

# RAC AGENDA – July/August 2017



- |    |   |                      |
|----|---|----------------------|
| 1. | Welcome, RAC Introductions and RAC Procedure<br>- RAC Chair   |                      |
| 2. | Approval of Agenda and Minutes<br>- RAC Chair   |                      |
| 3. | Wildlife Board Meeting Update<br>- RAC Chair  |                      |
| 4. | Regional Update<br>- DWR Regional Supervisor  | <b>INFORMATIONAL</b> |
| 5. | R657-23 – Hunter Education Rule Amendments<br>- Gary Cook, Hunter Education Coordinator             | <b>ACTION</b>        |
| 6. | R657-11 - Furbearer Rule Amendments<br>- Darren DeBlois, Mammals Coordinator                        | <b>ACTION</b>        |
| 7. | Furbearer and Bobcat Harvest Recommendations for 2017-2018<br>- Darren DeBlois, Mammals Coordinator | <b>ACTION</b>        |
| 8. | Cougar Recommendations and Rule Amendments for 2017-2018<br>- Darren DeBlois, Mammals Coordinator   | <b>ACTION</b>        |
| 9. | Beaver Management Plan<br>- Darren DeBlois, Mammals Coordinator                                     | <b>ACTION</b>        |

## Regional Presentations Only

- |            |   |                      |
|------------|---|----------------------|
| SERO & CRO | Scofield Reservoir Management Plan<br>Justin Hart, Southeastern Region Aquatics Manager | <b>INFORMATIONAL</b> |
|------------|---|----------------------|

## Meeting Locations

- |                 |   |                        |  |
|-----------------|---|------------------------|--|
| <b>CR RAC</b> – | July 25th, 6:30 PM<br>City Civic Center<br>110 S. Main Street, Springville        | <b>SER RAC</b> –       | August 2nd, 6:30 PM<br>John Wesley Powell Museum<br>1765 E. Main St., Green River    |
| <b>NR RAC</b> – | July 26th, 6:00 PM<br>Brigham City Community Center<br>24 N. 300 W., Brigham City | <b>NER RAC</b> –       | August 3rd, 6:30 PM<br>Wildlife Resources NER Office<br>318 North Vernal Ave, Vernal |
| <b>SR RAC</b> – | August 1st, 7:00 PM<br>Beaver High School<br>195 E. Center Street, Beaver         | <b>Board Meeting</b> – | August 31st, 9:00 AM<br>DNR, Boardroom<br>1594 W. North Temple, SLC                  |



GARY R. HERBERT  
Governor

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Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Wildlife Resources

MICHAEL D. FOWLKS  
Interim Division Director

## MEMORANDUM

Date: July 12, 2017

To: Wildlife Board and Regional Advisory Council Members

From: Gary L. Cook, Hunter Education Program Coordinator

Subject: **AMENDMENT TO RULE R657-23 UTAH HUNTER EDUCATION PROGRAM RESULTING FROM H.B. 67**

House Bill 67, entitled Wildlife Amendments, passed through the last legislative session and is now in effect. This bill cleans up the process we use to verify that hunters have passed an approved hunter education course by allowing license and permit applicants to "self-verify" that they have completed a qualifying course, rather than waiting for DWR to research our records and verify their completion on their behalf. We believe this new process is a good balance in our efforts to ensure hunter safety in the field, while also providing hunters with the customer service they need and expect. This bill makes modifications to our proof of Hunter Education requirements, which requires some changes in the related sections of our Administrative Rule.

We are proposing to amend Rule R657-23 to:

- 1) Outline the criteria and standards for approving a hunter or furharvester education course.
- 2) Outline the procedures for verifying the successful completion of an approved hunter or furharvester education course.
- 3) Include requirements for the Utah Furharvester Education program.
- 4) Clarify definitions and terms to be applicable for both hunter and furharvester education programs.

## **R657. Natural Resources, Wildlife Resources.**

### **R657-23. Utah Hunter Education ~~Program~~ and Furharvester Education Programs.**

#### **R657-23-1. Purpose and Authority.**

Under authority of ~~Section~~Sections 23-19-11, 23-10-11.1, 23-19-11.5, 23-19-12, and 23-19-12.5 this rule provides the ~~process~~criteria and ~~requirements~~standards for:

- (1) hunter education student and instructor training;
- (2) recognizing other jurisdiction's hunter education courses as approved courses in Utah;
- ~~(1) hunter education instructor and student training; and~~
- ~~(2) presenting and obtaining proof of having successfully completed~~(3) verifying an individual's completion of an approved hunter education course; and
- (4) furharvester education student training.

#### **R657-23-2. Definitions.**

- (1) Terms used in this rule are defined in Section 23-13-2.
- (2) In addition:
  - ~~(a) "Approved hunter education course" means any hunter education course that qualifies a person to receive a resident hunting license in the state, province, or country in which the hunter education course is offered. "Blue Card" means the certificate of completion issued by the division for having passed a division-approved hunter education course.~~
  - ~~(b) "Authorized division representative" means a volunteer hunter education instructor who has been approved by the division to issue duplicate blue cards.~~
  - ~~(c) "Blue Card" means the certificate of completion issued by the division for having passed a Utah hunter education course or an approved hunter education course.~~
  - ~~(d) "Certificate of completion" means a card, certificate, or other document issued by the wildlife agency of a state, province, or country, and signed by a hunter education instructor, verifying successful completion of an approved hunter education or furharvester education course in that jurisdiction.~~
  - (c) "Division-approved furharvester education course" means any furharvester education course that:
    - (i) is offered through the division as an online education course, followed by successful completion of a mandatory field day exercise;
    - (ii) is offered through the division as an instructor-led education course; or
    - (iv) is offered by another state or country and completion of the course qualifies a person to receive a resident furbearer license or its equivalent in the state, province, or country in which the furharvester education course is offered.
  - (d) "Division-approved hunter education course" means any hunter education course that:
    - (i) is offered through the division as an online hunter education course, followed by successful completion of a mandatory field day exercise;
    - (ii) is offered through the division as an instructor-led hunter education course;
    - (iii) is offered by another state or country and meets International Hunter Education Association – USA minimum standards; or
    - (iv) is offered by another state or country and completion of the course qualifies a person to receive a resident hunting license in the state, province, or country in which the hunter education course is offered.
  - (e) ~~"Hunter~~ Education Registration Certificate" means a document purchased from the division that is valid for 365 days from date of purchase which is required to sign up

for and graduate from ~~the~~ hunter education or furharvester education course. ~~This document becomes a valid hunting license upon validation of course completion by a certified hunter education instructor.~~

(f) "Field day" means an instructor-~~lead~~ed practical exercise ~~which may include instruction in and student demonstration in the safe use of firearms, hunter responsibility, a written exam, and a live fire exercise~~ with a certified hunter education or furharvester education instructor as prescribed by this rule and the Utah Hunter Education Program administration.

(g) "Trainer" means ~~a volunteer hunter education instructor or Division employee who has been an individual or entity~~ certified by the division to train hunter education instructors and furharvester education instructors.

(h) "Instructor" means a volunteer ~~hunter education~~ instructor or division employee who has been approved by the division to teach the hunter education program or furharvester education program to students.

~~(i) "Online hunter education course" means a Division approved hunter education course that is completed online prior to attending a field day.~~

~~(j) "Student" means a person who is registered in a hunter education or furharvester education course being taught by a certified hunter education instructor.~~

~~(k) "Instructor lead hunter education course" means a hunter education course that meets the International Hunter Education Association—USA minimum standards for hunter education and that is lead by an instructor and includes, a written exam and a live fire exercise.~~

### **R657-23-3. Hunter Education Required.**

(1)(a) To obtain a hunting license, any person born after December 31, 1965, must present proof of having passed successfully completing a division -approved hunter education course.

(b) A person may take a hunter education course offered by the division as provided in Subsection (2), or (3).

(2) Completion of an instructor-~~lead~~ed hunter education course requires students to:

(a) purchase a hunter education registration certificate from a Division authorized licensed vendor;

(b) attend the instructor-~~lead~~ed course;

(c) behave in a safe and responsible manner in class;

(d) obtain a passing score of at least 75% on a written exam; and

(e) participate in a live fire exercise demonstrating safe firearms handling.

(3) Completion of the online hunter education course requires students to:

(a) purchase a hunter education registration certificate from a Division authorized licensed vendor.

(b) pre-register for the field day ~~by contacting the instructor by mail, e-mail or telephone;~~

(c) successfully complete ~~a division approved~~the online hunter education course and provide documentation of completion to the hunter education instructor prior to participating in a field day;

(d) participate in a field day;

(e) behave in a safe and responsible manner while attending the field day;

(ef) obtain a passing score of at least 75% on a written exam; and

(fg) participate in a live fire exercise demonstrating safe firearms handling.

~~(4)(a)~~ The division will issue a Blue Card to each individual who successfully completes ~~the~~ division-approved hunter education course.

~~(5)~~ The Hunter Education Registration Certificate becomes a valid hunting license upon validation of course completion by a certified hunter education instructor.

~~(6)~~ A member of the United States Armed Forces on active duty, reserve duty, or having veteran status, or a member of the Utah National Guard is exempt from the live fire exercise required in Subsections 2 and 3 above if they can provide their active or reserve status Military identification card or valid documentation of veteran status to the hunter education instructor prior to the live fire exercise.

~~(67)~~ The division shall accept other states, provinces, and countries criteria and qualifications for their respective courses, which:

~~(a)~~ meet or exceed the International Hunter Education Association-USA hunter education standards; or

~~(b)~~ completion of the course qualifies a person to receive a resident hunting license in the state, province, or country in which the hunter education course is offered.

#### **R657-23-4. ~~Documents Accepted as Proof of~~ Verifying Completion of ~~an~~ Approved Hunter Education Course.**

~~(1)~~ The division and division approved license agents shall accept proof of completion of an approved hunter education course from other states, provinces, and countries whose criteria and qualifications for their respective courses, meet or exceed the International Hunter Education Association USA hunter education standards in accordance with Section 23-19-11. At the time of applying for a license or permit, the applicant shall:

~~(a)~~ have a valid hunter education number recorded on the division's customer database;

~~(b)~~ provide the division with a Certificate of Completion indicating the hunter education number and state or country of issuance; or

~~(c)~~ certify via a sworn statement that the applicant has completed a division-approved hunter education course.

~~(2)(a)~~ Any person who has completed an ~~(2)~~ The division may research an individual's hunter education records in order to verify completion of a division-approved hunter education course in another state, province, or country and becomes a Utah resident must obtain a transfer Blue Card prior to purchasing a resident hunting license.

~~(b)~~ The person must present proof of completion of an approved hunter education course to a division office as required under Subsection (1).

~~(3)(a)~~ If an applicant for a nonresident hunting license is not able to present a hunting license with the hunter education number noted on it or a certificate of completion as provided in Subsection (1), the division may contact another state, province, or country to verify the completion of a hunter education course so that a nonresident hunting license may be issued.

~~(4)(a)~~ If an applicant for a resident or nonresident hunting license has completed a hunter education course in Utah but is not able to present a hunting license with the hunter education number noted on it, the division may research the division's hunter education records to verify that the applicant has completed the hunter education course. ~~(3)~~ The division may require those individuals satisfying the hunter education requirement by completing the sworn statement to obtain a Blue Card after verification that they have completed a division-approved hunter education course.

~~(b)~~ Upon issuance of the hunting license, the division shall indicate the applicant's hunter education number on the face of the hunting license.

(54)(a) If a Blue Card is lost or destroyed, a person may apply by mail or in person at a division office to obtain a duplicate Blue Card. The person must complete an affidavit and request a ~~record's~~records search.

(b) Upon verification of completion of the hunter education course, the division may issue the person a duplicate Blue Card.

~~(6) The division requires any person whose records cannot be found or who cannot be verified as having completed a hunter education course to take the complete course as required under Section R657-23-3.~~

~~(7-5)~~ For the purpose of issuing a hunting license, the division may, upon request, provide verification to another state's wildlife agency that a resident or former resident of Utah has met the Utah hunter education requirements.

(86) The division may charge a fee for the services provided in Subsections (2), (3), ~~(4)~~, and (54).

(7)(a) A license or permit that is obtained by an individual who is unable to verify completion of a division-approved hunter education course is invalid.

(b) Any person whose records cannot be found or who cannot be verified as having completed a hunter education course must take a division-approved hunter education course in order to obtain a hunting license or permit.

#### **R657-23-5. Hunter Education Instructor Training.**

(1) A person must be 21 years of age or older to become a certified hunter education instructor.

(2) Completion of a hunter education instructor course requires a person to:

(a) Complete the Division's instructor training course.

(b) Pass a criminal background check assessing suitability to work with children under the age of 18 years and to serve as an instructor;

(c) Attend a training course conducted by a trainer;

(d) Obtain a passing score of at least 75% on a written exam; and

(e) Participate in a live fire exercise or a range safety training course.

(3) The division shall issue a hunter education instructor card to each individual who successfully completes the hunter education instructor course.

#### **R657-23-6. Furharvester Education.**

(1)(a) To obtain a resident furbearer license, any person born after December 31, 1984, must present proof of successfully completing a division-approved furharvester education course.

(b) A person may take a furharvester education course offered by the division as provided in Subsection (3), or (4).

(2) At the time of applying for a furbearer license or permit, the applicant shall:

(a) have a valid furharvester education number recorded on the division's customer database;

(b) provide the division with a Certificate of Completion indicating the furharvester education number and state or country of issuance; or

(c) certify via a sworn statement that the applicant has completed a division-approved furharvester education course.

(3) Completion of an instructor-led furharvester education course requires students to:



(a) purchase a furharvester education registration certificate from a Division authorized licensed vendor;

(b) attend the instructor-led course;

(c) behave in a safe and responsible manner in class;

(d) obtain a passing score of at least 75% on a written exam; and

(e) participate in a furharvester field day.

(4) Completion of the online furharvester education course requires students to:

(a) purchase a furharvester education registration certificate from a Division authorized licensed vendor;

(b) pre-register for the field day;

(c) successfully complete the online furharvester education course and provide documentation of completion to the furharvester education instructor prior to participating in a field day;

(d) participate in a furharvester field day;

(e) behave in a safe and responsible manner while attending the field day; and

(f) obtain a passing score of at least 75% on a written exam.

(5) The division will issue a certificate of completion each individual who successfully completes a division-approved furharvester education course.

**KEY:** wildlife, game laws, hunter education

**Date of Enactment or Last Substantive Amendment:** July 11, 2016

**Notice of Continuation:** December 5, 2012

**Authorizing, and Implementing or Interpreted Law:** 23-19-11



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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
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### Division of Wildlife Resources

MICHAEL D. FOWLKS  
Interim Division Director

## MEMORANDUM

TO: Utah Wildlife Board and Regional Advisory Council Members  
FROM: Darren DeBloois, Predatory Mammals and Furbearer Program Coordinator  
DATE: July 10, 2017  
SUBJECT: **2017 Furbearer and Trapping Rule Amendments**

Last year we made some recommended amendments to the Furbearer and Trapping Rule (R657-11). One change we made has caused some confusion among our trappers, and some concern from our Law Enforcement section. Currently the rule is only applicable to “protected wildlife species”. This change effectively exempts people trapping non-protected species from complying with our trapping rules. Because it has been shown that as many as 25% of animals caught in traps can be non-target species, we feel that the DWR has an interest in regulating all trapping activity that goes on in the State in order to manage protected wildlife that may be caught in traps set for non-protected species.

Highlights of our proposed changes are:

- A person must possess a valid trap registration license when trapping furbearers, coyotes and raccoons except within 100 feet of a building or structure occupied for humans or livestock.
- Current trap numbers will be transferred to the new registration license without cost to current number holders. New trappers will need to obtain the license for \$10, and will not need to buy another one. This is essentially how things are now, just changing from a registration number to a license.
- All other rules will remain the same and apply to anyone trapping coyotes and raccoons as well as protected wildlife species.





## **R657. Natural Resources, Wildlife Resources.**

### **R657-11. Taking Furbearers and Trapping.**

#### **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 and trapping.

(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.

#### **R657-11-2. Definitions.**

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

(2) In addition:

(a) "Artificial cubby set" means any artificially manufactured container with an opening on one end that houses a trapping device.

(b) "Bait" means any lure containing animal parts larger than one cubic inch with the exception of white-bleached bones with no hide or flesh attached.

(c) "Cage trap" means any enclosure containing a one-way door triggered by a treadle or pan that prevents escape of an animal after the door closes.

(d) "Exposed bait" means bait which is visible from any angle, except when used in an artificial cubby set.

(e) "Foothold trap" means any underspring or jump trap, longspring trap or coil-spring trap with two smooth arms or jaws that come together when an animal steps on a pan in the center of the trap.

(f) "Fur dealer" means any individual engaged in, wholly or in part, the business of buying, selling, or trading skins or pelts of furbearers within Utah.

(g) "Fur dealer's agent" means any person who is employed by a resident or nonresident fur dealer as a buyer.

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

(i) "Green pelt" means the untanned hide or skin of any furbearer.

(j) "Owner" means the person who has been issued a trap registration number associated with one or more trapping devices.

(k) "Pursue" means to chase, tree, corner, or hold a furbearer at bay.

(l) "Scent" means any lure composed of material of less than one cubic inch that has a smell intended to attract animals.

