RAC AGENDA – May 2020
Electronic Meetings Only

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

2. Approval of Agenda and Minutes **ACTION**
   - RAC Chair

3. Wildlife Board Meeting Update **INFORMATIONAL**
   - RAC Chair

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

5. Upland Game and Turkey Guidebook and Rule Recommendations **ACTION**
   - Heather Talley, Upland Game Coordinator

6. Migratory Upland Game Recommendations and Swan rule amendments **ACTION**
   - Blair Stringham, Migratory Game Bird Program Coordinator

7. AIS Rule Amendments **ACTION**
   - Bruce Johnson, AIS Lieutenant

8. Walk-in Access rule amendments **ACTION**
   - Bryan Christensen, Volunteer Services Coordinator

Regional Presentations Only

NR	Willard Spur WMA Habitat Management Plan Ashley Kijowski, Wildlife Biologist	**INFORMATIONAL**

Presentations can be viewed at https://wildlife.utah.gov/online-board.html
Public Comment can be provided by clicking the link under the presentation.
RAC Public Comment will close 72 hours prior to the respective RAC meeting.
Board Public Comment will be accepted until 11:59 p.m on Friday, May 29. There will be no public comment accepted during the electronic RAC or Wildlife Board meetings.

CR RAC – May 12th, 6:00 PM
https://youtu.be/jnLFzZnMEis

SER RAC – May 20th, 6:30 PM
https://youtu.be/vdtPlg1XxPM

NR RAC – May 13th, 6:00 PM
https://youtu.be/RnsYvef5_Vk

NER RAC – May 21st, 6:30 PM
https://youtu.be/hRpKBHxt9fk

SR RAC – May 19th, 7:00 PM
https://youtu.be/Og-VIjiD140

Board Meeting – June 4th, 9:00 AM
https://youtu.be/X6mw9-bYwV0

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
BRIAN C. STEED
Executive Director
Division of Wildlife Resources
MICHAL D. FOWLKS
Division Director

April 20, 2020

TO: Utah Wildlife Board / Regional Advisory Council Members

FROM: Heather Talley, Upland Game Program Coordinator
Blair Stringham, Migratory Game Bird Program Coordinator

SUBJECT: 2020-21 to 2022-23 Upland Game and Wild Turkey Season Recommendations, Utah Wild Turkey Management Plan Extension, and Rule Amendments

Summary of Recommended Changes:

- Youth quail season starting last Saturday in October through the following Monday (traditionally held on the Saturday closest to October 13 through the following Monday)
- Youth pheasant season starting last Saturday in October through the following Thursday (traditionally held on the Saturday closest to October 13 through the following Monday)
- Change the ptarmigan season to open on September 1, ending October 31 (traditionally held fourth Saturday in August – October 31)
- The Utah Wild Turkey Management Plan is due for revision in 2020, unless the Board approves the three-year extension. Recommend extension of current plan for three more years. This was a six year plan, and no significant changes are needed at this time.
- Translocate sage-grouse broods in the summer. Only spring translocations of adults have been approved in the past.
- Approval and support from the Wildlife Board to close Wildlife Management Areas as needed, for the use of DWR-sponsored and co-sponsored public events. This year, the closures would include the Annabella, Pahvant, and a portion of the Ogden Bay WMAs on the second Saturday in November to the general public for sponsored organized pheasant hunts.
- Allow airguns as a legal method of take for turkeys in the fall season only, as well as rabbits and hares. This will impact rules R657-54-2, R657-54-4 and R657-6-6.
- Extend sandhill crane season in East Box Elder area from 9 to 60 days
- Changes to Rules R657-6-16, R657-54-11 and R657-9-5; corrections/clarification to tagging swans, turkeys, and upland game

Species Recommendations:

California & Gambel's Quail:
Area: Statewide
Youth hunt: Last Saturday in October to the following Monday
General hunt: 1st Saturday in November to December 31 (fixed date)
Bag limit: 5
Possession limit: 15

The statewide youth quail and pheasant hunts have been underutilized for years; we hope that moving the season dates closer to the general opener will increase participation in these hunts. The youth quail hunt has traditionally been held beginning on the Saturday closest to October 13 through the following Monday. We propose to have the youth quail hunt the weekend previous to the general opener, which would be the last Saturday in October through the following Monday.

Scaled Quail: CLOSED TO HUNTING

Ring-Necked Pheasant:
Area: Statewide
Youth hunt: Last Saturday in October to the following Thursday
General hunt: 1st Saturday in November to 1st Sunday in December
Bag limit: 2 males
Possession limit: 6 males

Due to the lack of participation in the statewide youth pheasant hunt, we hope that moving the season dates closer to the general opener will increase interest in these hunts. The youth pheasant hunt has traditionally been held beginning on the Saturday closest to October 13 through the following Monday. We propose to have the youth pheasant hunt the weekend previous to the general opener, which would be the last Saturday in October. We would like to extend this youth hunt through the first Thursday in November. Since most of our pheasant hunts occur on put-and-take areas, we would like to give the youth the opportunity to harvest as many of the pen-reared birds as possible throughout the week, as pen-reared birds have a low survival rate in the wild. Additionally, since this is a male-only hunt, wild populations would not be affected by this hunt season extension.

Chukar:
Area: Statewide
Youth hunt: 2nd to last Saturday in September to following Monday
General hunt: Last Saturday in September to February 15 (fixed date)
Bag limit: 5
Possession limit: 15

Gray (Hungarian) Partridge:
Area: Statewide
Youth hunt: 2nd to last Saturday in September to following Monday
General hunt: Last Saturday in September to February 15 (fixed date)
Bag limit: 5
Possession limit: 15

Dusky and Ruffed Grouse:
Area: Statewide
Season: September 1 to December 31 (fixed dates)
Bag limit: 4
Possession limit: 12

Greater sage-grouse:
Requires special permit obtained in a drawing in addition to hunting license
Area: Rich Co., West Box Elder Co., Parker Mtn. and Diamond/Blue Mtn.
Permit only hunt: Last Saturday in September to Sunday 3 weeks later
Bag limit: 2 per year
Possession limit: 2 per year

We request that the translocation extension incorporate brood translocations to further our abilities to augment populations. We have research from brood translocations done in other states that confirm that translocated birds have increased fidelity to the release sites if broods are released together. Furthermore, this will give us the opportunity to finish lek counts, to confirm population numbers and the stability of the source population before taking birds from that area. Brood translocations would occur between May 1 and July 31. We recommend that sage-grouse translocations may occur at any time of the year, and may include adults and/or chicks, to give us the best chance of success for augmenting populations.

Sharp-tailed Grouse:
Requires special permit obtained in a drawing in addition to hunting license
Area: Cache Co., and Northeast Box Elder Co.
Permit only hunt: Last Saturday in September to Sunday 3 weeks later
Bag limit: 2 per year
Possession limit: 2 per year

White-tailed Ptarmigan: Requires a free permit in addition to hunting license
Area: Statewide
Permit only hunt: September 1 to November 7 (fixed date)
Bag limit: 4
Possession limit: 12

Due to an increasing trend of hunters and hunter-days-afield over time, we recommend changing the season to a September 1 opening date, rather than the fourth Saturday in August, to allow more time for brood breakup prior to hunting. This will also create consistency with the opening of other upland game seasons. The season will still end on October 31.

Cottontail (mountain/desert):
Area: Statewide
Season: September 1 to February 28 (fixed dates)
Bag limit: 10
Possession limit: 30

Snowshoe Hare:
Area: Statewide
Season: September 1 to March 15 (fixed dates)
Bag limit: 5
Possession limit: 15

Wild Turkey (Spring):
Requires special permit obtained in a drawing in addition to hunting license
Area: Limited Entry = UDWR Region
General Season = Statewide
Seasons: Hunters w/ Disabilities (COR required): 1st Saturday in April to following Monday
LE hunt: 2nd Saturday to last Thursday in April
Youth hunt: Last Friday in April to following Sunday
General hunt: Monday following youth hunt to May 31 (fixed date) Bag limit: 1 bearded turkey
Possession limit: 1 bearded turkey

Wild Turkey (Fall):
Requires special permit in addition to hunting license
Area: Open areas within a UDWR Region
General hunt: Maximum dates of November 1 to February 28 (region determines season length within these dates)
Bag limit: 1 wild turkey (either sex)
Possession limit: 1 wild turkey

Turkey Management Plan: The Utah Wild Turkey Management Plan is due for revision in 2020. We are recommending that the board approve a three-year extension, since no significant changes are needed at this time.