(m) "Trapping device" means any apparatus used to remotely capture or kill an animal, including a cage trap, foothold trap, snare wire, or any other body gripping mechanism.

#### **R657-11-3. License, Permit and Tag Requirements.**

(1) A person who has a valid furbearer license may take furbearers during the established furbearer seasons published in the guidebook of the Wildlife Board for taking furbearers.

(2) A person who has a valid furbearer license and valid bobcat permits may take a bobcat during the established bobcat season published in the guidebook of the Wildlife Board for taking furbearers.

(3) A person who has a valid furbearer license and valid marten trapping permit may take marten during the established marten season published in the guidebook of the Wildlife Board for taking furbearers.

(4) A person who has a valid trap registration license may use a trapping device to take furbearers, coyotes, or raccoons, as authorized in the Wildlife Code, this rule and the guidebooks of the Wildlife Board.

~~(4)~~(5) Any license, permit, or tag that is mutilated or otherwise made illegible is invalid and may not be used for taking or possessing furbearers.

#### **R657-11-4. Bobcat Permits.**

(1) Bobcat permits can only be obtained and are only valid with a valid furbearer license.

(2)(a) A person may obtain up to the number of bobcat permits authorized each year by the Wildlife Board.

(b) Permit numbers shall be published in the guidebook of the Wildlife Board for taking furbearers.

(3) Bobcat permits will be available during the dates published in the guidebook of the Wildlife Board for taking furbearers and may be obtained by submitting an application through the division's Internet address.

(4) Bobcat permits are valid for the entire bobcat season.

#### **R657-11-5. Tagging Bobcats.**

(1) The pelt or unskinned carcass of any bobcat must be tagged in accordance with Section 23-20-30.

(2) The tag must remain with the pelt or unskinned carcass until a permanent tag has been affixed.

(3) Possession of an untagged green pelt or unskinned carcass is prima facie evidence of unlawful taking and possession.

(4) The lower jaw of each bobcat taken must be removed and tagged with the numbered jaw tag corresponding to the number of the temporary possession tag affixed to the hide.

#### **R657-11-6. Marten Permits.**

(1) A person may not trap marten or have marten in possession without having a valid furbearer license and a marten trapping permit in possession.

(2) Marten trapping permits are available free of charge from any division office.

#### **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 second 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

(c) 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 for each harvested bobcat.

(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 furharvester 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 furharvester.

(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 furharvester;

(f) the name of the individual transporting the bobcat or marten; and

(g) the furharvester'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) Furharvesters taking marten are required to present the entire skinned carcass to the division in good condition when brought for permanent tagging.

#### **R657-11-8. Trap Registration Licenses and Numbers.**

(1)(a) Except as provided in Subsection (1)(a)(ii), a person must possess a valid trap registration license before using any trapping device to take a furbearer, coyote, or raccoon.

(i) A trap registration license is required in addition to any other license, permit, or tag required by this rule to take a furbearer.

(ii) A trap registration license is not required for trapping a coyote, or raccoon when the trapping device is set within 100 feet of a building or structure occupied or utilized by humans or domestic livestock, provided the trapping device is set with the landowner's or lessee's permission.

(b) To obtain a trap registration license, a person must:

(i) provide the following information when requested by the division:

(A) full name;

- (B) complete home address;
- (C) email address;
- (D) phone number;
- (E) date of birth; and
- (F) any other information requested by the division; and

(ii) pay a \$10 license fee.

(c) The division may deny issuing a trap registration license if the applicant:

- (i) is subject to an administrative or judicial order suspending any hunting, trapping, or fishing privilege;
- (ii) has violated any provision in Title 23 of the Utah Code, or rules or guidebooks of the Wildlife Board; or

(iii) fails to pay the one-time \$10 license fee.

(d) The division may suspend a trap registration license, as provided in Sections 23-19-9, 23-25-5, and 23-25-6.

(e) The trap registration license must be carried on the person of the individual it is issued to while setting, checking or moving trapping devices.

(f) A trap registration license shall include a unique trap registration number printed on its face that is permanently assigned to the licensee.

~~(4)~~(2)(a) Each trapping device used to take a furbearers, coyote, or raccoon must be permanently, legibly, and indelibly marked or tagged with the registered trap registration number of the owner.

(b) A trap registration number is not required on a trapping device set within 100 feet of a building or structure occupied or utilized by humans or domestic livestock, provided the trapping device is set:

- (i) to capture a coyote or raccoon; and
- (ii) with the landowner's or lessee's permission.

~~(2)~~(3) No more than one trap registration number may be on a single trapping device.

~~(3) Trap registration numbers must be legible.~~

~~(4) Trap registration numbers are permanent and may be obtained by mail or in person from any division office.~~

~~(5) Applicants must include their full name, including middle initial, and complete home address.~~

~~(6) A registration fee of \$10 must accompany the request. This fee is payable only once.~~

~~(7)~~(4) Each individual is issued only one trap registration number.

(5) Except as provided in R657-11-9, a person may not take a furbearer, coyote, or raccoon with any trapping device marked with the trap registration number of another person.

(6) A person may not lend, transfer, sell, give, or assign a trap registration license or trap registration number to another person or entity.

~~(8)~~(7) Any person who has obtained a trap registration number must notify the division within 30 days of any:

- (a) change in address; or
- (b) the theft of traps trapping devices.

**R657-11-9. Traps Trapping Devices.**

(1) ~~All Any~~ foothold traps used to take a furbearer, coyote, or raccoon must have spacers on the jaws which leave an opening of at least 3/16 of an inch when the jaws are closed, except;

- (a) rubber-padded jaw traps,
- (b) traps with jaw spreads less than 4.25 inches, and
- (c) traps that are completely submerged under water when set.

(2)(a) ~~All Any~~ cable devices (i.e snares) used to take a furbearer, coyote, or raccoon, except those set in water or with a loop size less than 3 inches in diameter, must be equipped with a breakaway lock device that will release when any force greater than 300 lbs. is applied to the loop.

(b) Breakaway cable devices must be fastened to an immovable object solidly secured to the ground.

(c) The use of drags is prohibited.

(3) On the middle section of the Provo River, between Jordanelle Dam and Deer Creek Reservoir, the Green River, between Flaming Gorge Dam and the Utah Colorado state line; the Colorado River, between the Utah Colorado state line and Lake Powell; and the Escalante River, between Escalante and Lake Powell, trapping for a furbearer, coyote, or raccoon within 100 yards of either side of these rivers, including their tributaries from the confluences upstream ½ mile, is restricted to the following devices:

(a) Nonlethal-set foot-hold traps with a jaw spread less than 5 1/8 inches, and nonlethal-set padded foot-hold traps. Drowning sets with these traps are prohibited.

(b) Body-gripping, killing-type traps with body-gripping area less than 30 square inches ~~(i.e., 110 Conibear)~~.

(c) Nonlethal dry land cable devices equipped with a stop-lock device that prevents it from closing to less than a six-inch diameter.

(d) Size 330, body-gripping, killing-type traps ~~(i.e. Conibear)~~ modified by replacing the standard V-trigger assembly with one top side parallel trigger assembly, with the trigger placed within one inch of the side, or butted against the vertical turn in the Canadian bend.

(4) A person may not disturb or remove any trapping device, except:

- (a) the owner of the trapping device;
- (b) peace officers in the performance of their duties;
- (c) the landowner where the trapping device has been placed is set; or
- (d) the owner of a domestic pet that has been is caught in the device; or
- (e) as provided in Subsection (6).

(5) A person may not kill or remove wildlife caught in any trapping device, except:

(a) the owner of the trapping device who must possesses a valid the permit, license, ~~or tag(s)~~, or legal authorization required for the species that has been is captured;

(b) a peace officer in the performance of their duties;

(c) as provided in Subsection (6); or

(d) as provided in R657-11-~~12~~11.

(6)(a) A person, other than the owner, may temporarily possess, disturb or remove a trapping device; or temporarily possess, kill or remove wildlife caught in a

trapping device provided:

~~(a)(i)~~ the person possesses a valid trap registration license, furbearer license, ~~the and~~ appropriate permits or tags; and

~~(b)(ii)~~ has obtained written authorization from the owner of the trapping device stating the following:

~~(i)(A)~~ date written authorization was obtained;

~~(ii)(B)~~ name and address of the owner;

~~(iii)(C)~~ owner's trap registration number;

~~(iv)(D)~~ the name of the individual being given authorization; and

~~(v)(E)~~ signature of owner.

(b) Nothing in Subsection (6)(a) authorizes a person to use the owner's trap registration license, furbearer license, permit or tag.

(7) The owner of any trapping device providing written authorization to another person under Subsection (~~56~~) shall be strictly liable for any violations of Title 23, this rule, or applicable guidebooks resulting from the use of the trapping device by the authorized person.

(8) The owner of any trapping device providing written authorization to another person under Subsection (~~56~~) must keep a record of all persons obtaining written authorization and furnish a copy of the record upon request from a conservation officer.

(9)(a) A person may not set any ~~trap or~~ trapping device on posted private property without the landowner's or lessee's written permission.

(b) Wildlife officers should be informed as soon as possible of any illegally set ~~traps or~~ trapping devices.

(10) Peace officers in the performance of their duties may seize all ~~traps,~~ trapping devices, and wildlife used or held in violation of this rule.

(11) Except as provided in Subsection (6), A person may not possess any trapping device that is not permanently marked or tagged with that person's ~~registered~~ trap registration number while ~~engaged in taking wildlife~~ setting, checking, or moving a trapping device targeting a furbearer, coyote, or raccoon.

(12) All ~~traps and~~ trapping devices used to take a furbearer, coyote, or raccoon must be checked and animals removed at least once every 48 hours, except;

(a) killing traps striking dorso-ventrally;

(b) drowning sets; and

(c) lethal cable devices that are set to capture on the neck, that have a nonrelaxing lock, without a stop, and are anchored to an immovable object; which must be checked every 96 hours.

(14) A person may not transport or possess live protected wildlife. Any animal found in a ~~trap or~~ trapping device must be killed or released immediately by the trapper.

(15) The trapping restrictions in Subsections (1), (2), and (3) do not apply to a trapping device set within 100 feet of a building or structure occupied or utilized by humans or domestic livestock, provided the trapping device is set:

(a) to capture a coyote or raccoon; and

(b) with the landowner's or lessee's permission.

#### **R657-11-10. Use of Bait.**

(1) A person may not use any protected wildlife or ~~their its~~ parts, ~~except for~~



~~white-bleached bones with no hide or flesh attached, as bait or scent to take a furbearer, coyote, or raccoon, except for the following: ; however, parts of legally taken furbearers and nonprotected wildlife may be used as bait.~~

~~(a) white-bleached bones of protected wildlife with no hide or flesh attached; and~~

~~(b)(i) parts of legally taken furbearers; and~~

~~(ii) nonprotected wildlife.~~

~~(2) Traps or trapping devices used to take a furbearer, coyote, or raccoon:~~

~~(a) may not be set within 30 feet of any exposed bait;~~

~~(3)(b) Traps may be placed near carcasses of protected wildlife, provided the carcass has not been moved or relocated for the purpose of trapping furbearers and the trapping device is not located within 30 feet of the carcass.~~

~~(4)(3) White-bleached bones with no hide or flesh attached may be set within 30 feet of a trapping device traps.~~

~~(5)(4)(a) Bait used inside an artificial cubby set must be placed at least eight inches from the opening.~~

~~(b) Artificial cubby sets must be placed with the top of the opening even with or below the bottom of the bait so that the bait is not visible from above.~~

~~(c) A person using bait is responsible if it becomes exposed for any reason.~~

~~(5) The trapping restrictions in Subsections (2) and (4) do not apply to a trapping device set within 100 feet of a building or structure occupied or utilized by humans or domestic livestock, provided the trapping device is set:~~

~~(a) to capture a coyote, or raccoon; and~~

~~(b) with the landowner's or lessee's permission.~~

#### **R657-11-11. Accidental Trapping.**

~~(1)(a) Any bear, bobcat, cougar, marten, otter, wolverine, any furbearer trapped out of season, or other protected wildlife accidentally caught in a trapping device that is alive must be immediately released unharmed by a person authorized in R657-11-9(5) and (6).~~

~~(b) All incidents of accidental trapping of protected wildlife must be reported to the division within 48 hours.~~

~~(b)(2)(a) Permission must be obtained from a division representative to remove from a trapping device the carcass of any of these species protected wildlife from a trap accidentally caught.~~

~~(c)(b) The carcass remains the property of the state and must be turned over to the division.~~

~~(2) All incidents of accidental trapping of any of these animals must be reported to the division within 48 hours.~~

~~(3) Black-footed ferret, lynx and wolf are protected species under the Endangered Species Act. Accidental trapping or capture of these any federally protected species must be immediately reported to both the U.S. Fish and Wildlife Service and the division within 48 hours.~~

~~(4) A person that captures or kills an unauthorized species of protected wildlife in a trapping device is not criminally liable under state law for that take, provided the person:~~

~~(a) was not attempting to take the unauthorized species;~~



- (b) possesses a valid trap registration license;
- (c) possesses the licenses, permits and tags required to trap the targeted wildlife species; and
- (d) otherwise complies with the provisions of the Wildlife Code, this rule, and guidebooks applicable to trapping the targeted wildlife species.

#### **R657-11-12. Methods of Take and Shooting Hours.**

- (1) Furbearers, except bobcats and marten, may be taken by any means, excluding explosives and poisons, or as otherwise provided in Section 23-13-17.
- (2) Bobcats may be taken only by shooting, trapping, or with the aid of dogs as provided in Section R657-11-26.
- (3) Marten may be taken only with an elevated, covered set in which the maximum trap size shall not exceed 1 1/2 foothold or 160 Conibear.
- (4) Taking furbearers by shooting or with the aid of dogs is restricted to one-half hour before sunrise to one-half hour after sunset, except as provided in Section 23-13-17.
- (5) 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.

#### **R657-11-13. Spotlighting.**

- (1) Except as provided in Subsection (3):
  - (a) a person may not use or cast the rays of any spotlight, headlight, or other artificial light to locate protected wildlife while having in possession a firearm or other weapon or device that could be used to take or injure protected wildlife; and
  - (b) the use of a spotlight or other artificial light in a field, woodland, or forest where protected wildlife are generally found is prima facie evidence probable cause of attempting to locate protected wildlife.
- (2) The provisions of this section do not apply to:
  - (a) the use of the headlights of a motor vehicle or other artificial light in a usual manner where there is no attempt or intent to locate protected wildlife; or
  - (b) 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 weapon to hunt or take wildlife.
- (3) The provisions of this section do not apply to the use of an artificial light when used by a trapper to illuminate his path and trap sites for the purpose of conducting the required trap checks, provided that:
  - (a) any artificial light must be carried by the trapper;
  - (b) a motor vehicle headlight or light attached to or powered by a motor vehicle may not be used; and
  - (c) while checking ~~traps~~ trapping devices with the use of an artificial light, the trapper may not occupy or operate any motor vehicle.
- (4) Spotlighting may be used to hunt coyote, red fox, striped skunk, or raccoon where allowed by a county ordinance enacted pursuant to Section 23-13-17.
- (5) The ordinance shall provide that:
  - (a) any artificial light used to spotlight coyote, red fox, striped skunk, or raccoon

must be carried by the hunter;

(b) a motor vehicle headlight or light attached to or powered by a motor vehicle may not be used to spotlight the animal; and

(c) while hunting with the use of an artificial light, the hunter may not occupy or operate any motor vehicle.

(6) For purposes of the county ordinance, "motor vehicle" shall have the meaning as defined in Section 41-6-1.

(7) The ordinance may specify:

(a) the time of day and seasons when spotlighting is permitted;

(b) areas closed or open to spotlighting within the unincorporated area of the county;

(c) safety zones within which spotlighting is prohibited;

(d) the weapons permitted; and

(e) penalties for violation of the ordinance.

(8)(a) A county may restrict the number of hunters engaging in spotlighting by requiring a permit to spotlight and issuing a limited number of permits.

(b) A fee may be charged for a spotlighting permit.

(9) A county may require hunters to notify the county sheriff of the time and place they will be engaged in spotlighting.

(10) The requirement that a county ordinance must be enacted before a person may use spotlighting to hunt coyote, red fox, striped skunk, or raccoon does not apply to:

(a) a person or his agent who is lawfully acting to protect his crops or domestic animals from predation by those animals; or

(b) a wildlife service's agent acting in his official capacity under a memorandum of agreement with the division.

#### **R657-11-14. Use of Dogs.**

(1) Dogs may be used to take furbearers only from one-half hour before sunrise to one-half hour after sunset and only during the prescribed open seasons.

(2) The owner and handler of dogs used to take or pursue a furbearer must have a valid, current furbearer license in possession while engaged in taking furbearers.

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

#### **R657-11-15. State Parks.**

(1) Taking any wildlife is prohibited within the boundaries of all state park areas except those designated as open by the Division of Parks and Recreation in Section R651-614-4.

(2) Hunting with a rifle, handgun, or muzzleloader on park areas designated open is prohibited within one mile of all park facilities including buildings, camp or picnic sites, overlooks, golf courses, boat ramps, and developed beaches.

(3) Hunting with shotguns, crossbows, and archery equipment is prohibited within one quarter mile of the above stated areas.

#### **R657-11-16. Transporting Furbearers.**

(1)(a) A person who has obtained the appropriate license and permit may transport green pelts of furbearers. Additional restrictions apply for taking bobcat and marten as provided in Section R657-11-6.

(b) A registered Utah fur dealer or that person's agent may transport or ship green pelts of furbearers within Utah.

(2) A furbearer license is not required to transport red fox or striped skunk.

#### **R657-11-17. Exporting Furbearers from Utah.**

(1) A person may not export or ship the green pelt of any furbearer from Utah without first obtaining a valid shipping permit from a division representative.

(2) A furbearer license is not required to export red fox or striped skunk from Utah.

#### **R657-11-18. Sales.**

(1) A person with a valid furbearer license may sell, offer for sale, barter, or exchange only those species that person is licensed to take, and which were legally taken.

(2) Any person who has obtained a valid fur dealer or fur dealer's agent certificate of registration may engage in, wholly or in part, the business of buying, selling, or trading green pelts or parts of furbearers within Utah.

(3) Fur dealers or their agents and taxidermists must keep records of all transactions dealing with green pelts of furbearers.

(4) Records must state the following:

(a) the transaction date; and

(b) the name, address, license number, and tag number of each seller.

(5) A receipt containing the information specified in Subsection (4) must be issued whenever the ownership of a pelt changes.

(6)(a) A person may possess furbearers and tanned hides legally acquired without possessing a license, provided proof of legal ownership or possession can be furnished.

(b) A furbearer license is not required to sell or possess red fox or striped skunk or their parts.

#### **R657-11-19. Wasting Wildlife.**

(1) A person may not waste or permit to be wasted or spoiled any protected wildlife or ~~their~~ its parts as provided in Section 23-20-8.

(2) The skinned carcass of a furbearer may be left in the field and does not constitute waste of wildlife.

#### **R657-11-20. Depredation by Badger, Weasel, and Spotted Skunk.**

(1) Badger, weasel, and spotted skunk may be taken anytime without a license when creating a nuisance or causing damage, provided the animal or its parts are not sold or traded.

(2) Red fox and striped skunk may be taken any time without a license.

**R657-11-21. Depredation by Bobcat.**

(1) Depredating bobcats may be taken at any time by duly appointed Wildlife Services agents, employed by Wildlife Services, while acting in the performance of their assigned duties and in accordance with procedures approved by the division.

(2) A livestock owner or his employee, on a regular payroll and not hired specifically to take furbearers, may take bobcats that are molesting livestock.

(3) Any bobcat taken by a livestock owner or his employee must be surrendered to the division within 72 hours.

**R657-11-22. Depredation by Nuisance Beaver.**

(1) Beaver doing damage or other nuisance behaviors may be taken or removed during open and closed seasons with either a valid furbearer license or a nuisance permit.

(2) A nuisance permit to remove beaver must first be obtained from a division office or conservation officer.

**R657-11-23. Survey.**

Each permittee who is contacted for a survey about their furbearer harvesting experience should participate in the survey regardless of success. Participation in the survey helps the division evaluate population trends, harvest success and collect other valuable information.

**~~R657-11-24. Prohibited Species.~~**

~~(1)(a) A person may not take black-footed ferret, fisher, lynx, otter, wolf, or wolverine.~~

~~(b) Accidental trapping or capture of any of these species must be reported to the division within 48 hours.~~

**R657-11-25. Season Dates and Bag Limits.**

Season dates, bag limits, and areas with special restrictions are published annually in the guidebook of the Wildlife Board for taking furbearers.

**R657-11-26. Approval to Trap on State Waterfowl Management Areas.**

(1)(a) Trapping wildlife, including nonprotected species, on state waterfowl management areas is prohibited unless specifically authorized by the division. Trapping is a property management tool used to protect waterfowl populations and infrastructure improvements found on the property.

(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) the wildlife species authorized for trapping;  
~~(ii)~~(iii) a general description of the trapping area authorized under the certificate of registration;  
~~(iii)~~(iv) the desired form of compensation to the division, whether monetary, in-kind, or both;  
~~(iv)~~(v) the division's management objectives for the state waterfowl management area; and  
~~(v)~~(vi) 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 and wildlife 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.

(c) All individuals listed on the application who will conduct trapping activities under the certificate of registration must:

(i) possess a trap registration license;  
(ii) use traps marked with the owner's trap registration number; and  
(iii) meet all age requirements, proof of hunter education and furharvester requirements, and including youth restrictions as provided in Utah Code 23-19-24, 23-19-11 and 23-20-20.

(d) The bid amount described in Subsection (vi) above may include non-monetary, in-kind contributions.

(3)(a) Late or incomplete applications may be rejected.

(b) A separate application must be submitted for each state waterfowl management area an individual the applicant wishes to trap on.

(c) 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.

(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.

**R657-11-27. Trapping Fees on State Waterfowl Management Area.**

(1) Upon verified payment of trapping required fees, permits certificates of registration will be mailed to successful applicants ~~are~~ granted trapping ~~rights for~~ privileges on state waterfowl management areas.

(2) If a successful applicant fails to make full payment within 14 days of the results posting date, an alternate trapper will be selected.

(3) Permits Certificates of registration are not valid until signed by the superintendent in charge of the area to be trapped.

**R657-11-28. Vehicle Travel on State Waterfowl Management Areas.**

Vehicle travel is restricted to developed roads. However, written permission for other travel may be obtained from the waterfowl management area superintendent.

**R657-11-29. Trapping Hours on State Waterfowl Management Areas.**

On waterfowl management areas, traps may be checked only between one-half hour before official sunrise to one-half hour after official sunset.

**R657-11-30. Trapper Responsibilityies of Trappers on State Waterfowl Management Areas.**

(1) All trappers are directly responsible to the waterfowl management area superintendent.

(2) Violation of management or trapping rules, including failure to return a trapping permit within five days of cessation of trapping activities, or failure to properly trap an area, as determined and recommended by the superintendent, may be cause for cancellation of trapping privileges, existing and future, on all waterfowl management areas.

**~~R657-11-31. Closed Area.~~**

~~———— Davis County ———— Trapping is allowed only on the dates published in the guidebook of the Wildlife Board for taking furbearers, on those lands administered by the state lying along the eastern shore of the Great Salt Lake, commonly known as the Layton-Kaysville marshes. In addition, there may be a portion of the above stated area that is closed to trapping. This area will be posted and marked.~~

**R657-11-32. Wildlife Management Areas.**

~~(1)~~ A person may not use motor vehicles on division-owned wildlife management areas closed to motor vehicle use without first obtaining written authorization from the appropriate division regional office.

~~(2) For purposes of coyote trapping, the division may, in its sole discretion, authorize limited motor vehicle access to its wildlife management areas closed to such use provided the motor vehicle access will not interfere with wildlife or wildlife habitat.~~

**KEY:** wildlife, furbearers, game laws, wildlife law

**Date of Enactment or Last substantive Amendment:** November 7, 2016

**Notice of Continuation:** July 13, 2015

**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

**MICHAEL D. FOWLKS**  
*Interim Division Director*

## MEMORANDUM

**TO:** Utah Wildlife Board and Regional Advisory Council Members  
**FROM:** Darren DeBloois, Predatory Mammals and Furbearer Program Coordinator  
**DATE:** July 10, 2017  
**SUBJECT:** **2017 Bobcat and Furbearer Recommendations**

We are recommending the following season dates and permit allocations for Furbearing Species.

- Beaver and Mink: September 23, 2017 – April 3, 2018
- Badger, Gray Fox, Kit Fox, Ringtail, Spotted Skunk, Marten and Weasel: September 23, 2017 – March 1, 2018
- Bobcat: All management targets are within plan objectives. We are not recommending any changes to permit allocation or season dates. Individuals will be allowed up to 6 permits with no cap on permits overall. Bobcat season will be November 15, 2017 – March 1, 2018.



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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Wildlife Resources

MICHAEL D. FOWLKS  
Interim Division Director

## MEMORANDUM

TO: Utah Wildlife Board/Regional Advisory Council Members

FROM: Darren DeBloois, Predatory Mammals and Furbearer Program Coordinator

DATE: July 10, 2017

SUBJECT: **2018 COUGAR PERMIT RECOMMENDATIONS**

The attached table summarizes the Utah Division of Wildlife Resources recommended limited entry, split and harvest objective permit allocations for the 2018 cougar hunting season. These recommendations have been made taking into consideration cougar harvest data from 2017, prey population dynamics for mule deer and bighorn sheep, and using the Utah Cougar Management Plan. Adjustments to permits are within the parameters set out in the Utah Cougar Management Plan, and will help ensure healthy cougar populations while addressing local issues of concern including impacts to specific prey populations, livestock depredation and maintaining cougar hunting opportunities across the State.

### Highlights:

1. Twenty-three (23) out of Fifty-one (51) Cougar hunting units are currently being managed for predator control to benefit prey populations of mule deer, bighorn sheep or both. On these units we consider the status of the prey base and attempt to manage cougar numbers in order to achieve DWR population goals for the particular prey species in question.
2. We recommend a reduction of permits on the Central Mountains, Northwest Manti unit from 9 permits to 7 because the unit failed to meet its objective of > than 20% of cougars harvested over 5 years of age.
3. We recommend increases of permits and or quotas on 15 units because they are meeting the objectives set forth in the Cougar Management Plan. These units include:
  - a. Box Elder, Raft River (6 – 8)
  - b. Cache (22 – 25)
  - c. Central Mtns, Southwest Manti (16 – 20)
  - d. Chalk Creek/Kamas (10 – 12)
  - e. East Canyon (8 – 10)
  - f. Fillmore, Pahvant (11 – 14)



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- g. Morgan-South Rich (6 – 10)
  - h. Nine Mile, North (22 – 25)
  - i. Oquirrh-Stansbury (11 – 12)
  - j. Pine Valley, North (10 – 12)
  - k. Pine Valley, South (11 – 12)
  - l. South Slope, Bonanza/Diamond Mtn/Vernal (18 – 20)
  - m. Southwest Desert (11 – 13)
  - n. West Desert, Tintic-Vernon (6 – 9)
  - o. Zion (18 – 20)
4. We recommend adding a new hunt unit the Wasatch Mountains, Wasatch to allow archery only hunting in an area of Salt Lake County where firearms are prohibited, but archery hunting is not. We are recommending a Harvest Objective of 6.
5. We propose changing the Plateau, Thousand Lakes from a Split unit to a Harvest Objective unit.
6. Other dates are as follows:
- a. Limited Entry Only: November 8, 2017 – May 31, 2018
  - b. Split: LE November 8, 2017 – Feb. 25, 2018; HO March 1, 2018 – May 31, 2018
  - c. Harvest Objective: November 8, 2017 – November 3, 2018
  - d. Unlimited Units: November 8, 2017 – November 7, 2018
  - e. Pursuit Season: November 8, 2017 – May 31, 2018

Unit Name	Predator Management Considerations	Summary of Data from last 3 Years					2017 Pemits/Quota	Hunt Strategy	Permit Change
		Male harvest	Female harvest	Total harvest	% females	% >5 yrs old			
Beaver	No	21	6	27	22%	31%	8	Split	
Book Cliffs, East	Deer	47	27	74	36%	30%	29	HO	
Book Cliffs, Rattlesnake Canyon/Nine Mile, South	Deer/Sheep	2	0	2	0%	0%	Unlimited	HO	
Box Elder, Desert	No	2	2	4	50%	67%	5	Split	
Box Elder, Pilot Mtn	No	1	0	1	0%	100%	6	HO	
Box Elder, Raft River	No	11	1	12	8%	55%	8	Split	2
Cache	No	36	17	53	32%	20%	25	HO	3
Central Mtns, Nebo	Sheep	23	10	33	30%	21%	12	Split	
Central Mtns, Nebo-West Face	Sheep	16	3	19	16%	28%	10	Split	
Central Mtns, Northeast Manti	Deer	9	9	18	50%	24%	13	Split	
Central Mtns, Northwest Manti	No	12	6	18	33%	19%	7	LE	-2
Central Mtns, Southeast Manti	No	27	9	36	25%	31%	20	Split	4
Central Mtns, Southwest Manti	No	17	3	20	15%	32%	8	LE	
Chalk Creek/Kamas	No	19	3	22	14%	41%	12	LE	2
East Canyon	No	14	3	17	18%	47%	10	LE	2
East Canyon, Davis	No	6	1	7	14%	0%	5	Split	
Fillmore, Oak Creek	Sheep	9	7	16	44%	31%	12	HO	
Fillmore, Pahvant	No	17	8	25	32%	16%	14	Split	3
Henry Mtns	Sheep	10	7	17	41%	7%	12	HO	
Kaiparowits	Sheep	2	1	3	33%	0%	Unlimited	CCU	
La Sal	Deer/Sheep	10	7	17	41%	25%	15	HO	
Monroe	No	16	8	24	33%	27%	9	Split	
Morgan-South Rich	No	14	7	21	33%	30%	10	LE	4
Mt Dutton	No	13	8	21	38%	47%	14	Split	
Nine Mile, North	Sheep	38	21	59	36%	24%	25	HO	3
North Slope, Summit/West Daggett	Sheep	9	6	15	40%	62%	10	HO	
North Slope, Three Corners	Sheep	6	2	8	25%	14%	10	HO	
Ogden	No	24	17	41	41%	20%	13	HO	
Oquirrh-Stansbury	Sheep	15	4	19	21%	47%	12	LE	1
Panguitch Lake	No	24	6	30	20%	18%	10	Split	
Paunsaugunt	Deer	10	8	18	44%	50%	10	HO	
Pine Valley, North	No	17	3	20	15%	18%	12	HO	2
Pine Valley, South	Sheep	15	9	24	38%	19%	12	HO	1
Plateau, Boulder	No	24	10	34	29%	34%	14	Split	
Plateau, Fishlake	No	23	9	32	28%	21%	16	Split	
Plateau, Thousand Lakes	No	2	2	4	50%	25%	4	HO	
San Juan, Desert	Deer/Sheep	0	1	1	100%	100%	Unlimited	CCU	
San Juan, Mountains	Deer/Sheep	35	22	57	39%	13%	25	HO	
San Rafael	Sheep	0	4	4	100%	0%	Unlimited	CCU	
South Slope, Bonanza/Diamond Mtn/Vernal	No	32	18	50	36%	26%	20	HO	2
South Slope, Yellowstone	Deer	10	9	19	47%	44%	10	HO	
Southwest Desert	No	11	3	14	21%	29%	13	HO	2
Wasatch Mtns, Wasatch*	No	--	--	--	--	--	6	HO	6
Wasatch Mtns, Avintaquin-Wildcat	Sheep	26	12	38	32%	18%	15	HO	
Wasatch Mtns, Cascade	Sheep	9	5	14	36%	7%	5	HO	
Wasatch Mtns, Currant Creek-North	No	19	1	20	5%	47%	10	LE	
Wasatch Mtns, Timpanogos	Sheep	10	5	15	33%	8%	7	HO	
Wasatch Mtns, West-Strawberry	No	11	4	15	27%	36%	11	LE	
West Desert, Mountain Ranges	No	3	2	5	40%	25%	8	HO	
West Desert, Tintic-Vernon	No	6	1	7	14%	33%	9	Split	3
Zion	No	29	13	42	31%	22%	20	HO	2
STATEWIDE TOTALS		762	350	1,112	31%	27%	571		40

\*New hunt unit for 2017. Archery Only Salt Lake County



**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

**MICHAEL D. FOWLKS**  
*Interim Division Director*

## MEMORANDUM

**TO:** Utah Wildlife Board/Regional Advisory Council Members  
**FROM:** Darren DeBloois, Predatory Mammals and Furbearer Program Coordinator  
**DATE:** July 20, 2017  
**SUBJECT:** **2018 COUGAR PERMIT RECOMMENDATIONS – REVISED PERMIT NUMBERS**

Due to some additional livestock depredation data and consistent with the cougar management plan, DWR's cougar permit recommendations have changed from the recommendations in the RAC packet that was distributed last week. The change will result in DWR recommending 10 more permits than were included in our initial recommendation in the RAC packet. Details on this change can be found in the attached spreadsheet. I will be happy to answer any questions you may have.