Falconry:
Area: Statewide
Season: September 1 to February 28 (fixed dates)
Bag limit[1]: same for all hunters
Possession limit: same for all hunters
[1] Falconers may take either sex ring-necked pheasants; may not release on spring turkeys

Sandhill Crane:
Requires special permit obtained in a drawing in addition to hunting license (no falconry allowed)
Area: Rich County, Cache County
Season: 1st Saturday in September to 2nd Sunday in September

Area: East Box Elder
Season: 1st Saturday in September, closes 60 days later

Area: Uintah County
3 Seasons: opens Saturday closest to October 1, closes 60 days later (three 20-day seasons)
Example: October 3 to October 22, 2020 (early)
October 23 to November 11, 2020 (middle)
November 12 to December 1, 2020 (late)
Bag limit: 1 per year
Possession limit: 1 per year

Sandhill cranes migrating through Box Elder County are congregating in large groups and staying for longer periods of time than they have historically. This is causing increased damage to corn, winter wheat, and other crops. We are recommending extending the hunt in the East Box Elder area from 9 to 60 days to reduce crop damage and to encourage cranes to migrate sooner.

Mourning and White-winged Dove:
Area: Statewide
Season: September 1 to October 30 (fixed dates)
Bag limit: 15
Possession limit: 45
Falconry Season: September 1 to December 16 (fixed dates)
Bag limit: 3
Possession limit: 9

American Crow:
Area: Statewide
Season: September 1 to 30; December 1 to February 28 (fixed dates)
Bag limit: 10
Possession limit: 30

Band-tailed Pigeon:
Requires a free permit in addition to hunting license
Area: Statewide
Permit only hunt: September 1 to 14 (fixed dates)
Falconry Dates: September 1 to December 16 (fixed dates)
Bag limit: 2
Possession limit: 6

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

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

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

R657-6-6. Authorized Weapons.

(1) A person may not use any weapon or device to take upland game except as provided in this section.

(2[~~)(a~~]) Upland game may be taken with archery equipment, including a draw-lock, a crossbow, a shotgun no larger than 10 gauge, or a handgun. Loads for shotguns and handguns must be one-half ounce or more of shot size ranging between no. 2 and no. 8, except:

([~~i~~]a) migratory game birds may not be taken with a handgun, or a shotgun capable of holding more than three shells, unless it is plugged with a one-piece filler, incapable of removal without disassembling the gun, so its total capacity does not exceed three shells;

([~~ii~~]b) cottontail rabbit and snowshoe hare may be taken with

(i) any firearm not capable of being fired fully automatic; and

[~~(iii) Sandhill~~]

(ii) a pre-charged pneumatic air rifle, as defined in R657-54-2, firing a single:

(A) broadhead tipped bolt or arrow; or

(B) pellet or slug during the fall turkey season that:

(I) is .22 caliber or larger;

(II) weighs 18 grains or more; and

(III) is fired at a velocity to produce at least 30 foot-pounds of energy at the muzzle; and

(c) sandhill crane may be taken with any size of nontoxic shot.

(3) A person may not use:

(a) a firearm capable of being fired fully automatic; or

(b) any light enhancement device or aiming device that casts a visible beam of light.

R657-6-16. Tagging Requirements.

(1) [~~The carcass of a Sandhill~~]A person that takes a sandhill crane, greater sage grouse, or sharp-tailed grouse must [~~be tagged~~]tag the carcass, as provided in [~~accordance with~~]Section 23-20-30, immediately upon taking possession of the carcass.

[~~(2)~~]

(2) To tag a carcass, a person shall:

(a) completely detach the tag from the license or permit;

(b) completely remove the appropriate notches to correspond with the date the animal was taken; and

(c) attach the tag to the carcass so that the tag remains securely fastened and visible.

(3) A person may not:
(a) remove more than one notch indicating the date; or
(b) tag more than one carcass using the same tag.
(4) A person may not hunt or pursue [~~Sandhill~~]a sandhill crane, greater sage grouse, or sharp-tailed grouse after:
(a) shooting and retrieving the bird;
(b) the tag is detached from the permit; or
(c) any of the notches have been removed from the tag[~~ or the tag has been detached from the permit~~].

KEY: wildlife, birds, rabbits, game laws
Date of Enactment or Last Substantive Change: August 7, 2017
Notice of Continuation: June 8, 2015
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-19

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

R657-9-5. Tagging Swans.

(1)(a) [~~The carcass of~~]A person that takes a swan must [~~be tagged before~~]tag the carcass[~~ is moved from or the hunter leaves the site of kill~~], as provided in Section 23-20-30, immediately upon taking possession o fthe carcass and reaching a location listed below that is closest to the place where the carcass was first retrieved by the hunter, another person, or a dog:

(i) the blind or fixed location in the field where the person taking the swan was set up and from where they shot at the swan;

(ii) a vessel available to the person; or

(iii) the first area of land free from standing water.

(b) "Vessel" means, for the purposes of this subsection, any type of watercraft used or capable of being used as a means of transportation on water.

[~~(2~~]

(2) To tag a carcass, a person shall:

(a) completely detach the tag from the license or permit;

(b) completely remove the appropriate notches to correspond with the date the animal was taken; and

(c) attach the tag to the carcass so that the tag remains securely fastened and visible.

(3) A person may not:

(a) remove more than one notch indicating the date; or

(b) tag more than one carcass using the same tag.

(4) A person may not hunt or pursue a swan after:

(a) shooting and retrieving the swan;

(b) the tag is detached from the permit; or

(c) any of the notches have been removed from the tag[~~ or the tag has been detached from the permit~~].

KEY: wildlife, birds, migratory birds, waterfowl
Date of Enactment or Last Substantive Amendment: February 7, 2019
Notice of Continuation August 1, 2016
Authorizing, and Implemented or Interpreted Law: 23-14-19; 23-14-18; 50 CFR part 20

R657. Natural Resources, Wildlife Resources.
R657-54. Taking Wild Turkey.
R657-54-1. Purpose and Authority.

(1) Under authority of Sections 23-14-18 and 23-14-19 and in accordance with 50 CFR 20, 2003 edition, which is incorporated by reference, the Wildlife Board has established this rule for taking wild turkey.

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

R657-54-2. Definitions.

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

(2) In addition:

(a) "Bait" means shelled, shucked or unshucked corn, wheat or other grain, salt or other feed that lures, attracts or entices wild turkey.

(b) "Baiting" means the direct or indirect placing, exposing, depositing, distributing, or scattering of salt, grain, or other feed that could serve as a lure or attraction for upland game to, on, or over any areas where hunters are attempting to take them.

(c) "CFR" means the Code of Federal Regulations.

(d) "Falconry" means the sport of taking quarry by means of a trained raptor.

(e) "Fall season permit" means any turkey hunting permit having season dates on or between August 1 to March 14, excluding turkey permits issued pursuant to R657-41 and turkey control permits issued pursuant to R657-69-6.

[~~(f~~]

(f) "Pre-charged pneumatic air rifle" means a rifle that fires a single projectile with compressed air released from a chamber:

(i) built into the rifle; and

(ii) pressurized at 2,000 to 3,000 psi from an external high compression device or source, such as a hand pump, compressor, or scuba tank.

(g) "Spring season permit" means any turkey hunting permit having season dates on or between March 15 to July 31, excluding turkey permits issued pursuant to R657-41 and turkey control permits issued pursuant to R657-69-6.

([~~g~~]h) "Wild Turkey" as used in this rule means a wild, free-ranging turkey and does not include a privately-owned wild turkey, domestic turkey, or wild-domestic hybrids.

R657-54-4. Authorized Weapons.

Wild turkey may be taken only with:

(a) Archery equipment, including a draw-lock, or a crossbow using broadhead tipped arrows or bolts;

(b) a shotgun, firing shot sizes BB and smaller diameter; or

(c) a rimfire firearm during any fall [~~season permit~~]turkey season; or

(d) a pre-charged pneumatic air rifle firing a single:

(i) broadhead tipped bolt or arrow; or

(ii) pellet or slug during the fall turkey season that:

(A) is .22 caliber or larger;
(B) weighs 18 grains or more; and
(C) is fired at a velocity to produce at least 30 foot-pounds of energy at the muzzle.

R657-54-11. Tagging Requirements.

(1) [~~The carcass of~~]A person that takes a turkey must [~~be tagged before~~]tag the carcass[~~ is moved from, or the hunter leaves, the site~~], as provided in Section 23-20-3-, immediately upon taking possession of [~~kill~~]the carcass.

(2) To tag a carcass, a person shall:

(a) completely detach the tag from the license or permit;

(b) completely remove the appropriate notches to correspond with:

(i) the date the animal was taken;

(ii) the sex of the animal; and

(c) attach the tag to the carcass so that the tag remains securely fastened and visible.

(3) A person may not:

(a) remove more than one notch indicating date or sex; or

(b) tag more than one carcass using the same tag.

(4) A person may not hunt or pursue a turkey after :

(a) shooting and retrieving the bird;

(b) the tag is detached from the permit;

(c) any of the notches have been removed from the tag[~~ or the tag has been detached from the permit~~].

KEY: wildlife, wild turkey, game laws
Date of Enactment or Last Substantive Amendment: August 9, 2018
Notice of Continuation: August 5, 2019
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-1

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
BRIAN C. STEED
Executive Director
Division of Wildlife Resources
MICHAL D. FOWLKS
Division Director

MEMORANDUM

To: Utah Wildlife Regional Advisory Council Members
From: Lt. Bruce Johnson, AIS Field Operations
Date: May 4, 2020
Subject: 2020 AIS Program Proposed Rule Changes

During the 2020 Utah Legislative Session new Aquatic Invasive Species (AIS) statutes were created and some minor changes to current AIS statutes also occurred.

The creation of the Aquatic Invasive Species Fee. This creates a $20 fee for non-residents to pay prior to boating in Utah. This statute also requires the non-resident boater to complete an AIS education course. There will also be a feasibility study for implementing a real time date entry system for watercraft.

The creation of the Aquatic Invasive Species Interdiction Account. This account will consist of fees collected by the Division. These fees will consist of non-resident fees collected under 23-27-304, and resident fees collected under 73-18-26. These fees are to fund AIS prevention and containment efforts.

The creation of the Drain Plug law. This statute requires all watercraft to have the drain plug removed during transport within the State of Utah.

The new definition of Vessel was added to the current AIS statutes. It was located in statute in other locations, but added here for reference.

The Division's proposed rule changes include several associated with the newly created statutes. The non-resident $20 fee, and requirement to complete the mandatory education course would be added to Administrative Rule. The requirement to possess and provide proof of the education course and fee payment.

The requirement to remove drain plugs on watercraft while in transit within the state would be added. Also, clarification on the authority of law enforcement for this new rule. Another Administrative Rule proposal is prohibiting the alteration of an attached seal.

Clarification of the required 30-day mandatory dry time for watercraft with complex mechanical or water systems. The Division also proposes clarification of mandatory reporting requirements, add one definition already in statute for reference.

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

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

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

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

R657-60-2. Definitions.

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

(2) In addition:

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

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

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

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

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

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

(D) if all water cannot be drained from the conveyance, or the conveyance has a complex water or mechanical system that the division determines poses a significant risk that Dreissena mussels could remain on the conveyance after the dry time identified in Subsection (C), fulfilling the requirements of Subsection (A) and (B) to the extent practicable and drying the conveyance for no less than 30 days;

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

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

(B) complete a mandatory 30 day dry time after the scalding water wash is completed if the division determines that[~~there is~~], due to the complexity of water or mechanical systems on the conveyance, a significant risk that Dreissena mussels remain [~~attached to~~]present on the conveyance [~~after the~~]regardless of receiving a scalding water wash[~~, complete a mandatory 30 day dry time after the hot water wash is completed~~] described in Subsection (A); or

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

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

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

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

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

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

(h) "Highway" has the same meaning as Utah Code 72-1-102(7).

(i) "Infested Water" or "Infested" means a water body, facility, water supply system, or geographic region where the presence of multiple age classes of attached Dreissena mussels is indicated in two or more consecutive sampling events using visual detection or microscopy and the result of each sampling event is confirmed in two polymerase chain reaction tests, each conducted at independent laboratories.

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

([~~j~~]k) "Quarantine" means imposing a required minimum period of time where a conveyance must stay at a predetermined location in order to minimize the risk that Dreissena mussels are spread.

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

([~~l~~]m) "Veliger" means a microscopic, planktonic larva of Dreissena mussel.

([~~m) "Vessel" means every type of watercraft used or capable of being used as a means of transportation on water~~]n) "Vessel" has the same meaning as Utah Code 73-18-2(19).

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

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

([~~p~~]q) "Water supply system" does not include a water body.

R657-60-3. Possession of Dreissena Mussels.

(1) Except as provided in Subsections R657-60-3(2) and R657-60-5(2), a person may not possess, import, ship, or transport any Dreissena mussel.

(2) Dreissena mussels may be imported into and possessed within the state of Utah with prior written approval of the Director of the Division of Wildlife Resources or a designee.

R657-60-4. Reporting of invasive species required.

(1) A person who discovers a Dreissena mussel within this state or has reason to believe a Dreissena mussel may exist at a specific location shall immediately report the discovery to the division.

(2) The report shall include the following information:

(a) location of the Dreissena mussels;

(b) date of discovery;

(c) identification of any conveyance or equipment in which mussels may be held or attached; and

(d) identification of the reporting party with their contact information.

(3) The report shall be made in person or in writing:

(a) at any division regional or headquarters office or;

(b) to the division's toll free hotline at 1-800-662-3337; or

(c) on the division's website at [~~www.wildlife.utah.gov/law/hsp/pf.php~~]www.wildlife.utah.gov/law/hsp/pf.php.

(4) Reporting requirements under this Section do not apply to:

(a) Dreissena mussels found in an Infested waterbody;

(b) a conveyance or equipment that is subject to a quarantine or mandatory dry time and has been documented by the division; or

(c) a person lawfully in possession of a Dreissena mussel pursuant to R657-60-3.

R657-60-5. [~~Transportation~~]Requirements for transportation and launching of equipment and conveyances[~~ that have been in waters containing Dreissena mussels~~].

(1) Before transporting a conveyance on a highway, as defined in Section 72-1-102, in the state, a person shall:

(a) remove all drain plugs and similar devices that prevent drainage of raw water systems on the conveyance; and

(b) to the extent feasible, drain all water from live wells, bilges, ballast tanks, and similar compartments on the conveyance.

(2)(a) Before launching a conveyance in a Utah waterbody, a nonresident vessel owner shall:

(i) pay the annual aquatic invasive species fee;

(ii) successfully complete the aquatic invasive species education course; and

(iii) provide proof of compliance with this Subsection to the vessel operator.

(b) The vessel operator is responsible for verifying compliance with this Section while recreating on a Utah waterbody.

(c) Except as provided in Subsection (6), a person must satisfy all decontamination requirements before launching or placing equipment or a conveyance in a waterbody if that equipment or conveyance has been in a waterbody or water supply system subject to decontamination requirements in the previous 30 days.

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

[~~(a) immediately remove the drain plug or similar mechanical feature and drain all water from the equipment or conveyance at the take out site, including water held in ballast tanks, bilges, livewells, motors, and other areas of containment; and~~]

[~~(b) immediately~~] inspect the interior and exterior of the equipment or conveyance [~~at the take out site~~]for the presence of Dreissena mussels immediately upon exiting the waterbody and prior to leaving the take out site.

([~~2~~]4)(a) If all water in the equipment or conveyance is drained and the inspection undertaken pursuant to Subsection ([~~1)(b~~]3) reveals the equipment and conveyance are free from mussels or shelled organisms, fish, plants and mud, the equipment and conveyance may be transported in or through the state directly from the take out site to the location where it will be:

(i) decontaminated; or

(ii) temporarily stored and subsequently returned to the same water body and take out site as provided in Subsection ([~~5~~]6).

(b) [~~To the extent feasible, any~~]All drain [~~plug or~~]plugs and similar [~~mechanical feature~~]devices that [~~may retain~~]prevent drainage of raw water [~~or conceal aquatic invasive species~~]systems on the conveyance shall [~~remain open~~]be removed during the transport and storage of a conveyance.

([~~3) If all the water in the equipment or conveyance is not drained or the inspection undertaken pursuant to Subsection (1)(b) reveals the equipment or conveyance has attached mussels or shelled organisms, fish, plants, or mud, the equipment and conveyance shall not be moved from the take out site until the division provides the conveyance~~]5) Equipment and conveyances may not be moved from a take out site of an infested, suspected, or detected water body, or a water body subject to a closure order or control plan requiring decontamination, unless:

(a) the operator satisfies the requirements of Subsection (4); or

(b) the operator receives prior written [~~or electronic~~]authorization to move the equipment or conveyance to a designated location [~~for professional~~]to complete decontamination requirements.