Units with changes are:

- Beaver – 1 additional permit
- Central Mtns, Nebo-West Face – 2 additional permits
- Central Mtns, Northwest Manti – Permits remain the same as last year, not decrease by 2
- Central Mtns, Southwest Manti – 2 additional permits
- Mt. Dutton – 1 additional permit
- Wasatch Mtns, Currant Creek-North – 2 additional permits



Unit Name	Predator Management Considerations	Summary of Data from last 3 Years					2017 Pemics/Quota	Hunt Strategy	Original Recommended Change	Permit Change
		Male harvest	Female harvest	Total harvest	% females (Target <40%)	% >5 yrs old (Target 15% - 20%)				
Beaver	No	21	6	27	22%	31%	9	Split	0	1
Book Cliffs, East	Deer	47	27	74	36%	30%	29	HO	0	0
Book Cliffs, Rattlesnake Canyon/Nine Mile, South	Deer/Sheep	2	0	2	0%	0%	Unlimited	HO	0	0
Box Elder, Desert	No	2	2	4	50%	67%	5	Split	0	0
Box Elder, Pilot Mtn	No	1	0	1	0%	100%	6	HO	0	0
Box Elder, Raft River	No	11	1	12	8%	55%	8	Split	2	2
Cache	No	36	17	53	32%	20%	25	HO	3	3
Central Mtns, Nebo	Sheep	23	10	33	30%	21%	12	Split	0	0
Central Mtns, Nebo-West Face	Sheep	16	3	19	16%	28%	12	Split	0	2
Central Mtns, Northeast Manti	Deer	9	9	18	50%	24%	13	Split	0	0
Central Mtns, Northwest Manti	No	12	6	18	33%	19%	9	LE	-2	0
Central Mtns, Southeast Manti	No	27	9	36	25%	31%	20	Split	4	4
Central Mtns, Southwest Manti	No	17	3	20	15%	32%	10	LE	0	2
Chalk Creek/Kamas	No	19	3	22	14%	41%	12	LE	2	2
East Canyon	No	14	3	17	18%	47%	10	LE	2	2
East Canyon, Davis	No	6	1	7	14%	0%	5	Split	0	0
Fillmore, Oak Creek	Sheep	9	7	16	44%	31%	12	HO	0	0
Fillmore, Pahvant	No	17	8	25	32%	16%	14	Split	3	3
Henry Mtns	Sheep	10	7	17	41%	7%	12	HO	0	0
Kaiparowits	Sheep	2	1	3	33%	0%	Unlimited	CCU	0	0
La Sal	Deer/Sheep	10	7	17	41%	25%	15	HO	0	0
Monroe	No	16	8	24	33%	27%	9	Split	0	0
Morgan-South Rich	No	14	7	21	33%	30%	10	LE	4	4
Mt Dutton	No	13	8	21	38%	47%	15	Split	0	1
Nine Mile, North	Sheep	38	21	59	36%	24%	25	HO	3	3
North Slope, Summit/West Daggett	Sheep	9	6	15	40%	62%	10	HO	0	0
North Slope, Three Corners	Sheep	6	2	8	25%	14%	10	HO	0	0
Ogden	No	24	17	41	41%	20%	13	HO	0	0
Oquirrh-Stansbury	Sheep	15	4	19	21%	47%	12	LE	1	1
Panguitch Lake	No	24	6	30	20%	18%	10	Split	0	0
Paunsaugunt	Deer	10	8	18	44%	50%	10	HO	0	0
Pine Valley, North	No	17	3	20	15%	18%	12	HO	2	2
Pine Valley, South	Sheep	15	9	24	38%	19%	12	HO	1	1
Plateau, Boulder	No	24	10	34	29%	34%	14	Split	0	0
Plateau, Fishlake	No	23	9	32	28%	21%	16	Split	0	0
Plateau, Thousand Lakes	No	2	2	4	50%	25%	4	HO	0	0
San Juan, Desert	Deer/Sheep	0	1	1	100%	100%	Unlimited	CCU	0	0
San Juan, Mountains	Deer/Sheep	35	22	57	39%	13%	25	HO	0	0
San Rafael	Sheep	0	4	4	100%	0%	Unlimited	CCU	0	0
South Slope, Bonanza/Diamond Mtn/Vernal	No	32	18	50	36%	26%	20	HO	2	2
South Slope, Yellowstone	Deer	10	9	19	47%	44%	10	HO	0	0
Southwest Desert	No	11	3	14	21%	29%	13	HO	2	2
Wasatch Mtns, Wasatch*	No	--	--	--	--	--	6	HO	6	6
Wasatch Mtns, Avintaquin-Wildcat	Sheep	26	12	38	32%	18%	15	HO	0	0
Wasatch Mtns, Cascade	Sheep	9	5	14	36%	7%	5	HO	0	0
Wasatch Mtns, Currant Creek-North	No	19	1	20	5%	47%	12	LE	0	2
Wasatch Mtns, Timpanogos	Sheep	10	5	15	33%	8%	7	HO	0	0
Wasatch Mtns, West-Strawberry	No	11	4	15	27%	36%	11	LE	0	0
West Desert, Mountain Ranges	No	3	2	5	40%	25%	8	HO	0	0
West Desert, Tintic-Vernon	No	6	1	7	14%	33%	9	Split	3	3
Zion	No	29	13	42	31%	22%	20	HO	2	2
STATEWIDE TOTALS		762	350	1,112	31%	27%	581		40	50

\*New hunt unit for 2017. Archery Only Salt Lake County



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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Wildlife Resources

MICHAEL D. FOWLKS  
Interim Division Director

## MEMORANDUM

TO: Utah Wildlife Board and Regional Advisory Council Members  
FROM: Darren DeBloois, Predatory Mammals and Furbearer Program Coordinator  
DATE: July 10, 2017  
SUBJECT: **2017 Beaver Plan Review and Revisions**

This spring and summer we reviewed the Beaver Management Plan. We incorporated research that has been completed at the direction of the original plan, and made some changes that allow the DWR to more easily use beavers as a tool to enhance riparian systems across the State.

Highlights are as follows:

- Incorporated a Beaver Restoration Assessment Tool (BRAT) developed by USU that help us determine where beavers are most likely to occur, and if they are absent from a system, where they are most likely to persist if reintroduced.
- Uses the BRAT model to qualify sites for possible beaver releases.
- Uses a "human conflict" model to evaluate the likelihood beavers will cause nuisance problems and helps us eliminate areas of high conflict likelihood.
- Allows beavers from problem areas throughout the State to be relocated to areas that could benefit from beaver activity once they undergo a quarantine process to eliminate the possibility of disease and/or aquatic invasive species transmission.





# UTAH BEAVER MANAGEMENT PLAN



Developed in consultation with  
**BEAVER ADVISORY COMMITTEE**

DWR Publication 09-29

Utah Division of Wildlife Resources  
1594 West North Temple  
Salt Lake City, Utah 84114

Approved by the Wildlife Board January 6, 2010  
Revised May, 2017

## **2010 BEAVER ADVISORY COMMITTEE MEMBERS**

### Group Members

Stan Bassett	Utah Trappers Association
Steve Flinders	U.S. Forest Service
Karen Fullen	Natural Resource Conservation Service
Darrell Johnson	Utah Cattlemen's Association
John Keeler	Utah Farm Bureau
Mary O'Brien	Grand Canyon Trust
Darren Williams	Bureau of Land Management
Jared Zierenberg	U.S.D.A., Wildlife Services

### Division of Wildlife Resources Representatives

Kevin Bunnell	Mammals Coordinator
Justin Dolling	Game Mammals Coordinator
Steve Gray	Wildlife Specialist
Craig Walker	Aquatic Habitat Coordinator
Alison Whittaker	Wildlife Habitat Biologist

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# UTAH BEAVER MANAGEMENT PLAN

## Plan Goal

Maintain healthy, functional beaver populations in ecological balance with available habitat, human needs, and associated species.

## INTRODUCTION

The purpose of the Utah Beaver Management Plan is to provide direction for management of American beaver (*Castor canadensis*) in Utah and where appropriate expand the current distribution to historic range. This purpose is in accordance with the mission statement of the Utah Division of Wildlife Resources (UDWR). The mission of UDWR is:

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

The Beaver Management Plan will direct beaver management statewide. This document will be reviewed, management progress will be evaluated and an updated management plan will be written and presented to the Utah Wildlife Board for approval periodically as needs are identified or new research is conducted.

## BACKGROUND

### Natural History

Beaver are the largest member of the rodent order in North America, and belong to the family Castoridae. They are very adapted to aquatic environments, with webbed feet, a stout body and broad paddle like tail to aid in swimming and balancing when standing upright. On land beaver move with an awkward waddle but are capable of bolting short distances. Adult beaver weigh 16-31.5 kg (35-70 lbs) and are up to 120 cm (47 in) in length (Baker and Hill, 2003). Pelt coloration varies from reddish, chestnut, nearly black to a yellowish brown depending on the population.

Beaver reach sexual maturity between 1.5-3 years of age (Baker and Hill, 2003). They are considered monogamous with a single pair and young forming a family group. Extended family members form a loose knit group referred to in the literature as a colony. A typical colony consists of an adult pair, young of the year or kits and yearlings from the previous year. Beaver breed in the fall and early winter and give birth to one litter (typically 2-4 young) in the spring. The gestation period is approximately 100 days. Young stay with the adults through the first winter and as yearlings during the second winter. Dispersal usually occurs at 24 months of age but is variable depending on the amount of unoccupied habitat.

Beavers are believed to exhibit density dependent population characteristics (Barker et. al. 2003). Home range can vary 8-18 ha (20-45 ac) with nonfamily groups tending to occupy larger territories than family groups (Wheatley, 1997a; Wheatley, 1997b; Wheatley, 1997c).

Beaver construct dams, ponds and canals to gain reliable access to food resources. This activity tends to alter the adjoining landscape. In addition, beaver construct lodges and bank dens for shelter and protection from predators. Within these newly created aquatic systems, beaver may establish winter food caches. This behavior usually occurs only in regions with persistent ice cover during a portion of the year. Beaver consume both herbaceous and woody plants with studies documenting 0.5-2.0 kg (1-4.5 lbs) of wet woody forage per day (Dyck and Macarthur, 1993). Their preferred diet, when present, consists of herbaceous vegetation (forbs, grasses, roots and tubers), aspen, cottonwood and willow (Jenkins, 1981). Other woody plants found in their diet but less desirable, like conifers, sage brush and tamarisk are used for dam construction and the capping of winter food caches.

### **Distribution and Abundance**

Beaver are native to North America and found throughout most of Utah. Durrant (1952) described beaver inhabiting all regions of Utah, except the desert environments of the Great Basin. Early Utah explorers and fur trappers considered beaver abundant prior to 1825 (Rawley, 1985). Aggressive trapping continued into the late 1800's until beaver were considered rare. Beaver harvest was closed by the state legislature in 1899.

By 1912 beaver populations were increasing and nuisance activities were reported. Beginning in 1915, Utah citizens could live trap up to 10 beaver per year for propagation provided 25% of the progeny were released back into the wild. In 1937, thirty caretakers (trappers) live trapped and transplanted 84 beaver onto National Forest Lands. Statewide harvest resumed in 1957, with occasional site specific closures, likely due to an increase in beaver distribution and abundance.

The predicted beaver habitat in Utah was mapped as part of the 1995 Utah GAP Analysis (Figure 1). However, this mapping is based on general assumptions and habitat suitability models do not generally discriminate well for generalists like beaver. In simple terms, beaver need woody and herbaceous plants for forage and deep enough water to maintain under water entrances to their lodges and provide cover from predators. The UDWR conducted a beaver distribution, habitat and population survey from 1971-1982. This survey estimated 4,021 miles (6,471 km) of suitable stream habitat with a carrying capacity of 25,492 beaver statewide (Blackwell and Pederson, 1993). The population in 1981 was estimated at 29,445 beavers (Blackwell and Pederson, 1993). By contrast, more recent estimates by Macfarlane et al. (2014, pp 89-91) conservatively estimate that at least 15,000 miles (24,140 km) of perennial streams in Utah can support dam building activity by beaver (Figure 2). This does not include intermittent streams they sometimes build dams in, nor consider habitat along deeper rivers and 80 that can support beaver in the absence of beaver dam building. Macfarlane et al. (2014, pp 89-91) also point out how difficult it is to reliably estimate population numbers from habitat assessments and

or dam counts, and highlight this by suggesting that such an approach would estimate anywhere between 312 and 58,680 beaver with a best guess of roughly 12,887 dam-building beaver. By contrast, estimating the capacity of streams to support dam building (i.e. how many dams per mile could fit), has been shown to be a reliable method of estimating where beaver build dams and developing realistic expectations for upper limits on such activity (Macfarlane et al., 2015). Such an example is shown in Figure 2 for the entire state of Utah and suggests that at least 226,939 beaver dams could be supported in the state under current conditions. Current beaver distribution and abundance is not fully understood, however they are considered common and occupy much of their historic range. However, based on scaling of partial dam counts ( $n = 2852$  dams over 2128 miles) by Macfarlane et al. (2014) capacity estimates suggests there are likely somewhere between 20,000 and 40,000 beaver dams currently in the state of Utah. The suggestion is that there is significant additional capacity in the system to support more beaver dams, as well as more beaver.

## UTAH GAP ANALYSIS - PREDICTED HABITAT American Beaver

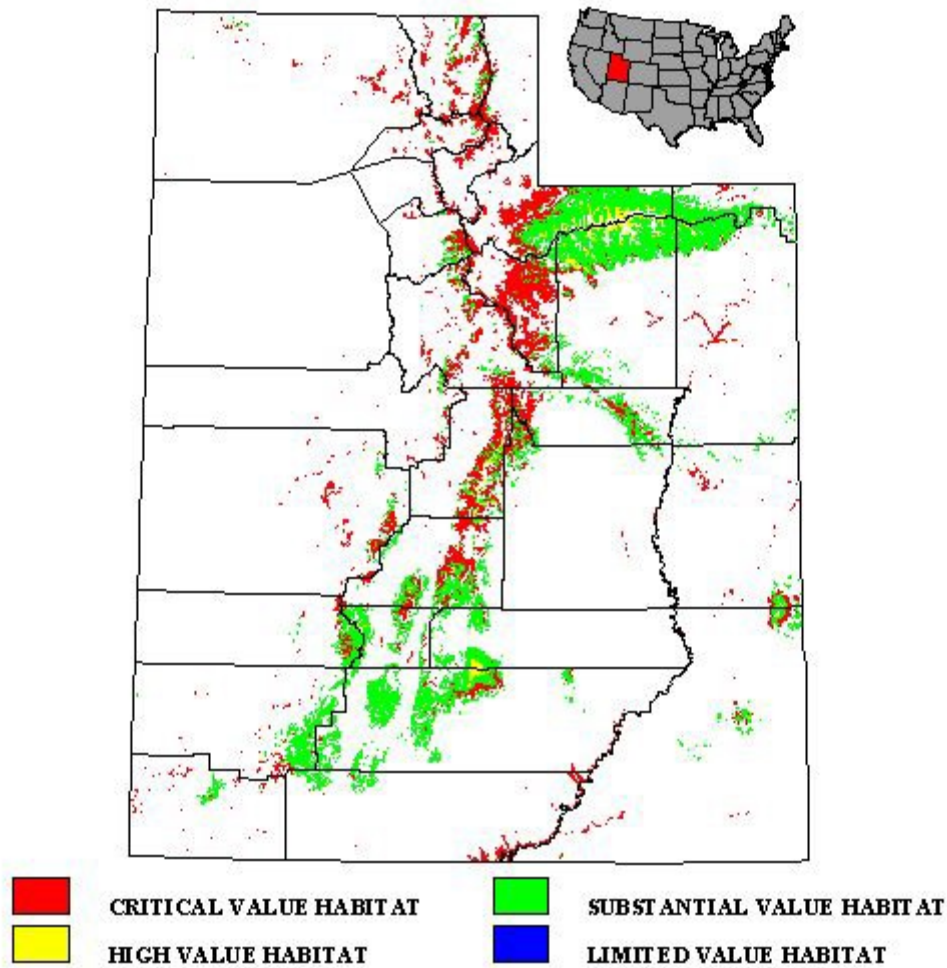


Figure 1. Predicted beaver 'habitat' from Utah GAP Analysis. This analysis does not differentiate beaver habitat (i.e. anywhere with water and wood) from areas where they build dams. Dams are of interest from a management perspective both for the nuisance damage they can cause (flooding and clogging), as well as the ecosystem services they provide in other areas.



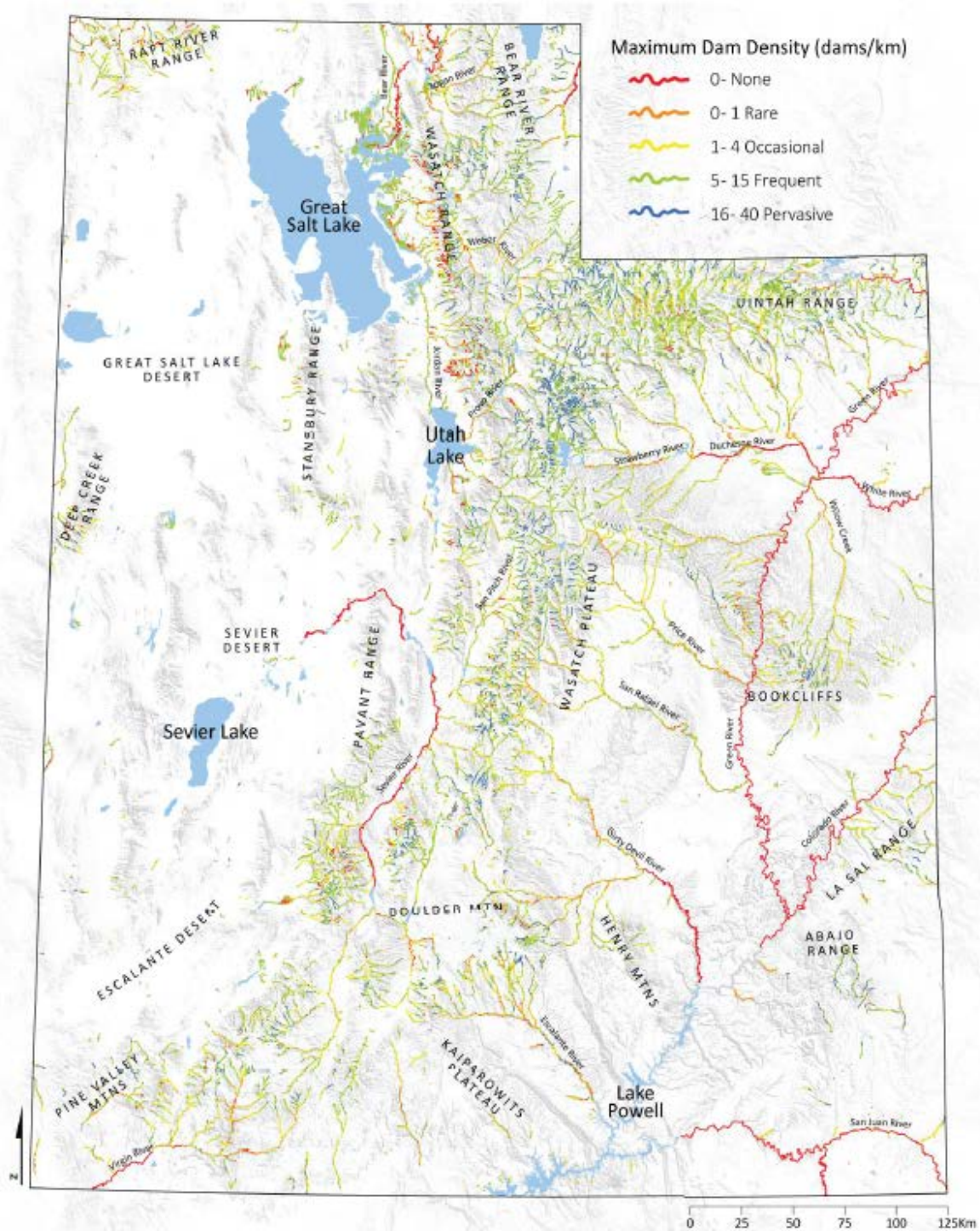


Figure 2. A beaver dam capacity estimate based on existing vegetation and hydrologic conditions. This type of model predicts the ‘capacity’ of individual stream reaches to support dam building activity (maximum number of dams per mile of stream). This estimate from a UDWR study by Macfarlane et al. (2014), conservatively suggests even with current somewhat degraded stream conditions, Utah’s 16,990 miles (27,344 kilometers) of perennial streams could support up to 226,000 beaver dams.

## **Legal Status**

Beaver in Utah are classified as protected wildlife. The UDWR is responsible for their management. There is an open trapping season, which generally runs from October through early April with unlimited take. Beaver causing damage may be taken or removed by the public during closed seasons provided a permit is obtained from UDWR. The UDWR also licenses nuisance wildlife control companies to lethally remove beaver causing damage at any time of year.

## **Management Actions**

The state legislature made it illegal to “kill” beaver in 1899. In 1915 the UDWR (formally referred to at the time as the Utah Fish and Game Department) was given authority to live trap and transplant nuisance beaver. Many of these animals were moved around the state and this effort continued at least through 1954. Live trapping efforts as far as number of individuals, source and translocation sites were not well documented.

Harvest by commissioned trappers began in 1922. From 1922 to 1953 duly commissioned trappers were allowed to harvest beaver with 50% of the pelt proceeds retained by the state. Pelt prices began to drop in 1953, resulting in an upward adjustment of the percentage paid to commissioned trappers. By 1957 the UDWR was given authority to establish an open beaver trapping season eliminating the need for most commissioned trappers other than UDWR employees. During open seasons there was no bag limit but trappers were required to submit their pelts to conservation officers for tagging. Officers tagged each pelt for a fee of \$1.00. This fee was reduced to \$.50 in 1968. The tagging requirement was discontinued in 1974. A statewide beaver trapping season from October to early April with unlimited take has been in place from 1957 to present. Site specific closures have been periodically used to reduce harvest.

Early beaver management consisted of assessing populations in select streams within defined beaver management units. An annual report has been published with beaver management recommendations and limited harvest statistics since 1953. The management recommendation section of the annual report was dropped in 1981. Sport harvest reporting began in 1958 with harvest statistics collected annually since that time. It was not until 1972 when a metric used to measure trapping effort was collected as part of the annual harvest survey. This metric is expressed as the number of trap set-days/beaver. Since 1983 trap set-days per beaver have ranged from 8 to 55.

Nuisance beaver control activities were tracked from 1958 through 1980 and include UDWR and authorized citizen removals. It is unclear if this data were collected prior to 1958 or after 1980.

Harvest statistics for beaver can be found in the UDWR’s annual reports for furbearers on our website.

## ASSESSMENT

### Issues and Concerns

The initial Beaver Advisory Committee in 2010 identified a list of issues and concerns that should be addressed as part of the planning effort. Many of these issues have been addressed since then and additional issues were identified when the plan was reviewed in 2017. The following list comprises these issues.

#### Outreach / Education

- Education on
  - non-lethal control methods
  - the habitat values of beavers
  - accommodating beaver working with private neighbors when a private/public reintroduction is desired
  - restoration techniques using beaver
  - expectation management when using beaver as a conservation and restoration tool
- Plan should balance needs of people, habitat and wildlife species
- Educate the public what UDWR's role or responsibility is in dealing with problem beaver (when we aggressively solve the problem, or when we leave it in the public's hands with the proper permit)

#### Population Management

- Obtain/Maintain a basic picture of distribution/density of beaver in Utah
- Need to understand we will be working in human altered habitat which requires management
- Consider beaver colony distribution and abundance

#### Harvest Management

- Concerned about trapping closures
- Closures should have time frames for evaluation (# years closed until evaluation)
- Trapping limits after beaver have established in a stream
- Consider unique harvest regulations
- Don't eliminate fur harvest program
- Support public use of beaver as a furbearer
- Little need to protect translocated beaver in areas with poor vehicle access and/or during times with low demand for pelts, as is currently the case

## Damage Management / Beaver Conflict Management

- Deal with problems in some areas
  - keeping water moving in small systems
  - wetland management concern
  - lethal vs nonlethal removal decision model
- Problem beaver management using trappers
- Process to streamline problem beaver management using trappers (COR's for trappers statewide)
- Retain ability to help cooperators in a timely fashion (beaver damage)
- Educate the public about non-lethal techniques
- Refer trappers to resolve problems
- Build statewide list of trappers willing to help solve the problem
- Conflict areas where beavers should not be allowed to establish dams
- Consider management system (decision matrix) from non-lethal to lethal control
- Use of explosives to breach dams with other agencies assisting. Improve communication within UDWR when beaver dams are removed
- Materials list/specifications for flow control devices (pond leveler, culvert protection)
- Video on construction of flow control devices
- Problems in managed wetlands, resolve with non-lethal methods
- Provide drawings of non-lethal management techniques
- Tree protection methods for new restoration sites
- Cooperate with private landowners and water right holders with both removal and introductions
- Procedures for handling nuisance beaver written into a policy similar to other species like cougar and bear
- Refine the nuisance beaver permit process
- Keep an updated list of local trappers in each region (perhaps on the \S drive)
- Educate the public what our role or responsibility is in dealing with problem beaver (when we aggressively solve the problem, or when we leave it in the public's hands with the proper permit)
- Review the UDWR's role for use of explosives in breaching dams (stream alteration permit process, etc.)
- Maintain a database of beaver problems with GPS locations (create a beaver nuisance form for each region to fill out on every call for better records of problem areas and history)
- Dealing with problem beavers in the following areas
  - Residential urban (tree cutting, flooding)
  - City nuisance beavers (culvert damming, flooding, etc.)
  - Landowners (damming irrigation canals)
  - UDOT (major roadway flooding)
  - Other (Railroads, businesses by rivers – tree cutting-aesthetics)
- Retain ability to cooperatively manage/address nuisance issues around campgrounds, roads, dams/spillways, diversions, trails

- Potential funding and information for non-lethal beaver management structures where appropriate.

#### Disease/Aquatic Nuisance Species Management

- Disease transmission
- Consider invasive species introductions through transplants (mussels)

#### Research

- Ability to assist with scientific collection requests

#### Watershed Restoration

- Some areas suitable for establishment of beaver
  - need to create/establish standards and guidelines for potential release sites
  - need to individually analyze potential release sites due to existing riparian health mitigation
  - internal scoping (NEPA) process necessary before relocation could occur (BLM land)
- Transplants of native wildlife (beaver) are generally considered “State Actions” and as such, typically require no National Environmental Policy Act documentation unless federal funds are involved.
- Pro beaver transplant
- Support restoration of beaver and adequate protection where establishing
- List of
  - sites approved/available for reintroduction
  - source sites
- Encourage live-trapping of entire families
- List of people who know how to live trap
- Explore certification of non agency people to live trap and move beaver to approved sites
- Develop list of beaver re-introduction sites (private lands) and source populations
- Water right issues
- Go to areas with the least number of conflicts
- Cooperate with private landowners and water right holders with both removal and introductions
- Consider using beaver as a stream restoration tool
- Beaver are a good tool that could be used to restore degraded riparian communities that could benefit many other wildlife species

- Need to consider the site characteristics of the locations where beaver will be relocated/re-introduced
  - Enough vegetation to support a beaver population
  - Will they create more depredation problems in the new location? i.e. roads, private land, water rights, etc.
  - How will they affect the fish habitat/population and migration?
- Potential funding and information for non-lethal beaver management structures where appropriate
- Transplant “stock” should not be held to nuisance beaver only, as has been the case in the past...more efficiency in capture and movement as well as success in survival could be attained by using beaver from colonies in neighboring watersheds
- Little need to protect translocated beaver in areas with poor vehicle access and/or during times with low demand for pelts, as is currently the case
- Potential benefits of aspen/cottonwood restoration in improving beaver habitat

## **OBJECTIVES, STRATEGIES AND MANAGEMENT SYSTEM**

The Beaver Advisory Committee developed the plan goal, objectives, strategies and management system to address identified issues and concerns. Following are the objectives, strategies and management system developed by the advisory committee. The plan goal is found at the beginning of the document on page 4. In 2017 after working on many of the goals spelled out by the committee the plan was revised to implement new tools and research.

### **Outreach and Education**

Objective 1:

Increase awareness of and appreciation for the role of beaver in Utah’s ecosystems by stakeholders (landowners, educators, recreationalists, sportsmen, water rights holders).

Strategies:

1. Conduct a baseline survey of stakeholders to establish their current understanding of the role of beaver in Utah’s landscape.
2. Establish at least one showcase beaver management area in each UDWR Region.
3. Evaluate program effectiveness periodically or as new information and research becomes available.

Strategies Accomplished as of 2017 Review:

1. Developed “Living with Beaver” informational materials outlining the difference between nuisance and beneficial beavers and options for landowners, agencies and the general public for coexisting with beavers (Tippie, 2010). These materials highlighted techniques, benefits and costs associated with non-lethal



methods for beaver management all the way through lethal removal as a final option. See also <http://beaversolutions.com> and Pollock et al. (2015).

2. Adaptive beaver management plans have been prepared for Park City, Walmart in the City of Logan (Portugal et al., 2015a), and Hardware Ranch to mitigate beaver nuisance activities, but allow beaver to stay in an area. The plans can be adapted to other situations, but show how problem identification, alternative pathways, and identify triggers and options for mitigation activities.
3. Completed Wildlife Notebook Series publication on beavers.

#### Objective 2:

Improve the understanding of all UDWR and other governmental agency employees involved in beaver management and assure consistent transmission of information and application of management actions.

#### Strategies:

1. Conduct a baseline survey of agency employees to establish their current understanding of beaver management options and the role of beaver in Utah's landscape.
2. Assess how the agencies currently handle beaver management challenges.
3. Establish guidelines to bring consistency and inform UDWR employees and assisting agencies (similar to cougar and bear guidelines) by outlining procedures for management of beaver in urban, rural and upper watershed settings.
4. Evaluate program effectiveness periodically or as new information and research becomes available.

## **Population Management**

#### Objective 1:

Maintain reproducing beaver populations within their current distribution in appropriate habitat. (See Watershed Restoration Objective for population expansion)

#### Strategies

1. Actively pursue funding and partnerships to conduct ground and possibly aerial beaver population and habitat suitability surveys to obtain 1) detailed distribution information: and, when possible, density estimates.
2. Obtain methodologies and results from other agencies currently conducting beaver surveys. Consider the methodology developed by UDWR in the statewide 1971-1981 study to allow for comparison of current and historical population data.

## Harvest Management

### Objective 1:

Maintain recreational opportunity for a minimum of 350 trappers and a sustainable harvest of 3,500 beavers annually. (See Watershed Restoration Objective for population expansion)

### Management System:

Maintain baseline regulated statewide harvest management program of traditional seasons and unlimited take unless:

1) Average set-days/beaver over a three year period is greater than 34; then season length will first be shortened (open a week later and close a week earlier) and if additional protection is necessary, area closures will be expanded to bring set-days/beaver into historical range (11 to 34 set-days/beaver) over the following three year guidebook cycle.

(-OR-)

2) Average number of beavers trapped over a three year period exceeds 3,500 and average set-days/beaver goes above 18; then season length will first be shortened (open a week later and close a week earlier) and, if additional protection is necessary, area closures will be expanded to reduce harvest and maintain catch per unit effort below 18 set-days/beaver over the following three year guidebook cycle.

### Strategies:

1. Continue post season furbearer surveys to estimate beaver harvest, number of trappers and catch per unit effort at the county level.
2. Evaluate the need for stream closures, based on both sustainable harvest targets and restoration objectives, listed in the guidebook once every three years. Remove or add streams based on achieving desired results, harvest vulnerability and high level of conflict. Post signage of temporary harvest closures to notify public both of closure and its intended benefits (e.g. population viability, sustainable harvest, restoration, etc.; (Figure 6).
3. Determine the level of protection required for translocated or diminished beaver populations by considering harvest vulnerability. Create and maintain a map of known and or monitored beaver populations within UDWR. One of the following approaches will be selected.
  - a. (High Harvest Vulnerability i.e. less than 0.5 mile from open roads/access points) – close specific watersheds for a given length of time. Generally the length of time should not exceed six years or two three-year guidebook cycles. Upon transition from the high harvest vulnerability, the population will be provided protection identified under the moderate harvest vulnerability approach.
  - b. (Moderate Harvest Vulnerability i.e. 0.5 to 1.0 mile from open roads/access

- points) – encourage light harvest by signing appropriate areas to obtain voluntary compliance. This management approach will be useful for streams that fall between the high and low harvest vulnerability.
- c. (Low Harvest Vulnerability i.e. over 1.0 mile from open roads/access points) – access constraints or demand for pelts limit trapping interest. This management approach is self regulating (requires no action) and relies on the “law of diminishing returns”.
4. Upon completion of a statewide population survey (contingent upon available funding) identified in Population Objective section of the plan (O1 S3), the current beaver harvest management system will be adjusted accordingly. Particular consideration should be given to use of closures in areas to which beaver are being translocated and/or areas where restoration efforts are focused on getting viable populations. Note that population surveys should not be based on number of dams, dam complexes or lodges alone, as individual beaver colonies in Utah have been shown to actively maintain numerous complexes and lodges over 10’s of kilometers of streams (i.e. easy to over-estimate population from dam counts).



Figure 3– Example of signage used to notify public of temporary beaver harvest closure and its intended purpose.

### Strategies

1. Harvest closures were implemented on a number of streams in the state (e.g. Figure 6) to 1) encourage recovery and expansion of existing populations in particular streams for habitat restoration purposes; 2) to provide protection for translocated beaver to new systems where their populations had not established; and 3) facilitate research and monitoring of beaver activity and impacts in study systems without confounding factors of harvest.

## Damage Management

### Objective 1:

Increase consistency in the response options (lethal and non-lethal) currently in use and increase the frequency of use of non-traditional options (e.g. beaver deceivers, live-trapping) used by UDWR, governmental and non-governmental agencies and landowners for managing beaver causing property damage.

### Strategies:

1. Assemble a list of available control/abatement options currently in use in Utah by UDWR, governmental and non-governmental agencies and landowners.
2. Implement non-lethal, living with beaver mitigation options to mitigate nuisance behavior and damage from beaver where possible (e.g. see Figure 4). Encourage following a process of specific evaluation of threats and or damages potential nuisance beaver could or are actually causing, and proceed through a series of management responses that start simple and inexpensive, and progress as needed through more involved responses (see Figure 4 for example considerations within water courses and Figure 5 on a beaver dam by dam basis).
3. Continue to issue Certificates of Registration (COR) to nuisance wildlife companies. Look for opportunities to relax control options available to companies (e.g. live trapping, snares and other methods).
4. Generate and maintain a list of individuals that have an interest in trapping beaver (including live-trapping).
5. Issue CORs to live-trappers who have undergone training, issue letters of authorization to lethal trappers on the list to address problems outside the trapping season and use them as a resource to help resolve nuisance conflicts where 'living with beaver' mitigation strategies are either not an option or not successful
6. Maintain a list of seasoned trappers by county of interest to harvest beavers as an option to resolve issues in high conflict areas during the trapping season. This list will be retained, updated and distributed by UDWR.
7. Use outreach materials described in Outreach and Education section of this plan (O1 S3) to inform landowners of the options available to address present and prevent future damage caused by beaver. Develop webpage on UDWR website as resource for land owners.
8. As agency personnel work through options for addressing present and preventing future damage caused by beaver, use the guideline (tiered approach) proposed in the Outreach and Education section of this plan (O2 S3). Where appropriate, use adaptive beaver management plans to address and map concerns.
9. Develop an online nuisance beaver reporting form and central database to track damage complaints (inter- and intra-agency), for the purpose of documenting *actual realized* high conflict areas, differentiating those from BRAT-predicted *potential* conflict areas (<http://brat.joewheaton.org>), and to tracking costs and effectiveness of methods. If possible, revise BRAT conflict models (Figure 6) to reflect nuisance reports as well as management, stakeholder and landowner tolerances for beaver conflicts and willingness to mitigate by non-lethal means.