[~~(4) Except as provided in Subsection (5), a person shall not place any equipment or conveyance into a water body or water supply system in the state without first decontaminating the equipment and conveyance when the equipment or conveyance in the previous 30 days has been in:~~]

[~~(a) an infested water; or~~]

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

([~~5~~]6) Decontamination is not required when a conveyance or equipment is removed from an infested water or other water body subject to decontamination requirements, provided the conveyance and equipment is:

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

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

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

([~~6~~]7)(a) Division personnel may provide the operator of a vessel leaving an infested water, or any water subject to a closure order under R657-60-8 or control plan under R657-60-9, with an inspection certification indicating the date which that vessel left the water body.

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

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

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

(iii) the operator receives a professional decontamination certificate.

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

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

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

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

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

(2) Certification of decontamination is satisfied by:

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

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

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

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

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

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

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

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

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

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

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

(1) The Wildlife Board may designate a geographic area, water body, facility, or water supply system as Infested with Dreissena mussels pursuant to Section 23-27-102 and 23-27-401

without taking the proposal to or receiving recommendations from the regional advisory councils.

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

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

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

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

(a) all coastal and inland waters in:

(i) California;

(ii) Nevada;

(iii) Arizona;

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

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

(vi) Mexico;

(b) Lake Powell and that portion of the:

(i) Colorado River within the boundaries of Glen Canyon National Recreation Area;

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

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

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

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

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

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

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

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

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

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

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

(d) A closure order may;

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

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

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

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

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

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

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

(iii) reasons for the closure or restrictions;

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

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

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

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

and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(8) The director or his designee may remove a detected classification if:

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

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

R657-60-9. Control plan required.

(1) The controlling entity of a water body, facility, or water supply system may develop and implement a control plan in cooperation with the division prior to infestation designed to:

(a) avoid the infestation of Dreissena mussels; and

(b) control or eradicate an infestation of Dreissena mussels that might occur in the future.

(2) A pre-infestation control plan developed consistent with the requirements in Subsection (3) and approved by the division will eliminate or minimize the duration and impact of a closure order issued pursuant to Section 23-27-303 and R657-60-8.

(3) If a water body, facility, or water supply system within the state is classified as infested, detected, or suspected, and it does not have an approved control plan, the controlling entity shall cooperate with the division in developing and implementing a control plan to address the:

(a) scope and extent of the presence of Dreissena mussels;

(b) actions proposed to control the pathways of spread of Dreissena mussels;

(c) actions proposed to control the spread or eradicate the presence of Dreissena mussels;

(d) methods to decontaminate the water body, facility, or water supply system, if possible;

(e) actions required to systematically monitor the presence of Dreissena mussels; and

(f) requirements and methods to update and revise the plan with scientific advances.

(4) All control plans prepared pursuant to Subsection (3) shall be approved by the Division before implementation.

(5) A control plan prepared pursuant to this Section may require that all conveyances and equipment entering or leaving the subject water to comply with the decontamination requirements in R657-60-2(2)(b) and R657-60-5.

(6) Except as authorized by the Division and the controlling entity in writing, a person may not violate any provision of a control plan.

R657-60-10. Procedure for Establishing a Memorandum of Understanding with the Utah Department of Transportation.

(1) The division director or designee shall negotiate an agreement with the Utah Department of Transportation for use of ports of entry for detection and interdiction of Dreissena Mussels illegally transported into and within the state. Both the Division of Wildlife Resources and the Department of Transportation must agree upon all aspects of Dreissena Mussel interdiction at ports of entry.

(2) The Memorandum shall include the following:

(a) methods and protocols for reimbursing the department for costs associated with Dreissena Mussel interdiction;

(b) identification of ports of entry suitable for interdiction operations;

(c) identification of locations at a specific port of entry suitable for interdiction operations;

(d) methods and protocols for disposing of wastewater associated with decontamination of equipment and conveyances;

(e) dates and time periods suitable for interdiction efforts at specific ports of entry;

(f) signage notifying motorists of the vehicles that must stop at the port of entry for inspection;

(g) priorities of use during congested periods between the department's port responsibilities and the division's interdiction activities;

(h) methods for determining the length, location and dates of interdiction;

(i) training responsibilities for personnel involved in interdiction activities; and

(j) methods for division regional personnel to establish interdiction efforts at ports within each region.

R657-60-11. Conveyance or Equipment Detainment.

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

(a) temporarily stop, detain, inspect, quarantine, and impound a conveyance or equipment that the division reasonably believes is in violation of [~~Section~~]Sections 23-27-201, 23-27-306, or R657-60-5;

(b) order a person to decontaminate a conveyance or equipment that the division reasonably believes is in violation of [~~Section~~]Sections 23-27-201, 23-27-306, or R657-60-5.

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

(a) the division, agent, or peace officer reasonably believes that the person transporting the conveyance or equipment is in violation of [~~Section~~]Sections 23-27-201, 23-27-306, or R657-60-5.

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

(a) up to five days; or

(b) the period of time necessary to:

(i) decontaminate the conveyance or equipment; and

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

R657-60-12. Penalty for Violation.

(1) [~~A~~]Except as provided in Section 23-27-306, a violation of any provision of this rule is punishable as provided in Section 23-13-11.

(2) A violation of any provision of a closure order issued under R657-60-8 or a control plan created under R657-60-9 is punishable as a criminal infraction as provided in Section 23-13-11.

R657-60-13. Inspection Stations.

(1) Inspection stations may be established for administrative purposes to interdict the spread of Dreissena mussels consistent with Utah Code Title 23, Chapter 27 “Aquatic Invasive Species Act,” and this rule.

(2) The Division may establish inspection stations at locations authorized under Section 23-27-301 where:

(a) there is a high probability of intercepting conveyances or equipment transporting Dreissena mussels;

(b) there is typically a high level of boat and trailer traffic; or

(c) inspection of conveyances or equipment will provide increased protection against the introduction of Dreissena mussels into a water body that is not classified as infested, suspected, or detected under R657-60-2.

(3) Inspection stations shall have adequate space for conveyances or equipment to be stopped, inspected, and if necessary, decontaminated, without interfering with the public's use of highways or presenting a safety risk to the public.

(4) Inspection stations shall have adequate signage providing the public:

(a) notice that the inspection station is open and operational;

(b) notice that all persons transporting conveyances or equipment must stop at the inspection station and submit their conveyance and equipment for inspection; and

(c) an adequate opportunity to safely stop at the inspection station.

(5) Any person transporting a conveyance or equipment is required to stop at an inspection station during its hours of operation and submit that conveyance or equipment to the Division for inspection.

(6) The Division shall conduct an inspection of a conveyance or equipment that is stopped at an inspection station as follows:

(a) Division personnel will determine whether the conveyance or equipment has been in an infested, suspected, or detected water body within the past 30 days.

(b) If the conveyance or equipment has not been in an infested, suspected, or detected water body within the past 30 days, the Division will:

(i) conduct a brief visual inspection of the conveyance or equipment to ensure that there are no visible Dreissena mussels;

(ii) provide educational materials regarding aquatic invasive species risks and regulations in Utah; and

(iii) provide a certificate of inspection to the person in possession of the conveyance or equipment.

(c) If the conveyance or equipment has been in an infested, suspected, or detected water body within the past 30 days, the Division will:

(i) verify all water is drained from the conveyance or equipment, including water held in ballast tanks, bilges, livewells, motors, and other areas of containment;

(ii) verify that the surface of the conveyance or equipment is free of Dreissena mussels, shelled organisms, fish, plants, and mud; and

(iii) verify that the conveyance or equipment has been or will be decontaminated as defined in R657-60-2(b) before launching in a Utah water body.

(d) The Division may require professional decontamination of conveyances or equipment that have been in an infested, suspected, or detected water within the past 30 days and failed to comply with the draining and cleaning requirements established in R657-60-5(3).

(7) The Division may issue a certification of inspection and decontamination to persons who complete inspections and any applicable decontamination at an inspection station.

(8) Inspection stations shall be operated in a manner that minimizes the length of time of an inspection while ensuring that conveyances are free from the presence of Dreissena mussels.

KEY: fish, wildlife, wildlife law
Date of Enactment or Last Substantive Amendment: March 13, 2017
Notice of Continuation: July 31, 2018
Authorizing, and Implemented or Interpreted Law: 23-27-401; 23-14-18; 23-14-19

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
BRIAN C. STEED
Executive Director
Division of Wildlife Resources
MICHAL D. FOWLKS
Division Director

Memorandum

Date: April 30, 2020

To: Utah Wildlife Board / Regional Advisory Council Members

From: Bryan Christensen, Walk in Access Program Coordinator

Subject: R657-56 Walk in Access rule amendments

The Walk in Access program in Utah provides hunters and anglers access to privately held lands and waters for the purpose of hunting, trapping, and fishing. Approximately 82,000 acres of land, 55 miles of stream, and 200 acres of ponds are made available for free public access through this program. The recommended changes for R657-56 are intended to simplify the program, update administrative procedures, clarify rule requirements and expectations, and expand opportunities. Substantive changes are as follows:

Section 3: Provide more definitive requirements for proof of ownership of property.