10. Where dam removal is deemed necessary, and explosives are used as a means of dam removal, each DWR region will evaluate need and provide certified explosives training to employees who will use this method of dam removal. Coordinate beaver dam removal efforts within and among agencies to insure non-target species are not affected.
11. Develop an MOU between UDWR and USDA Wildlife Services for nuisance beaver management and response.

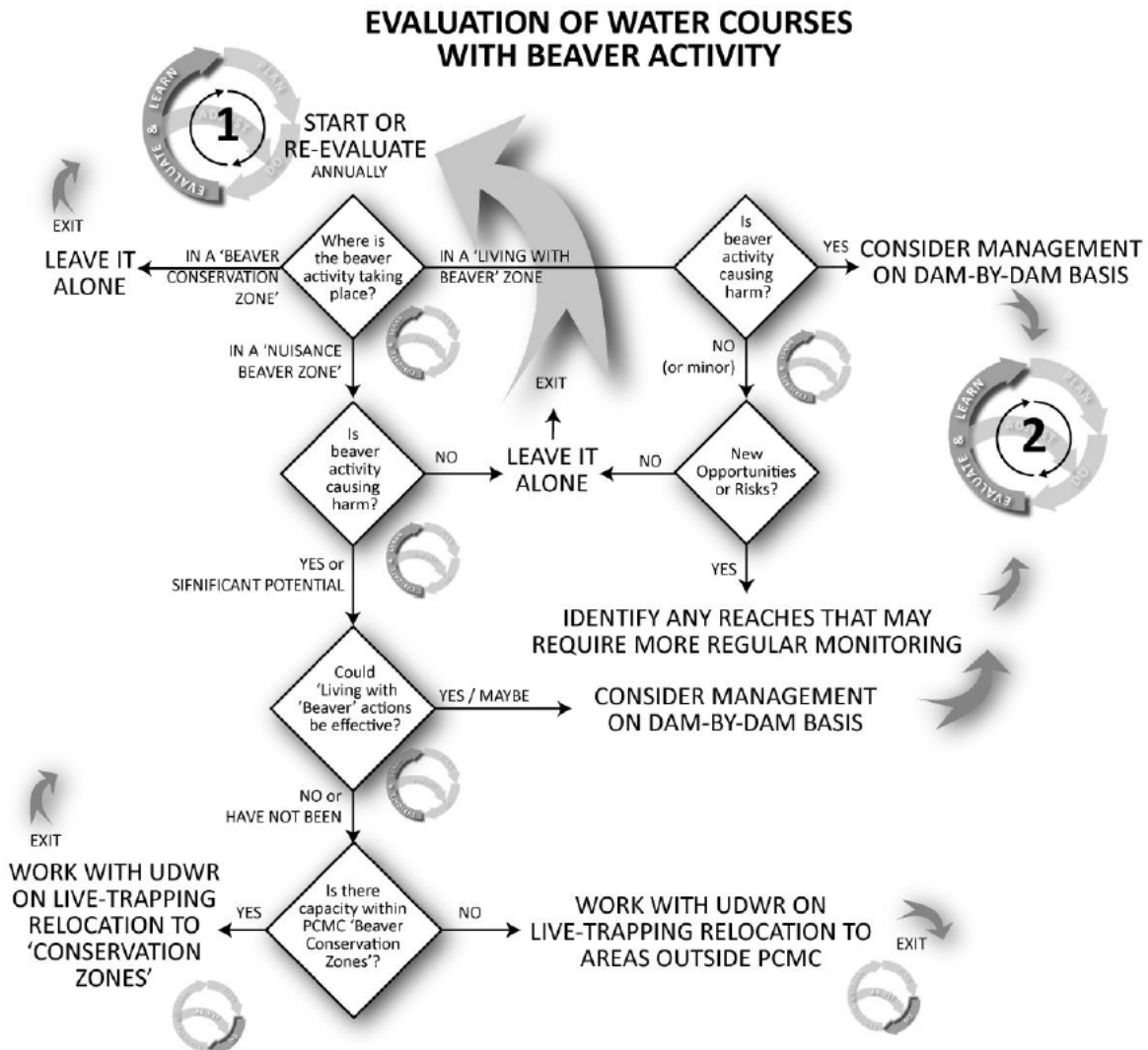


Figure 4 – Example of evaluation of beaver activity in water courses for damage management. This represents a key component of an ‘adaptive beaver management’ plan for evaluating potential ‘nuisance beaver activity’ on water courses mapped as ‘Living with Beaver’ zones in BRAT Management model. Figure from Wheaton (2013) developed for Park City Municipal Corporation (PCMC), but could be adapted as needed.

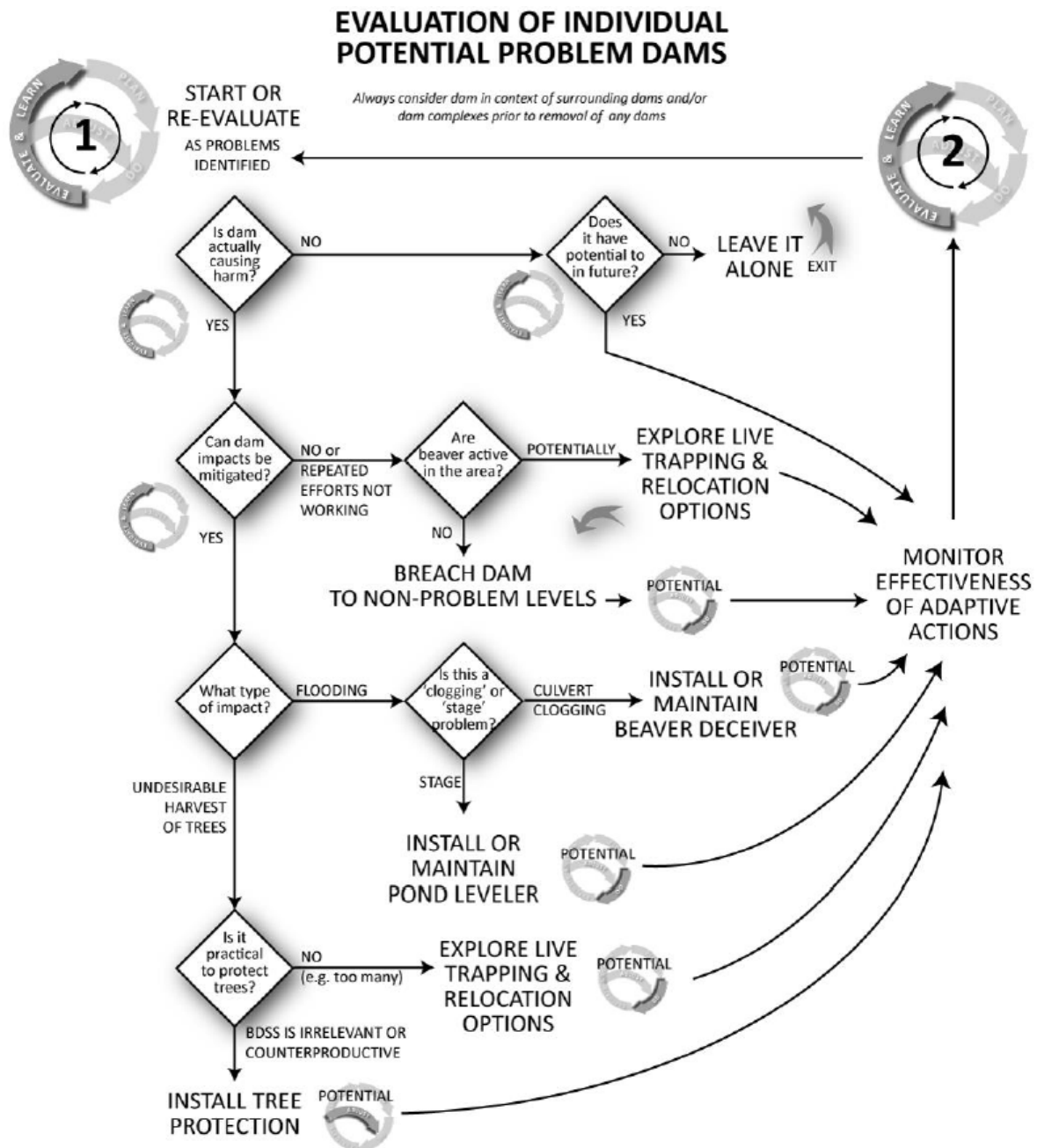


Figure 5 - Example of considerations of individual potential problem beaver dams and management responses. This is a key component of an ‘adaptive beaver management’ plan for evaluating potential ‘nuisance beaver activity’ at individual dams in water courses mapped as ‘Living with Beaver’ zones. Figure from Wheaton (2013) developed for Park City Municipal Corporation (PCMC), but could be adapted for UDWR purposes.



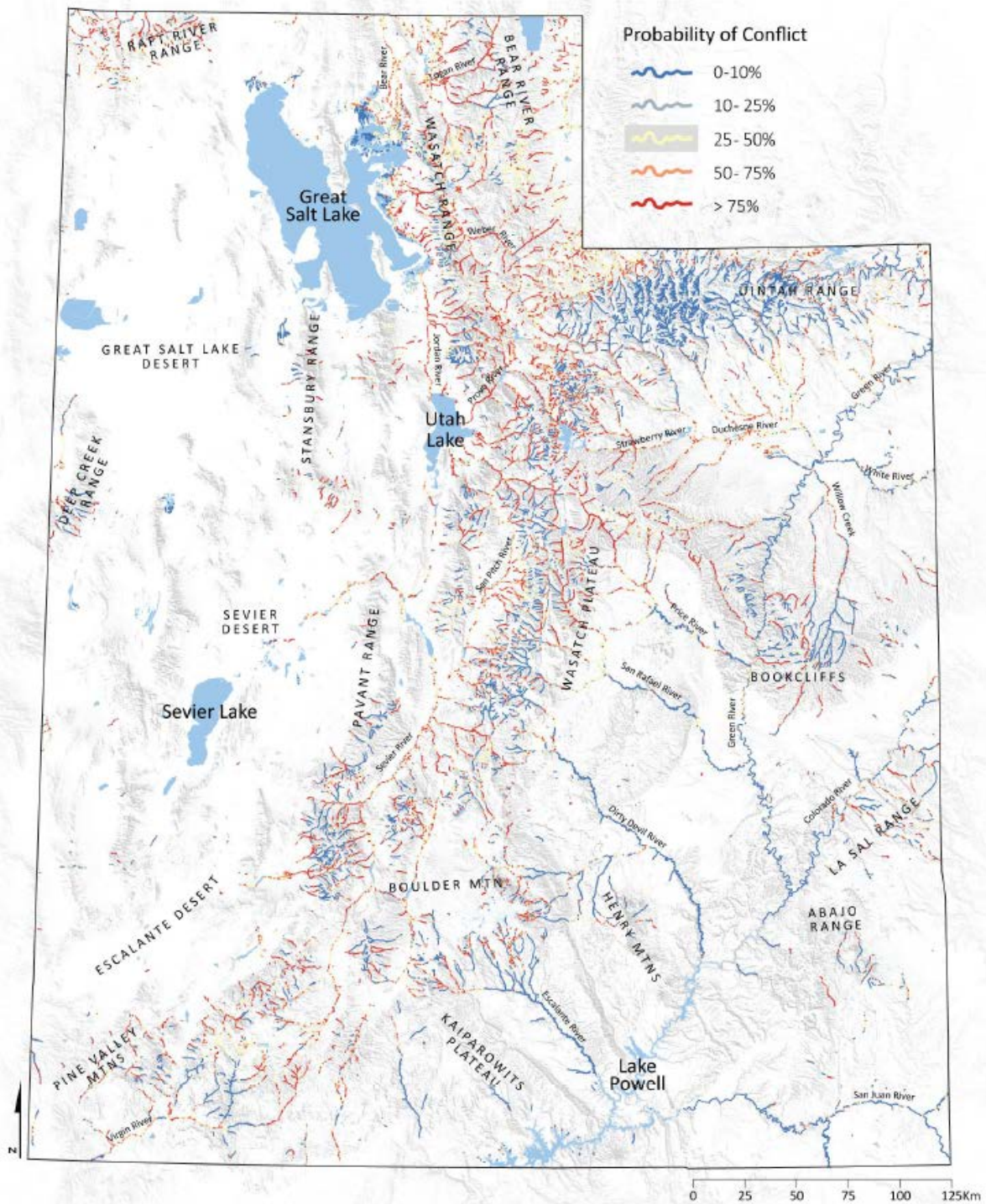


Figure 6 – Example of a human-beaver potential conflict model, based on proximity to roads, culverts, bridges, railroads and more intensive land uses from Macfarlane et al. (2014).

#### Strategies Accomplished as of 2017 Review

1. Since 2010, a variety of non-lethal control/abatement and living with beaver options have been successfully employed throughout the state ranging from beaver deceivers, pond-levelers and caging, to live-trapping and relocation. These solutions



- are not fool-proof, but are cost effective and have been working.
2. Training of ‘living with beaver’ mitigation strategies has been provided to UDWR, NRCS, BLM and USFS partners within Utah (<http://beaver.joewheaton.org>), and these agencies have all successfully enacted such mitigation strategies on a mix of private and public lands within Utah.
  3. Adaptive beaver management plans have been prepared for Park City (Wheaton, 2013), Wal-Mart in the City of Logan (Portugal et al., 2015a), and Hardware Ranch (Portugal et al., 2015b) to mitigate beaver nuisance activities, and progress through a series of simple and cost effective alternatives. The plans can be adapted to other situations, but show how problem identification, alternative pathways, and identify triggers and options for mitigation activities.
  4. The Utah BRAT model (Macfarlane et al., 2014) was run state-wide to conservatively identify potential human-beaver potential conflict areas (likely an over-prediction) and combines this with context of dam-building capacity models to identify ‘Living with Beaver’ zones. Such zones are predicted to have both the capacity to support dam building beaver, and the potential for that to cause flooding, clogging, or undesirable harvest impacts.

### **Disease/Aquatic Nuisance Species Management**

#### Objective 1:

Minimize the possibility of spreading aquatic diseases (e.g., whirling disease) and aquatic invasive species (AIS) (e.g., Quagga and zebra mussels, New Zealand mud snails and clams) from known contaminated sources to clean watersheds as a result of moving beaver between drainages through 2020.

#### Strategies:

1. Use ‘The Protocol for Live Trapping, Holding and Transplanting Beaver’ to screen source populations of beaver for transfer to other waters. Beavers should not be translocated from known waters containing whirling disease or ANS to waters believed to be clean without first following the Decontamination Protocol.

## Strategies Accomplished as of 2017 Review

1. A “Protocol for Live Trapping, Holding and Transplanting Beaver” was developed and followed during live trapping and translocation activities throughout the state. The protocol was updated to make it more pragmatic to implement in 2017.

### Objective 2:

Minimize the possibility of spreading aquatic diseases and AIS from known contaminated sources to clean watersheds as a result of lethal trapping used during control actions or recreational seasons.

### Strategies:

1. Follow best practices for decontaminating all gear used in translocating beaver.
2. Provide decontamination information via web or brochure to recreational trappers during the purchase of their furbearer license to encourage voluntary compliance with decontamination protocol.

## Strategies Accomplished as of 2017 Review

1. Developed a gear decontamination protocol. This included verbiage requiring adherence to decontamination protocol in all COR issued to nuisance wildlife companies.

## **Research**

### Objective 1:

Fund applied research that can help improve UDWR’s beaver management.

### Strategies:

1. Evaluate proposals to UDWR’s Research Council and provide support for beaver research.
2. Incorporate the collection of scientific information relative to beavers into the MOU with USDA Wildlife Services.
3. Encourage and support research proposals aimed at better assessing and tracking beaver population dynamics.
4. Encourage and support research to improve the understanding of the benefits and impacts of beaver dam building activity on other UDWR target management species as well as ecosystem services provided by beaver dams.
5. Consider partnering with UDWR staff, WRI, Utah AGRC and USU to improve and update BRAT with more resolved management layers and inputs. These include: censusing beaver dams throughout the state, tracking beaver dam dynamics, inventorying beaver nuisance issues, mapping land owner and management tolerances for beaver, and exploring water resources impacts.