Section 4: Simplify acreage requirements to expand new opportunities for smaller properties and discontinue option for multiple owners to form landowner association Walk in Access property.

Add emphasis to the quality of the habitat and wildlife for program participation.

Section 5: Clarify how an agreement is established and basic terms of all Walk in Access agreements.

Section 6: Clarify factors that may affect compensation.

Section 7: Clarify landowner responsibilities. Discontinue use of registration boxes. Discontinue landowner requirement for individual permission for each public access.

Section 8: Clarify Division responsibilities.

Section 9: Clarify terms and conditions for termination of agreements.

Section 11: Standardize open seasons and clarify exceptions, and special provisions.

Section 12: Update process of obtaining authorization and clarify its purposes.

Section 13: Clarify restriction of individuals from Walk in Access properties.

Section 15: Added section to enable current agreements to continue under the terms and conditions which pertained at the time they were established.

R657. Natural Resources, Wildlife Resources.
R657-56. [~~Recreational~~]Lease of Private Lands for Free Public Walk-in Access.

R657-56-1. Purpose and Authority.

Under the authority of Sections 23-14-3(2), 23-14-18, and 23-14-19, this rule provides the procedures, standards, and requirements to administer a Walk-In Access program in the State of Utah designed to compensate private landowners for leasing private property for the purpose of allowing free public access for wildlife -dependent recreation.

R657-56-2. Definitions.

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

(2) In addition:

(a[~~) "Base rate fee" is the minimum payment that a landowner is eligible for excluding all bonus payments.~~]

[~~(b~~]) "Contiguous" means parcels of real property that share a common property line and are otherwise connected as a single mass, excluding parcels that adjoin only at corners.

[~~(c) "Landowner association" means a landowner or group of landowners of private land organized as a single entity for the purpose of applying for and becoming a WIA property.~~]

[~~(d) "Landowner association chair" means an individual designated by a landowner association as their representative.~~]

[~~(e) "Landowner association member" means an individual landowner participating in the landowner association.~~]

[~~(f~~]

(b) "Division" means Utah Division of Wildlife Resources.

(c) "Private landowner" means any individual, partnership, corporation, lessee, or association that possesses the legal right on private property to grant rights for hunting, trapping, or fishing within a [~~recreational~~]lease agreement.

([~~g~~]d) "Recreational lease activities" [~~mean~~]means specific wildlife -dependent recreation [~~limited to fishing, hunting or trapping as provided in the wildlife dependent recreational~~]activities that are made available to the public on a Walk-in Access property, through a Walk-in Access lease agreement.

([~~h~~]e) "WIA" means [~~walk~~]Walk-in [~~access~~]Access, a program of the Utah Division of Wildlife Resources.

(f) "Wildlife-dependent recreation" means hunting, trapping, or fishing.

R657-56-3. Walk-In Access Private Landowner Enrollment Procedures.

(1) A private landowner with eligible property [~~may participate in the WIA program provided they submit an application to the appropriate division office by June 30, with the following information~~]as outlined in Section (4) may be considered for a WIA recreational lease agreement upon providing:

(a) evidence of property ownership[~~, or if leasing the private property a copy~~];

(b) evidence of [~~the~~]a lease agreement or other form of certification verifying a lessee's right to enter a WIA recreational lease agreement with the division, if applicable; and

([~~b~~]c) county recorder plat [~~maps~~]or equivalent [~~maps, dated by receipt of purchase within 30 days of the initial or renewal enrollment deadline,~~]map depicting property boundaries and ownership.

(2) Verification of [~~all~~]property ownership shall be obtained prior to finalization of a WIA agreement.

(3) The division may require additional supporting documentation to verify property ownership, boundaries, statements or claims.

R657-56-4. Walk-In Access Program Minimum Requirements.

(1) Private property enrolled in the WIA[~~.~~]

[~~(c) the private landowner's signature.~~]

[~~(3) two or more landowners with contiguous properties may join together to form a landowner association provided the combined properties~~] program must provide suitable habitat to support the recreational lease activities described in the WIA recreational lease agreement, and contain:

(a) no less than a 40 acre contiguous block of land, wetland, or riparian area for hunting or trapping;

(b) a minimum of 0.25 continuous miles of stream or river; or

(c) a minimum of 1 contiguous acre of lake, reservoir, or pond.

(2)(a) A private property which does not meet the minimum acreage or mileage requirements may be considered for approval based on the division's determination that the property holds a unique value which is highly beneficial to the public and not otherwise attainable.

(b)The statewide WIA coordinator must give specific approval for any property which does not meet the minimum acreage or mileage requirements[~~ in R657-56-5.~~]

[~~(4) Application forms are available at the appropriate division office.~~]

[~~R657-56-4. Walk-In Access Recreational Lease Agreement.~~].

(c) The property shall not be exempt from any other minimum requirement.

(2)(a) A WIA lease agreement may be developed for a property which provides a corridor to public lands or waters suitable for hunting, trapping, or fishing that are otherwise inaccessible, or reasonably inaccessible without such corridor or easement.

(b) Agreement terms for a WIA property containing an access corridor to public lands may be compensated with a rate consistent to the amount of land or water being made available to the public.

(4) No land parcel may be included in more than one WIA agreement, nor may a WIA property be in another lease or other agreement regarding the same hunting, trapping, or fishing access privileges.

(5)(a) The division shall evaluate a prospective WIA property to determine suitable wildlife and habitat for the designated recreational lease activities.

(b) The property must be capable of independently maintaining and harboring the respective species for the recreational lease activities identified for the period designated in the recreational lease agreement.

(c) The division may review the property periodically throughout the term of the lease agreement to determine if quality is maintaining, improving, or declining.

([~~1~~]d) The [~~division~~]access, area, and [~~private landowner shall prepare and agree~~]boundaries of the property must be practicable to and suitable for the [~~terms in a WIA~~]wildlife recreational lease [~~agreement by July 1~~]activities.

([~~2) Terms in the WIA recreational lease agreement shall include private landowner and division responsibilities, including the provisions in Sections R657-56-8 and R657-56-9, and compensation necessary to provide free public access for wildlife dependent recreational activities on private property.~~]

[~~(3) The amount of compensation paid to the private landowner participating in the WIA program shall be determined by:~~]

[~~(a) the type of wildlife dependent recreational lease activity allowed on the private property;~~]

[~~(b) the duration of the recreational lease agreement; and~~]

[~~(c) the number of acres of private land or pond, or miles of stream or river available for free public walk-in access.~~]

[~~(4) Upon mutual agreement, the division may provide habitat improvement, materials, or labor on the WIA property in lieu of all or part of the monetary compensation otherwise due for free public walk-in access.~~]

[~~(a) If habitat improvement, materials, and/or labor are provided by the division then the duration of the agreement shall be determined upon mutual agreement and based on the divisions cost estimate for the project.~~]

[~~R657-56-5. Walk-In Access Program Requirements.~~]

6)(a) Enrollment and participation in the walk-in access program is a privilege, not guaranteed, and at the sole discretion of the division, even if an applicant satisfies the minimum program requirements.

(b) The division may prioritize program enrollments and allocate lease compensation amounts based upon identified public recreational access needs, wildlife resource management objectives, and administrative limitations.

R657-56-5. Walk-In Access Lease Agreement.

(1) A WIA property is established through a written WIA lease agreement between the private landowner and the division.

(2) Terms of the agreement shall include private landowner and division responsibilities and compensation amount for the term of the agreement.

([~~1) Private property enrolled in the WIA program must provide suitable habitat that can support~~]3)(a) The private landowner transfers all access rights for the wildlife [~~dependent recreational lease activity described~~]activities included in the WIA[~~recreational~~] lease agreement[~~, and:~~]

[~~(a) contain no less than an 80 acre contiguous block of land for hunting or trapping;~~]

[~~(b) contain no less than a 40 acre contiguous block of wetland or riparian land for hunting or trapping;~~]

[~~(c) contain a minimum of .25 miles of stream or river;~~]

[~~(d) contain a minimum 5 acres of pond;~~]

[~~(e) the property provides an access corridor to comparable tracts of isolated public land or fishing waters open to free wildlife dependent recreational activities.~~]

[~~(2) If two or more landowners are joining private property to form a landowner association for the WIA program the property must:~~]

[~~(a) contain no less than a 320 acre contiguous block of land for hunting or trapping;~~]

[~~(b) contain no less than a 160 acre contiguous block of wetland or riparian land for hunting or trapping;~~]

[~~(c) contain a minimum of 1 mile of stream or river.~~]

[~~(3) No land parcel may be included in more than one WIA.~~]

[~~(4)(a) Division personnel shall evaluate proposed~~] for the agreement's term.

(b) WIA leases containing corridors to public land or water, or that are immediately adjacent to public land or water, transfer all access rights to cross through the WIA property to[~~determine if~~] the [~~property provides suitable~~]division for the wildlife [~~or fish populations and habitat for the designated~~]activities included in the WIA recreational lease [~~activity.~~]

[~~(b)~~]agreement.

(c) Public access on a WIA property shall be by foot only, unless otherwise authorized by the private landowner.

(d) Public access on a WIA property does not authorize trespass on adjacent private lands or waters.

(4) The [~~property must be capable of independently maintaining the respective species and harboring them during the period~~]terms and provisions of the [~~designated~~]WIA recreational lease[~~.~~]

[~~(c) If the property is approved for the designated wildlife dependent recreational lease activity,~~] agreement may be formally amended in writing at any time upon the mutual agreement of the division and the private landowner[~~may enter into the WIA recreational lease agreement as provided in Section R657-56-4~~].

R[~~657-56-7~~]657-56-6. Walk-In Access Compensation.

(1) The amount of compensation [~~payment~~]paid to [~~a~~]the private landowner [~~is~~]may be determined by the:

(a) type of recreational lease activities allowed;

(b) duration of the recreational lease agreement;

(c) actual acreage [~~or miles~~]of land or flat water, or length of stream [~~used for the WIA program and~~]or river which is legally allowed to be hunted, trapped, or fished; and

(d) quality of the habitat, location, species abundance or opportunities, and potential for public use.

(2) Total compensation may be reduced or increased by the division based upon:

(a) the type of recreational [~~activity~~]lease activities allowed[~~on the private property.~~];

[~~(a) Payments to a landowner association will be issued to the WIA landowner chair who will be responsible for disbursement of funds to other participating landowners.~~]
[~~(b) The landowner association will receive a base rate fee for the qualifying property and activity in addition to a bonus of 25% of the base rate.~~]
[~~(2) A bonus fee will be added to the base rate fee when a private landowner enrolls private property in the recreational lease agreement for additional consecutive years as follows:~~]
[~~(a) five percent will be added for two years; or~~]
[~~(b) ten percent will be added for three years; or~~]
[~~(c) fifteen percent will be added for four years; or~~]
[~~(d) twenty percent will be added for five years.~~]
[~~(3)~~]
(b) quality of public accessibility;
(c) number of consecutive years within an agreement;
(d) number of persons using the property;
(e) number of visits to the property per year by the public; and
(f) quality of the wildlife experience provided by the property.
(3) Final payment for an agreement which is terminated prior to the established expiration date, for which was given a higher rate of compensation due to the term length of the agreement, may be reduced according to the rate equivelant to the actual term length of the agreement.
(4)(a) Upon mutual agreement, the division may provide habitat improvement, materials, or labor on the WIA property in lieu of all or part of the monetary compensation otherwise due for free public walk-in access.

([~~a) Employees of~~]b) If a habitat improvement project performed or funded by the division is used as compensation for a walk-in access agreement, the division will provide an evaluation of the property[~~ for habitat improvement~~], a summary of the proposed project, and an estimated in-kind value estimate to the landowner.

([~~b~~]c) A habitat project proposal must be completed, reviewed, and approved through the[~~ divisions~~] Habitat Council, Blue Ribbon Fisheries Council, or the Watershed Restoration Initiative to qualify for use in the walk-in access program.
(d) The division and the private landowner must mutually agree to the use of a habitat project, it's estimated cost, and in-kind value to be used as compensation for a WIA lease agreement.
(e) A private landowner that received habitat improvement, materials, or labor in lieu of compensation, who ends a WIA lease agreement prior to the compensatory conditions of the habitat project agreement being fulfilled, may be assessed the balance of the predetermined cost.

R657-56-7. Walk-In Access Program Private Landowner Responsibilities.
[~~(c) The division and the~~] (1) Each WIA property with an active lease agreement must provide for the duration of the agreement:

(a) free public walk-in access for recreational lease activities described within the agreement;

(b) at least one designated and reasonable public access point to enter the property; and

(c) at least one designated and reasonable public parking area in close proximity to the access point(s).

(2) The private landowner [~~will agree to the duration of the agreement based on the estimated value of the habitat project as determined by~~]is responsible to verify accuracy of their WIA property map, description, conditions and other details as displayed on the division's webpage and must report any inaccuracy immediately to the division.

R657-56-8. [~~Walk-In Access Program Landowner Responsibilities.~~]

[~~(1) Each private landowner enrolled in the WIA program must provide:~~]

[~~(a) free public walk-in access for wildlife dependent recreational lease activities as provided in the recreational lease agreement; and~~]

[~~(b) private land with suitable habitat that can support the recreational lease activity; or~~]

[~~(c) an access corridor to comparable tracts of isolated public land open to free public access for wildlife dependent recreational activities.~~]

[~~(2) Each private landowner must indicate the type of landowner authorization required for the public to use the WIA for wildlife dependent recreational activities as follows:~~]

[~~(a) WIA authorization is the only requirement to access the property;~~]

[~~(b) registration at a WIA site is required prior to accessing the property; or~~]

[~~(c) contacting the landowner is required prior to accessing the property.~~]

[~~(3) The private landowner must transfer to the division, the recreational lease of their property for the wildlife dependent recreational lease activities designated in the WIA recreational lease agreement.~~]

[~~R657-56-9.~~]Walk-In Access Program Division Responsibilities.

(1) The division shall provide:

([~~1~~]a) [~~evaluations of habitat, wildlife or fish on~~]an evaluation of the [~~proposed WIA~~]property [~~as provided in Section R657-56-5;~~]

[~~(2)~~]prior to entering into a WIA[~~- recreational lease~~] agreement[~~- forms~~];

([~~3~~]b) an annual WIA authorization [~~program;~~]

[~~(4) WIA registration forms and boxes when applicable~~]document which public users must obtain prior to entering WIA properties;

([~~5) maps, requirements, and signs for enrolled WIA property as provided in the recreational lease agreement~~]c) a webpage displaying active properties, maps, authorized wildlife recreation activities, access points, designated parking areas, and special terms or conditions;

(d) WIA signage and adequate posting of signs as determined by the division; and

([~~6~~]e) discretionary law enforcement during [~~applicable wildlife dependent recreational activites;~~]
[~~and~~]
[~~(7) compensation payments to landowners following successful completion of the terms of the WIA recreational~~]seasons relative to the lease [~~agreement~~]activities.

R[~~657-56-10~~]657-56-9. Termination of Walk-In Access Recreational Lease Agreement.

(1) The WIA recreational lease agreement may be[~~:~~]
[~~(a)~~] terminated with 30 days notice for any reason by either party[~~ upon 30 days written notice; or~~]
[~~(b)~~]. [~~amended at any time upon written agreement by the landowner and the division.~~]

(2) [~~If a~~]The WIA recreational lease agreement [~~is~~]shall be terminated [~~as provided in Subsection (1)(a), prior to the ending date specified in the recreational lease agreement, the compensation fee shall be prorated based upon the recreational lease activity provided and the number of days that access was provided.~~]immediately upon:

([~~3~~]a) [~~Restriction~~]sale of [~~public use by the landowner of the private property enrolled in the WIA program in violation of the recreational lease agreement may void all or a~~]any portion of the WIA [~~recreational~~]property which is under lease[~~ agreement.~~];

([~~4~~]b) [~~Any~~]any change in [~~private land~~]ownership of [~~enrolled~~]a WIA property[~~ may terminate the WIA recreational lease agreement.~~];

(c) misrepresentation, deceit, or fraud pertaining to the agreement or any of its provisions; or

(d) any uncured breach or default of the WIA recreation lease agreement.

(3) The WIA recreational lease agreement may be terminated immediately upon:

([~~5~~]a) [~~Misrepresentation of enrolled~~]unauthorized restriction of public use by the private landowner; or

(b) any habitat or property [~~in the WIA program shall terminate the WIA~~]evaluation occurring within the term of the agreement indicating the property is no longer capable of supporting the recreational lease activities listed within the agreement.

[~~(6) If a habitat project is provided by the division and the landowner terminates the contract prior to the agreed term, the landowner will be required to reimburse the division the value of the project, which shall be prorated based on termination date.~~]

(4) Agreements having been terminated prior to the term completion may be subject to reduced compensation, prorated according to the number of days recreational lease activities were prematurely ended.