## Strategies Accomplished as of 2017 Review:

1. A \$40,000 UDWR grant to Utah State University was used to fund the development and application of the Beaver Restoration Assessment Tool (BRAT – <http://brat.joewheaton.org>), which has been used to set more realistic expectations for where various management strategies involving beaver make most sense (Macfarlane et al., 2015; Macfarlane et al., 2014; Wheaton and MacFarlane, 2014).
2. With support from USFS, research from Lokteff et al. (2013) assessed the degree to which beaver dams impact the movement of trout in Temple Fork (Northern Region).
3. With support from the USFS, Hafen (2017) evaluated the how much surface water storage and increase in groundwater storage was possible with beaver dams throughout the entire Bear River Basin and specifically addressed ‘to what extent might beaver dam building buffer water storage losses associated with a declining snowpack?’

## Watershed Restoration

### Objective 1:

Work to improve riparian habitats, associated streams and wetlands in as many suitable tributaries as is feasible through translocating beaver into unoccupied suitable habitat on public and/or private land.

### Strategies:

1. Facilitate and promote beaver-assisted restoration activities with translocation of nuisance beaver in ways that minimize potential for human-beaver conflicts as a result of the translocation, and maximize likelihood that beaver will take to a particular area. As a first pass at making this assessment and in preparing planning materials or funding applications, leverage the Utah Beaver Restoration Assessment Tool (BRAT) from Macfarlane et al. (2015); Macfarlane et al. (2014) to evaluate potential transplant sites. Sites that qualify as “Low-hanging Fruit Restoration Zone” (i.e. have ample existing capacity and minimal conflict potential), and/or sites that are identified as “Quick Return Restoration Zone” should be considered for transplants first (e.g. Figure 7). By contrast, site mapped as ‘Long Term Restoration Zone’ may require improvements to riparian and or grazing management first, before being suitable release sites for beaver. Utah BRAT by Macfarlane et al. (2014) was produced with nationally available datasets and should not be treated as the ‘absolute answer’, nor does it provide coverage of some areas (e.g. streams mapped as intermittent, but that are actually perennial) that may be suitable release sites. Sites that do not fall into these categories can be evaluated on a case by case basis, but priority will be given to sites identified by BRAT and verified in the field and fall in these categories.
2. Conduct site-specific evaluations using BRAT and considerations posed by Woodruff and Pollock (2015). Coordinate within DWR sections to evaluate suitability of reintroduction sites.
3. Coordinate at the UDWR regional level with land management agencies to

- determine the level and need for environmental compliance (NEPA).
4. UDWR regional personnel will coordinate with local governments, land management agencies, private landowners and any other affected parties that have an interest (positive or negative) in the establishment of beaver populations within translocation watershed.
  5. Develop at the UDWR regional level Habitat Authorization, Watershed Initiative project proposals, and other possible sources to fund site-specific beaver translocations for the purpose of restoring important statewide aquatic environments.
  6. When possible, live trap and translocate entire family groups. If not possible, find suitable male-female adult pairs for release together.
  7. Generate a list of trained UDWR personnel that have an interest in live trapping beaver and use them as a resource to establish new populations. Issue CORs to trained non-UDWR personnel for the purpose of assisting with live-trapping and translocation efforts. A base requirement for a COR would be the applicant's ability to demonstrate proficiency in live trapping and translocation.
    1. Proficiency would be demonstrated by successful completion of a
    2. UDWR-approved training program.
    3. Incorporate live-trapping options into the MOU with USDA Wildlife Services.
  8. Encourage land management agencies and private property owners to manage riparian habitat (aspen, willow and cottonwood) to support translocated beaver populations. Work with Utah Grazing Improvement Program and ranchers on both private and public land to find management solutions that promote the co-existence of sustainable grazing with thriving beaver populations.
  9. Select a level of harvest protection for translocated beaver populations from the Harvest Management Objective section (O1 S3abc).
  10. If there is likelihood that translocated beaver could become a nuisance within 5 miles of a release site and stakeholders are concerned, an adaptive beaver management plan should be developed to identify how they will be dealt with utilizing strategies identified in the Damage Management section.

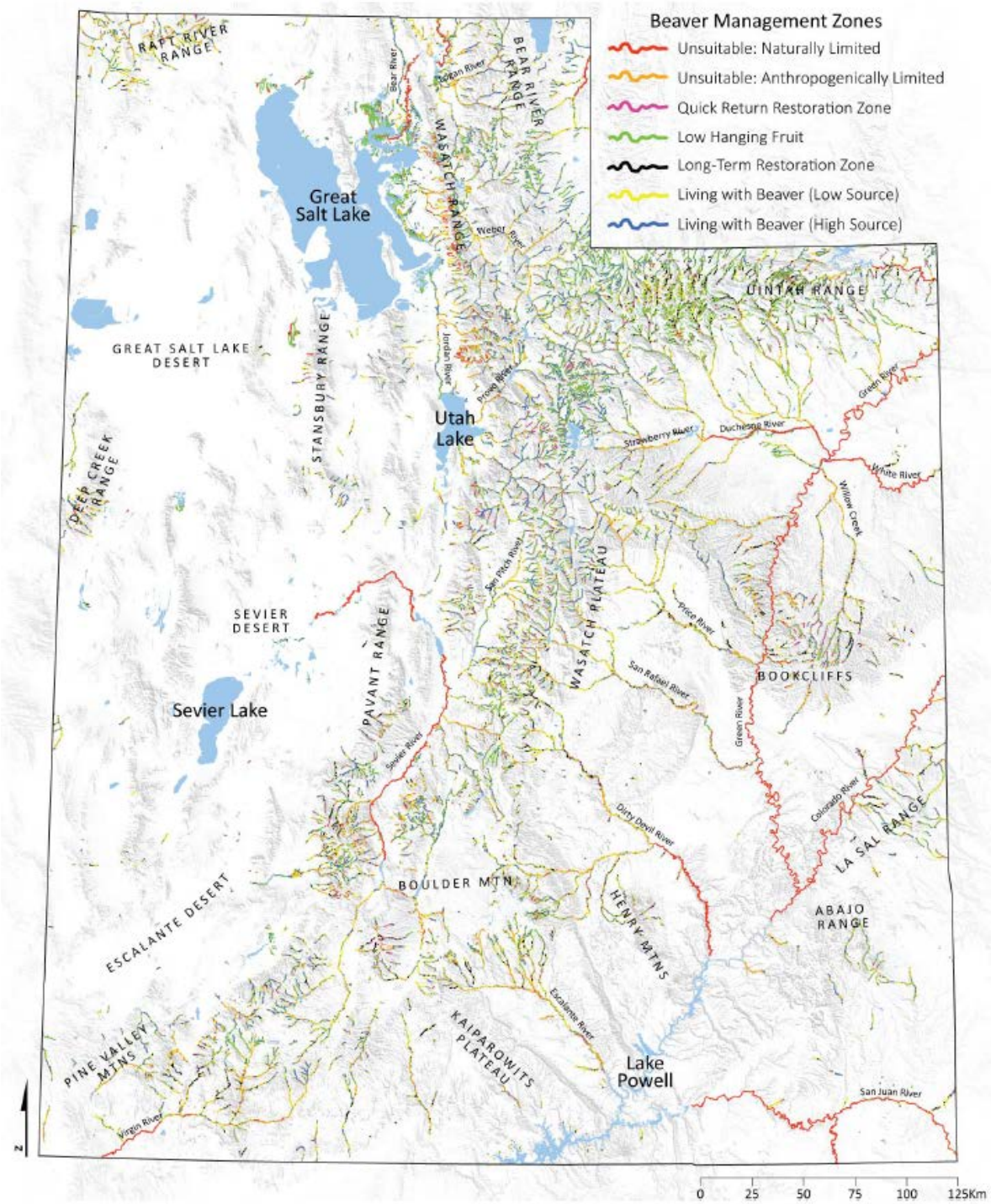


Figure 7 – Example from BRAT (Beaver Restoration Assessment Tool) of preliminary, model predicted potential beaver management zones.

Strategies Accomplished as of 2017 Review

1. Nuisance beaver had been successfully translocated to a variety of watersheds throughout the state and used as a restoration agent.

## Objective 2:

Facilitate and promote beaver-assisted restoration activities and expansion of existing beaver populations in areas that beaver are already present, habitat exists to already support them and human-beaver conflict potential is low and/or easily mitigated.

### Strategies:

1. Identify areas with beaver activity, where there dam footprint could be expanded without causing impacts. This can be done using a mix of existing beaver dam surveys, beaver activity surveys, and leveraging BRAT capacity model assessments. Where existing number of dams in potential 'restoration or conservation zones' is well below BRAT predicted capacity (i.e. < 10% of capacity), promoting expansion in these areas is recommended.
2. Assess what might be limiting or keeping beaver from expanding (e.g. limited woody vegetation resources, over-trapping, predation, incised channel conditions), and identify management actions that might address those specific limiting factors (e.g. riparian improvement, grazing management changes, temporary tapping closures, more cover (i.e. deep water) for beaver, or use of beaver dam analogues to either create some initial cover or intermediate stability from flood disturbance).

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# Scofield Reservoir Fishery Management Plan

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**Scofield Reservoir Advisory Committee**

**July 2017**

## **Scofield Reservoir Advisory Committee**

A public advisory committee was formed on January 7, 2017. During the fall of 2016 the Utah Division of Wildlife Resources (UDWR) conducted an on-line survey to gather public input and perceptions regarding the fishery at Scofield Reservoir. The final survey question asked respondents if they would be willing to serve on a committee to help develop a Scofield Reservoir Management Plan. Committee members who indicated a willingness and desire to serve on the committee were chosen and asked to represent Utah anglers on the committee. Other committee members were selected to represent Scofield area residents and cabin owners, the Utah Division of State Parks, and the Blue Ribbon Fisheries Council. Thus, the Scofield Reservoir Advisory Committee consists of individuals representing varying interests, constituency groups, and angling types.

### **Committee members:**

Doug Cloward, Scofield Area Residents and Cabin Owners  
Chad Gasser, Angler  
Jared Hone, Angler  
Jonathan Hunt, Utah Division of State Parks  
Derris Jones, Southeastern Region Advisory Council  
Mike King, Utah Wildlife Board (observer)  
Tony Nelson, Angler  
Tom Ogden, Angler  
Ransford Sorensen, Angler  
Dave Varner, Blue Ribbon Fisheries Council

### **Other committee participants:**

Calvin Black, Utah Division of Wildlife Resources  
Jordon Detlor, Utah Division of Wildlife Resources  
Justin Hart, Utah Division of Wildlife Resources  
Daniel Keller, Utah Division of Wildlife Resources  
Ken Strong, Sportsmen for Fish and Wildlife

## **Advisory Committee Purpose and Mission**

The purpose of the committee was to provide public input to the UDWR regarding sport fisheries management for Scofield Reservoir and to help develop a long term plan for the fishery. The Committee determined its mission to *“Develop a sport fish management plan that will provide the Utah Division of Wildlife Resources with recommendations and direction to create a sustainable and high quality fishery at Scofield Reservoir”*.

## **Constraints**

All recommendations will consider the following:

1. Existing state and federal laws and policies

2. Life history/biology of fish species
3. Reduction and utilization of Utah chub, not eradication, is the desired outcome of changing the species composition in Scofield Reservoir
4. Limnology and morphometry of the reservoir
5. Downstream impacts to aquatic resources (i.e., Green River endangered species, Utah sensitive species like Flannelmouth and Bluehead sucker, and the Blue Ribbon Stream Fishery)
6. Current budgetary and funding constraints
7. Availability and compatibility of alternative fish species for stocking in accordance with the Stocking Procedures Agreement “Compatible Species List” (USFWS 2009 and 2015)
8. Public perceptions and expectations

### **Scofield Reservoir and Current Conditions**

Scofield Reservoir is a high elevation (7,618 ft) impoundment on the Price River, eventually flowing to the Colorado River, located within the Manti-La Sal National Forest in Central Utah. The reservoir was created by the Scofield Dam in 1926 and is predominantly used for irrigation water storage, with angling, recreation, and flood control as additional benefits. The reservoir has a capacity of 73,600 acre-feet at full pool, mean surface area of 2,815 acres, and a mean depth of 25 feet (Bureau of Reclamation 2011). The Reservoir is operated by the United States Bureau of Reclamation (USBR) and shoreline lands are owned by a variety of entities (e.g., USBR, Utah Division of State Parks, Utah School Institution and Trust Lands Administration, the United States Forest Service, and various private property owners).

Historically, Scofield Reservoir has been managed as a basic yield (family) fishery with rainbow trout *Oncorhynchus mykiss* as the dominant species. The reservoir has a history of water quality issues related to water management (viz., low water), excess phosphorus loading, and low dissolved oxygen concentrations. These conditions can lead to periodic algal blooms and seasonal fish kills (both summer and winter). Scofield Reservoir is listed as impaired on the 303(d) list with total phosphorus and dissolved oxygen as the pollutants of concern (Department of Environmental Quality 2010). Scofield Reservoir has had a history of illegal introductions and fishery management challenges associated with non-native species. Rotenone treatments have occurred three times since the reservoir was built (1958, 1977, and 1991) to combat Utah chub *Gila atraria*, walleye *Sander vitreus*, and common carp *Cyprinus carpio*. After all treatments, stocking of rainbow trout and various strains of cutthroat trout occurred, and a basic yield (family) fisheries management philosophy was quickly reinstated.

In 2005, Utah chub *Gila atraria* were again documented in the reservoir for the first time in over a decade. As a result, tiger trout stocking began in 2005, a slot limit (15-22 inches) on tiger trout and cutthroat trout was implemented in 2009, and Bonneville cutthroat trout (Bear Lake strain) stocking was also initiated in 2009. Utah State University completed a two-year research project in 2013 assessing the effectiveness of the new, predator heavy, management strategy. The study suggested that Utah chub could effectively be controlled by tiger trout and cutthroat trout

predation by maintaining a given population size of adult predators (Budy et al. 2014). Based on gillnet surveys over the last several years, it appears the size structure of Utah chub has been shifted to a large (>10 inches) mean size (Black 2016). This indicates that Utah chub are being controlled and the adult population is in a state of senescence. However, the adult chub population constitutes such a large portion of the biomass, cessation of rainbow trout stocking occurred in 2014 because of interspecific competition and low return to the creel. Without a family friendly harvestable component to the fishery, angler satisfaction and use at the reservoir has steadily declined. Between 2005 and 2016 angling use at Scofield Reservoir has declined by nearly 70% (Hart and Birdsey 2006; UDWR unpublished data 2016).

### **Desired Condition and Species Assemblage**

Based on the results of the online survey (Appendix I) and the discussion at the initial Scofield Reservoir Advisory Committee meeting, it is evident that change needs to occur in the fishery. All committee members expressed the need to reduce and control the Utah chub population, and agreed it was the most limiting factor in developing a quality fishery at Scofield Reservoir. Additionally, a harvestable, family friendly, component to the fishery needed to be regained as quickly as possible. Similarly, the existing trophy component that Scofield Reservoir currently contains with its cold water predators needs to be maintained, and ideally enhanced moving forward. It was also agreed upon that adding diversity to the fishery in the form of alternative fish species was desirable to the committee and the anglers of Utah. The UDWR as well as the Advisory Committee would like to regain the Blue Ribbon Fishery status at Scofield Reservoir and increase the economic benefits the fishery brings to the Utah Division of State Parks, the town of Scofield and nearby housing associations, and Carbon County.

### **Stocking Agreements and Escapement Prevention**

In 2009, the wildlife management agencies of three states (UT, CO, and WY) within the upper Colorado River Basin (UCRB) and the U.S. Fish and Wildlife Service (USFWS) entered into an agreement which defined the Stocking Procedures for nonnative fish in the UCRB (USFWS 2009). In an ongoing effort to provide a balance of sustainable sportfishing opportunities with prevention of potential downstream impacts to Endangered Fish Recovery efforts: the signatories to the Stocking Procedures developed a list of “compatible” and “non-compatible” aquatic species for sportfish management (USFWS 2014 and 2015). Three species on the “compatible” list (sterile walleye, hybrid striped bass, and tiger muskellunge) require the use of screens or nets to prevent downstream escapement. The UDWR is committed to the prescribed use and development of the sterile predators which provide sportfishing opportunities and are important fisheries management tools.

Three of the species chosen for stocking into Scofield Reservoir are considered a threat to endangered fish in the UCRB if they reach riverine habitats (sterile walleye, hybrid striped bass,

and tiger muskellunge). Stocking of these species within the reservoir is contingent upon working towards the design and installation of a fish barrier to prevent escapement. The first step in preventing escapement will be for the UDWR to assess all available options. A viable solution will then be chosen and agreed upon with the applicable land and facilities management agencies. Finally, a construction and maintenance plan for the prevention option will be determined.

### **Goals for Management of Scofield Reservoir**

1. Reestablish a family fishery and maintain a harvestable component to the fishery
2. Maintain and enhance trophy (quality) angling opportunities
3. Enhance the diversity of angling opportunities by adding alternative fish species
4. Reduce Utah chub numbers with a sustainable management model
5. Increase angling and recreational use at the reservoir
6. Manage Scofield Reservoir for compatibility with native species management as its outflow connects to the Price, Green, and Colorado Rivers

### **Objectives and Strategies for Scofield Reservoir Management Goals**

#### **Goal 1: Reestablish a family fishery and maintain a harvestable component to the fishery**

##### **Objective 1: Reinstate the stocking of rainbow trout utilizing a “larger” sized fish.**

###### **Strategies**

- As Utah chub biomass is being reduced by methods described in Goal 4, stock 12-15 inch triploid rainbow trout. These larger fish are immediately available for angling harvest.
- Stock 10-50 triploid rainbow trout/acre, numbers based on availability within UDWR’s hatchery system and out of state purchases/trades.
- Maintain an angling catch rate  $\geq 0.25$  triploid rainbow trout/hour.
- Maintain an average gillnet catch rate of 10-15 triploid rainbow trout/net-night.