R[~~657-56-11~~]657-56-10. Liability Protection for Walk-In Access Private Landowner.

[~~Landowner~~]Private landowner liability may be limited when free public access is allowed on private property enrolled in the WIA program for the purpose of any recreational lease activities as provided in Title 57, Chapter 14 of the Utah Code.

R[~~657-56-12~~]657-56-11. Licenses, Permits[~~ and~~], Seasons[~~.~~] and Boundaries

(1) Any person [~~accessing WIA private lands for wildlife dependent recreational activities~~]hunting, trapping, or fishing must obtain and possess the [~~required~~]valid [~~license or permit~~]and necessary licenses or permits while participating in those activites on a WIA property.

(2) Seasons and field regulations on WIA properties are consistent with the respective hunting and fishing guidebooks published by the division.

(3) Public access to a WIA property may be restricted during times of the year when there is not a hunting, trapping or fishing season for the wildlife recreational activities in the WIA lease [~~activity, and must adhere to the respective rules and proclamations established by the Wildlife Board.~~]agreement.

[~~(2)(a) If enrolled WIA property requires prior private landowner authorization or any other requirement as provided in the recreational lease agreement, any person entering enrolled WIA private lands for wildlife dependent recreation must comply with said requirements.~~]

[~~(b) The division shall provide to the public maps of approved and enrolled WIA locations and requirements as determined~~]

(4) Additional weapon type restrictions may be established for WIA properties and listed in the WIA recreational lease agreement and on the division's webpage.

(5) Special closures, restrictions or conditions regarding WIA properties shall be published on the division's website respective to each WIA property.

(6) Boundaries for WIA properties shall be provided on the division's website.

R657-56-12. Walk-in Access Authorization.

(1) Any person accessing a WIA property must obtain an annual Walk-in Access Authorization and be able to show proof of authorization while on any WIA property.

(2) WIA authorizations are available on the division's website and are valid for a one year period from the date issued.

(3) A WIA authorization grants access to WIA properties to participate in the wildlife recreational lease [~~agreement.~~]activities listed in the WIA lease agreements.

(4) A WIA authorization may grant access through an active WIA property in order to access other public land or water, or private land for which the person has legal right to enter.

(5) The WIA authorization document may be used to authorize individual public access, monitor usage and satisfaction rates and other purposes respective to wildlife-dependent recreation on WIA properties.

(6) An annual report or survey may be required in order for a person to obtain a WIA authorization.

R657-56-13[~~. Walk-in Access Authorization Program (WIAA).~~]

[~~(1) Any person 14 years of age and older must obtain an annual Walk-in Access Authorization registration number to access properties enrolled in the Walk-in Access Program and may be required, while in the field, to prove they have registered.~~]

[~~(2) WIA authorization numbers will be valid from January 1 to December 31 for the year that they are obtained.~~]

[~~(3) To obtain an WIA authorization number, a person must call the telephone number published on-line or on signs available at WIA access points and provide the following information:~~]

[~~(a) combination, fishing, or hunting license number;~~]

[~~(b) license code or type;~~]

[~~(c) name;~~]

[~~(d) address;~~]

[~~(e) phone number;~~]

[~~(f) birth date; and~~]

[~~(g) information about their use of Walk-in Access areas.~~]

[~~R657-56-14~~]. Right to Deny Access.

(1) The division [~~or the~~]reserves the right to deny public access to any WIA property or a portion thereof for any reason and without notice.

(2) The private landowner reserves the right to deny [~~a person~~]public access[~~ to the WIA property described in the recreational lease agreement~~] for causes related to, but not limited to, [~~intoxication,~~]a member of the public:

(a) being intoxicated;

(b) causing property damage [~~to WIA~~]or vandalism;

(c) violation of property[~~, violations of~~] use terms or conditions [~~provided~~]in the [~~recreational~~]WIA lease agreement[~~,~~] or this rule;

(d) failure to [~~obtain~~]possess a WIA authorization[~~ number, or~~];

(e) committing any wildlife violation or crime on the WIA property; or

(f) any situation reasonably deemed an emergency.

(3)(a) A private landowner may give verbal notice to a member of the public that is being restricted or denied public access under Subsection (2) and must immediately notify the division.

(b) The private landowner may not otherwise restrict, limit, or prohibit public access.

(4) The division may revoke a WIA authorization and prohibit access to WIA properties for a person who has commited a wildlife violation [~~committed~~]or other civil or criminal offense while on a WIA property.

R[~~657-56-15~~]657-56-14. Prohibited Activities.

(1) It is unlawful for any person to access or use a WIA property in violation of the terms and conditions of the WIA recreational lease agreement, [~~or~~]the Wildlife Code, all rules and proclamations of the Wildlife Board.

(2) It is unlawful to refuse to leave a WIA property when requested by the private landowner, a division representative, or [~~a~~]other peace officer.

([~~2~~]3) Any person accessing WIA property in violation of [~~Subsection~~]Subsections (1) or (2) may further be subject to criminal trespass prosecution as provided in Sections 23-20-14 and 76-6-206.

R657-56-15. Effective Date and Prior WIA Lease Agreements.

(1) Amendments to this rule do not invalidate the terms of a valid WIA lease agreement, unless those terms are ortherwise unlawful or unenforceable.

(2) Renewal of a WIA lease is contingent upon the private landowner agreeing and complying with the rule's terms that are effective at the time the WIA lease renewal is executed.

KEY: wildlife, private landowners, public access
Date of Enactment or Last Substantive Amendment: August 9, 2018
Notice of Continuation: October 5, 2015
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-19; 57-14-1

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED
Executive Director

Division of Wildlife Resources

MICHAL D. FOWLKS
Division Director

MEMORANDUM

Date: April 21, 2020

To: Wildlife Board and Regional Advisory Council Members

From: Ashley Kijowski, Wildlife Biologist

Subject: Willard Spur Waterfowl Management Area Habitat Management Plan

The Utah Division of Wildlife Resources is providing an informational presentation on the newly acquired Willard Spur Waterfowl Management Area and its subsequent Habitat Management Plan.

See the attached management plan and presentation for details.

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

Willard Spur Waterfowl Management Area
Habitat Management Plan
DRAFT

RDCC Project Number:

Habitat Council Review Date:

RAC Review Date:

Director's Approval: Date:

EXECUTIVE SUMMARY
Willard Spur Waterfowl Management Area
Habitat Management Plan
January 2020
DRAFT

Primary Purpose of WMA

The primary purposes of the WMA are: (a) to propagate and sustain waterfowl, upland gamebirds, desirable mammals, shorebirds, and other migratory and non-migratory birds that use the Great Salt Lake ecosystem and the Great Salt Lake ecosystem's surrounding wetlands; (b) preserve and enhance the natural function, vegetation, and water flows under existing or acquired water rights to provide productive habitat for the species listed in Appendix D; (c) provide recreational opportunity for traditional marsh-related activities, including hunting, fishing, trapping, and wildlife viewing, including access with airboats and other small watercraft [See Appendix B].

Wildlife Species

The Willard Spur WMA provides crucial year-round habitat for a variety of avian species, particularly for waterfowl, shorebirds and other waterbird species.

Habitat Conditions/Problems

Willard Spur is an approximately 13,940-acre wetland that is extremely dynamic and driven by wide ranging inflows of surface water from the Bear River, Weber River, and a local east side drainage basin[1]. The surface water inflows tend to be dominated by spring runoff, contributions from the Bear River basin, and in almost all respects the surface water inflows are managed by water users at the fringes of the Willard Spur[1]. One issue is that the warm-water fishery at the Spur is dominated by invasive common carp. The gizzard shad, Utah chub, channel catfish, black bullhead, hybrid striped bass, yellow perch, and black crappie are also present at the Spur; however, Carp make up most of the biomass in the Spur [3,4,5]. The main threat to the fishery is thought to be the elimination of habitat through the absence of water. For example, a significant loss of fish was observed in 2012 and 2013 as the open water in Willard Spur receded and eventually dried up in 2013[1]. The high densities of common carp also degrade the water quality and reduce the habitat for other fish species and the effects of this become more important as water levels decrease and carp are concentrated in smaller areas. There are many invasive plant species located within Willard Spur; however, *Phragmites australis* is the most widespread. Monotypic stands of these invasive plants displace native vegetation and the food sources they provide for migratory birds, fragment the marshes, affect nesting habitat, and generally reduce the quality of the habitat and ecosystem services provided by the wetlands[1]. An in-depth study led by Utah

Division of Water Quality (UDWQ) showed that overall, the chemical integrity of the Willard Spur was "indicative of healthy conditions"[1,2]. There were no violations of their Class 3B numeric metal water quality criteria during the study on the open water of the Willard Spur; however, they did record a handful of violations of PH, temperature and ammonia criteria. The results showed that these violations occur during the latter stages of hydrologic isolation and may be the result of conditions that occur naturally.