##### **Objective 2: After Utah chub biomass is reduced reinstate the stocking of rainbow trout utilizing a “traditional” sized fish.**

###### **Strategies**

- Once Utah chub biomass is reduced by methods described in Goal 4 (gill net catch rate  $\leq 55$  Utah chub/net-night), stock 8-11 inch triploid rainbow trout. These fish will be facing reduced competition for resources with Utah chub and will be capable of growth before angling harvest.
- Stock 50-250 triploid rainbow trout/acre.
- Maintain an angling catch rate  $\geq 0.50$  triploid rainbow trout/hour.
- Maintain an average gillnet catch rate of 15-20 triploid rainbow/net-night.

### **Objective 3: Utilize triploid walleye and striped bass hybrids (wipers) as part of the harvestable component to the fishery.**

#### **Strategies**

- Even though these species may be used to help reduce Utah chub biomass as described in Goal 4, maintain standard statewide angling regulations to provide for angling harvest.
- Ensure adequate stocking rates to meet the needs described in Goals 1 and 4.
- Stock 5,000 to 12,500 triploid walleye fry/acre, numbers based on availability within UDWR's hatchery system and out of state purchases/trades (currently these fish are only available as fry).
- Stock 400 hybrid striped bass fry/acre, or 40 hybrid striped bass fingerlings (1-3 inch)/acre, numbers based on availability within UDWR's hatchery system and out of state purchases/trades.
- Maintain an average, combined gillnet catch rate of 5-9 sterile walleye and hybrid striped bass/net-night.

### **Goal 2: Maintain and enhance trophy (quality) angling opportunities**

#### **Objective 1: Continue the stocking and use of Bear Lake Bonneville cutthroat trout and tiger trout.**

##### **Strategies**

- Retain the current regulations for these two species. All cutthroat and tiger trout between 15 and 22 inches must be immediately released, no more than two cutthroat or tiger trout under 15 inches may be kept, and no more than 1 over 22 inches may be harvested.
- Stock 25-50 subcatchable size (6-8 inch) Bear Lake Bonneville cutthroat trout and tiger trout/acre at a 1:1 to 2:1 ratio (cutthroat trout to tiger trout).
- Maintain an average, combined gillnet catch rate of 10- 15 cutthroat and tiger trout/net night with 50% of the catch exceeding 12 inches.
- Educate anglers that this regulation is necessary to suppress Utah chub numbers and must remain in place moving into the future.

#### **Objective 2: Utilize triploid walleye and striped bass hybrids (wipers) as a trophy opportunity.**

##### **Strategies**

- During the initial stages of Utah chub control, it is likely to produce trophy opportunities in either of these species.
- Educate anglers that this trophy opportunity may be short lived and not sustainable once the majority of senescing (adult) Utah chub are gone.
- Utilize the UDWR Outreach Section to help publicize outstanding angling opportunities when they exist, utilizing local news outlets, television, internet, and social media.

- Stocking rates defined in Goal 1, Objective 3.

### **Objective 3: Utilize tiger muskellunge as a trophy opportunity.**

#### **Strategies**

- Stock a conservative number of tiger muskellunge ( $\leq 2.5$  fish/acre based on a fingerling size) numbers based on availability within UDWR's hatchery system and out of state purchases/trades.
- Utilize the current statewide regulations, 1 fish over 40 inches may be harvested.
- Educate anglers that this species is used for Utah chub suppression and also as a trophy angling opportunity.

### **Goal 3: Enhance the diversity of angling opportunities by adding alternative fish species**

#### **Objective 1: Stock sterile walleye and hybrid striped bass (wipers).**

##### **Strategies**

- Manage this species according to the criteria described in Goal 1, Objective 3.
- Utilize sterile walleye and wipers as a harvestable species and as an apex predator on Utah chub.
- Manage angling expectations based on the timeline of management (i.e., early stages of Utah chub control may produce trophy opportunity, then after that they may simply be utilized to control Utah chub as a background predator).
- Develop and install an escapement prevention structure.

#### **Objective 2: Stock tiger muskellunge.**

##### **Strategies**

- Manage this species according to the criteria described in Goal 2, Objective 3.
- Develop and install an escapement and prevention structure.

#### **Objective 3: Continue to stock rainbow trout, tiger trout and cutthroat trout.**

##### **Strategies**

- Manage rainbow trout according to the criteria described in Goal 1, Objectives 1 and 2.
- Manage tiger trout and cutthroat trout according to the criteria described in Goal 2, Objective 1.

### **Goal 4: Reduce Utah chub numbers with a sustainable management model**

#### **Objective 1: Continue the stocking and use of Bear Lake Bonneville cutthroat trout and tiger trout.**

##### **Strategies**



- Retain the current regulations for these two species. All cutthroat and tiger trout between 15 and 22 inches must be immediately released, no more than two cutthroat or tiger trout under 15 inches may be kept, and no more than 1 over 22 inches may be harvested.
- Maintain an average, combined gillnet catch rate 10- 15 cutthroat and tiger trout/net night with 50% of the catch exceeding 12 inches.
- Educate anglers that this regulation is necessary to suppress Utah chub numbers and must remain in place moving into the future.
- Stocking rates defined in Goal 2, Objective 1.

### **Objective 2: Stock sterile walleye and hybrid striped bass (wipers).**

#### **Strategies**

- Stock conservative numbers of both species based on availability within UDWR's hatchery system and out of state purchases.
- Stocking rates defined in Goal 1, Objective 3.
- Manage according to statewide angling regulations described in Goal 1, Objective 3.
- Adjust stocking rates in response to Utah chub abundance and availability as a prey source.
- Educate anglers that these species are a tool to control Utah chub and numbers stocked will likely be reduced as Utah chub numbers decrease.

### **Objective 3: Stock tiger muskellunge.**

#### **Strategies**

- Utilize the current statewide regulations, 1 fish over 40 inches may be harvested.
- Educate anglers that this species is used for Utah chub suppression and also as a trophy angling opportunity. Number of fish stocked will likely be reduced as Utah chub numbers decrease.
- Stocking rates defined in Goal 2, Objective 3.

### **Objective 4: Utah chub monitoring.**

#### **Strategies**

- Continue spring and fall gillnetting at Scofield Reservoir utilizing American Fisheries Society standardized nets and the small mesh add-on panel.
- Reduce current population size and maintain average gill net catch rates  $\leq 55$  Utah chub/net-night within five years.
- Educate the public that the goal is to suppress and control and that complete eradication is not possible or desired.
- Maintain adaptability regarding predator stocking (i.e., cutthroat trout, tiger trout, sterile walleye, wiper, and tiger muskellunge) paying close attention to overall chub abundance.

- Educate anglers and achieve public buy-in regarding the use of new species as a management tool to control Utah chub, and that numbers stocked could fluctuate greatly based on need.
- Prepare for a future rotenone treatment if planned management does not reach the desired outcome (i.e., initiate NEPA process, plan for rotenone purchases, acquire adequate funding, etc.).

## **Goal 5: Increase angling and recreational use at the reservoir**

### **Objective 1: Increase angling effort by 50% over the next five years.**

#### **Strategies**

- Publicize the new opportunities and species diversity at Scofield Reservoir focusing on family fishing and trophy fishing opportunities.
- Conduct short duration creel surveys every two years to assess changes in angling use.
- Conduct follow up online surveys to assess changes in angler satisfaction and perception at Scofield Reservoir and adapt management as necessary.

### **Objective 2: Increase State Park visitation by 50% over the next five years.**

#### **Strategies**

- Increase outreach efforts to educate and encourage visitors.
- When a new species is stocked into the reservoir let the public know about the new opportunity and hold fishing clinics to build excitement.
- Communicate angler success more frequently to show current conditions.
- Provide new/updated information to hand out as visitors arrive at the Park.
- Increase advertising (television, radio, internet, etc.).

### **Objective 3: Reestablish Blue Ribbon Fishery Designation.**

#### **Strategies**

- Communicate regularly with the Blue Ribbon Fisheries Council and provide updates on the status of the management plan implementation.
- Determine if issues outside the scope of the management plan need to be addressed to meet Blue Ribbon Fishery criteria.
- Recommend Scofield Reservoir for Blue Ribbon Fisheries status by 2023. Criteria for re-designation includes re-establishing the family fishery, increasing species diversity, and increasing angling and State Park use.

## **Goal 6: Manage Scofield Reservoir for compatibility with native species management as its outflow connects to the Price, Green, and Colorado Rivers**

### **Objective 1: Minimize negative impacts on native species.**

#### **Strategies**

- Work with the USFWS, Upper Colorado River Recovery Team, conservation teams, UCRB State Wildlife Agencies, and UDWR native aquatics staff to gain approval of the Scofield Reservoir Fishery Management Plan.
- Only consider the use of fish species on the compatible list (USFWS 2015) when introducing new species.
- Assess the viable options to prevent downstream escapement.
- Create a stakeholder contact list to share information regarding management changes, introductions of new species, as outlined in the UCRB stocking protocol (2009).

#### **Discussion**

The Scofield Reservoir Fishery Management Plan will serve as a guide for achieving the goals and objectives created by the Advisory Committee. There are many factors that the Advisory Committee and the UDWR cannot control. Periods of low water and high nutrient levels can cause summer/winter fish kills, create conditions for toxic algal blooms, or make introductions of new species difficult. An adaptive management strategy will be necessary in order to respond to adverse conditions caused by nature or anthropogenic factors. Objectives and strategies and their associated timelines may need to be altered to match unpredicted challenges. Stocking rates of all fish species may need to be altered to match current environmental and biological conditions. The UDWR will continue to work with the Advisory Committee as needed to manage the fishery.

Working in concurrence with this management plan a future rotenone treatment will be planned. The NEPA process will be initiated and all environmental clearances will be obtained. Long term financial needs will be identified for the future purchase of rotenone, and the need to mobilize a significant amount of manpower will be considered in the UDWR's work planning process over the next several years. If the current management plan does not produce the desired results laid out by the Advisory Committee, planning for a potential rotenone treatment will already be well underway.

This plan will be submitted to all appropriate stakeholders including the USBR, USFWS, conservation teams, UCRB State Wildlife Agencies, local irrigation companies, the Upper Colorado River Recovery Team, the Southeastern Regional Advisory Council, and the Utah Wildlife Board.

## **Plan Lifespan and Timeline**

The Scofield Reservoir Fishery Management Plan will have a lifespan of five years from the date of approval. Utah chub gill net catch rates must meet or be approaching their management objective within that time span since they are the critical, limiting factor to the success of this plan. Many Goals and Objectives of this plan are also dependent on the introduction of new species. If these introductions are not successful, modifying the management plan may be necessary before the plan expires (e.g., a rotenone project may be implemented). After a period no longer than five years (earlier if necessary) this plan will be re-evaluated by the Advisory Committee. Goals and Objectives will be evaluated for success and modifications will be made to meet current conditions.

## **The Rotenone Option**

When the Advisory Committee first met, they identified the need to reduce and control the Utah chub population, and unanimously agreed it was the most limiting factor in developing a quality fishery at Scofield Reservoir. The Committee identified two methods for reducing Utah chub biomass: biological control and a rotenone treatment. After a lengthy and careful discussion, a majority decision was reached to initiate a fisheries management strategy utilizing the biological controls laid out in this plan. As described in the previous section, a rotenone treatment is being planned and will be initiated if the Goals and Objectives of this plan are not reached.

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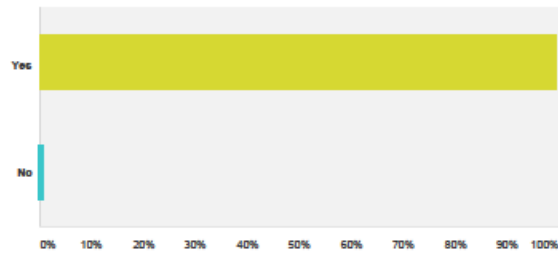
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# Appendix I. Results from public online survey (.pdf file, open in Adobe acrobat)

## 2016 Scofield Reservoir Angler Survey Results

Q1 Would you be willing to participate in this survey?

Answered: 2,628 Skipped: 6



Answer Choices	Responses
Yes	99.29% 2,505
No	0.71% 18
Total	2,628

**Appendix II. Catch Rates (#/net-night) of Fish Caught in Gillnets from 2006 to 2016 and Desired Catch Rates as Defined in Management Goals.**

Year	Rainbow trout	Cutthroat trout	Tiger trout	Utah chub
2006	20.0	4.7	5.0	2.7
2007	32.0	1.5	8.5	26.5
2008	20.7	4.0	24.3	230.3
2009	9.7	10.7	13.0	357.3
2010	5.6	21.2	6.2	48.0
2011	3.0	7.0	5.8	132.8
2012	2.4	8.0	8.2	134.4
2013	1.4	14.2	8.6	157.2
2014	1.6	18.0	3.2	84.6
2015	0.8	10.8	2.2	193.4
2016	0.0	8.8	1.4	135.4
Desired catch rate	15-20	*10-15	*10-15	≤ 55

\*Combined catch rate for cutthroat trout and tiger trout



**APPENDIX III. Lists of Nonnative Aquatic and Riparian Species that are Considered Compatible or Non-Compatible with Endangered Fish Recovery in the Upper Colorado River Basin (Revised May 2015)**

**Table C-1. Lists of nonnative aquatic species’ compatibility with the recovery and preservation of endangered and native aquatic species within critical habitat of the upper Colorado River basin (UCRB).** Judicious management of compatible species must conform to Stocking Procedures signed by the upper basin States of Utah, Colorado, and Wyoming, and the U.S. Fish and Wildlife Service in 2009 (USFWS 2009). These stocking procedures prohibit stocking any nonnative species directly into riverine critical habitat and require that non-salmonid species be managed in isolated or screened ponds or reservoirs to prevent or control their escapement into critical habitat. Non-compatible species should not be further introduced or stocked into any waters in the UCRB. All nonnative species not listed here are initially classified as non-compatible but may be considered on a case by case basis.

Compatible List	Non-Compatible List
<b>Fish</b>	
Salmonids, including, but not limited to:	Smallmouth bass <sup>^</sup> <i>Micropterus dolomieu</i>
Brown trout <i>Salmo trutta</i>	Northern pike <i>Esox lucius</i>
Lake trout <i>Salvelinus namaycush</i>	Walleye <i>Sander vitreus</i>
Arctic char <i>Salvelinus alpinus</i>	White sucker <i>Catostomus commersoni</i>
Brook trout <i>Salvelinus fontinalis</i>	Red shiner <i>Cyprinella lutrensis</i>
Rainbow trout <i>Oncorhynchus mykiss</i>	Burbot <i>Lota lota</i>
Cutthroat trout <i>Oncorhynchus clarkii</i>	Catfish species, including, but not limited to:
Kokanee <i>Oncorhynchus nerka</i>	Channel catfish <sup>^</sup> <i>Ictalurus punctatus</i>
& Arctic grayling <i>Thymallus arcticus</i>	Blue catfish <i>Ictalurus furcatus</i>
Bluegill <i>Lepomis macrochirus</i>	Flathead catfish <i>Pylodictis olivaris</i>
Black crappie <i>Pomoxis nigromaculatus</i>	Black bullhead <i>Ameiurus melas</i>
Largemouth bass <i>Micropterus salmoides</i>	Yellow bullhead <i>Ameiurus natalis</i>
Yellow perch <i>Perca flavescens</i>	
Triploid grass carp <i>Ctenopharyngodon idella</i>	
Fathead minnow <i>Pimephales promelas</i>	
Tiger muskie* <i>Esox lucius</i> x <i>E. masquinongy</i>	
Wiper* <i>Morone saxatilis</i> x <i>M. chrysops</i> (Hybrid Striped bass)	
Sterile Walleye* <i>Sander vitreus</i> (100% triploidy)	
* In order to be considered compatible, the stocking of sterile predators requires appropriate escapement prevention, such as outlet screens or spillway nets	<sup>^</sup> May be stocked in waters above Flaming Gorge Dam

Compatible List	Non-Compatible List
<b>Crustaceans</b>	
	All crayfish species Anchor Worm <span style="float: right;"><i>Lerneia cyprinacea</i></span>
<b>Molluscs</b>	
	Quagga and Zebra mussel <span style="float: right;"><i>Drissena</i> spp.</span> New Zealand mud snail <span style="float: right;"><i>Potamopyrgus antipodarum</i></span>
<b>Cestodes</b>	
	Asian tapeworm <span style="float: right;"><i>Bothriocephalus acheilognathi</i></span>
<b>Plants</b>	
	Tamarisk <span style="float: right;"><i>Tamarix</i> spp.</span> Russian olive <span style="float: right;"><i>Elaeagnus angustifolia</i></span> Didymo <span style="float: right;"><i>Didymosphenia geminata</i></span> Eurasian watermilfoil <span style="float: right;"><i>Myriophyllum spicatum</i></span>