Access Plan

The Willard Spur WMA contains two main access roads and two parking lot areas. The main road to the south is used to access the south and west ends of Willard Reservoir, the north end of Harold Crane WMA, and the east end of the massive Willard Spur area of the Bear River Bay Arm of Great Salt Lake [See Map 2]. This road provides tens of thousands of recreational visitors' free access year-round for activities such as hunting, fishing, dog training, bird watching, boating, and sight-seeing. However, the road is listed as a major issue item within both the Willard Upland Game Area (UGA) and Harold Crane WMA Habitat Management Plans, and is a constant cause of public complaints. It is in need of major improvements, such as re-grading and re-graveling. A collaborative grant proposal with the Bureau of Reclamation (BOR), Sportsmen for Fish and Wildlife (SFW) and the Utah Division of Wildlife Resources (UDWR) is currently being developed and will eventually become an appendix to this plan if approved by the Federal Lands Access Program (FLAP) within the Office of Federal Lands Highway (FLH, US Department of Transportation). The other access road is located on the north east side of the Willard Spur WMA and it provides access to a boat ramp to launch into the Spur and a small parking area.

Maintenance Activities

Typical maintenance activities include: the repair of boundary fences and gates to prevent motorized vehicles from creating unauthorized roads; maintaining boat ramps, access roads and parking lots; installing appropriate signs to communicate rules and regulations of the WMA, and replace regulatory signs as needed; and monitor and control noxious and invasive weeds using herbicide applications, supplemented by prescribed burns when possible.

Habitat Improvement

Wetland areas are overgrown with invasive weeds and need annual treatment. Other improvements will be made as personnel time and project budget allow.

Willard Spur
Waterfowl Management Area

DRAFT

-Habitat Management Plan-

January 2020

Prepared by:

Utah Division of Wildlife Resources

Northern Region

515 East 5300 South
Ogden, Utah 84405

Table of Contents

Willard Spur Waterfowl Management Area
Habitat Management Plan
January 2020
DRAFT

Background Information

Property Description

The Willard Spur Waterfowl Management Area (WMA) is an approximate 13,940 acre parcel of land located on unsurveyed state-owned lands below the 1855 meander line of Great Salt Lake in Sections 26, 35, 36 of Township 8 North, Range 4 West, S.L.B. and M.; Township 8 North, Range 3 West, S.L.B. and M; Sections 1,2,11,12 of Township 7 North, Range 4 West, S.L.B. and M.; Township 7 North, Range 3 West, S.L.B. and M.; Sections 20,21,29,30,31 of Township 8 North, Range 2 West, S.L.B. and M. The Full legal description is listed in Appendix B.

Encumbrances

- **Minerals**
  - There are no mineral rights associated with the Spur. According to the Great Salt Lake Mineral Lease Plan[6] the Spur is designated as a Class 5 protection and there will be no new oil and gas leasing or new salt leases within the Willard Spur Area.
- **Water rights/shares**
  - There was one water right that was filed back in 1966 for 638 cfs. It has not been approved. The water right number for this filing is: 29-1478 in the name of DWR.

- **Easements/ROWs/MOUs**
  - The Utah Division of Wildlife Resources (UDWR) must follow certain management criteria according to a memorandum of agreement (MOU) entered into between the State of Utah Division of Fire, Forestry and State Lands (FFSL) and UDWR (2019). This MOU describes the individual responsibilities of UDWR and FFSL in the management of the WMA to satisfy the general requirements identified in House Bill 265 (2019). Complete copies of both these documents can be found in Appendix B. Excerpts from the MOU include:

- FF&SL Will:
  - Consult with and direct UDWR regarding land-use requests and management activities [on sovereign lands] to ensure compliance with the Public Trust Doctrine.
- UDWR will:
  - Maintain access points, signage, assume primary law enforcement responsibility; and
  - Consult with FFSL, as needed, on land-use requests and management activities [on sovereign lands] and evaluate guidance regarding proper management of FFSL property consistent with the Public Trust Doctrine and FFSL management plans.
- Specific Activities on the WMA
  - Special Uses:
    - Any request by a third party that would necessitate an easement, lease, or special use permit under the UDWR Land Use Rule R657-28, or that would require a mineral lease, special use lease, easement, right of entry, or general permit under FFSL rules R652-20, R652-30, R652-40, R652-41, or R652-70 will first be directed to FFSL for initial review. If FFSL approves of proposed use, it will be forwarded to UDWR for their review. No use will be approved without written approval from both parties.
  - Duck Clubs: The WMA is currently used for commercial guiding for waterfowl hunters. All commercial guiding activities must be permitted through FFSL.
  - Permanent or Temporary Structures: No new permanent or temporary structures may be constructed on the WMA without prior written approval of both parties.
  - Public Access Points: The Parties will jointly identify public access points and boat launches. Signage will be provided and maintained by UDWR.
  - Invasive Species Control and Vegetative Treatments: UDWR will identify and select vegetation treatment projects on the WMA. UDWR will notify FFSL of completed projects on an annual basis. Use of prescribed fire may be included as part of a vegetation treatment project. The project(s) may encompass WMA lands, adjacent FFSL properties, and other lands as necessary. The parties agree to jointly pursue funding to accomplish vegetation objectives for the WMA. The UDWR will seek to work

collaboratively with outside entities to control invasive species, such as *Phragmites* and carp.

- Public Trust Doctrine: FFSL will consult with UDWR regarding best management protocols for WMA lands to ensure that proposed uses under the Management Plan identified in Section 6 are consistent with Public Trust Doctrine concepts.
- The entire MOU can be found in Appendix B.

- **Grazing**
  Grazing is not currently practiced on the WMA as the majority of the WMA supports open water habitats within Willard Spur; however, in the future grazing may be utilized as a habitat management tool on upland areas to achieve vegetation goals. In the event grazing is used, it will be done using a grazing prescription to achieve specific wildlife habitat goals and objectives. These goals and objectives will be described in a grazing agreement and will be on file at the UDWR Northern Region Office.

Land Acquisition History

The Willard Spur WMA was created in 2019 when the Utah Legislature passed House Bill 265 (H.B. 265), which created and provided for the use of the Willard Spur Waterfowl Management Area. Upon acquisition of the property, the UDWR entered into an agreement (MOU) with the Utah Division of Forestry, Fire and State Lands concerning certain management criteria, including the purpose for the property, water rights and invasive plant mitigation. In addition to developing the MOU, UDWR was directed to develop a management plan for the new WMA. This management plan satisfies that directive. Currently, there are no water control structures or impoundments on the WMA. H.B. 265 specifically provides that habitat, recreational opportunities and public access will be provided “without construction or use of an impounding dike, impounding levee or other impounding structure.” (UT. Code §23-21-5(2)(e).

Historic Uses

There is evidence that high populations of indigenous Americans lived in the marshes along the edges of Great Salt Lake for thousands of years. Human remains, ground stone, chipped stone, ceramics and tools have been documented on the Willard Spur WMA area. In more recent times, the area has been used for waterfowl hunting, fishing, bird-watching, kayaking, boating, and sight-seeing. The Willard Bay Reservoir was created in 1964 for the primary purpose of water storage. The bay has also provided incidental storage for recreation and fish and wildlife. Before the bay was created, there were large numbers of waterfowl and shorebirds that utilized the area. In fact, at some periods of the year almost any species of inland-breeding duck, along with Canada geese and whistling swans, could be found in the area. Large flocks of avocets,

godwits, dowitchers, stilts, willets, and many species of smaller shorebirds were also common in the area. Less numerous wildlife species include pheasants, mourning doves, and muskrats. Stagnant water and exposed mudflats were also often found in Willard Bay in late summer, creating conditions favorable to botulism outbreaks. In many years, large losses of ducks occurred. Waterfowl usage during the hunting season was heavy, but the sportsmen utilization was below potential prior to 1955. This was mainly due to lack of entry to certain areas. Waterfowl hunting recreation on the Willard Reservoir site is estimated at 3,500 man-days annually, with a harvest of approximately 7,700 birds[10]. Before Willard Bay Reservoir was constructed, waterfowl hunting was heavy and crowded along the Wasatch Front. Although, many would argue that it is still heavy across the Wasatch front, the Willard Bay increased access to areas for waterfowl hunting that many argued helped dilute the hunt in areas, helping to increase hunter numbers and experiences. These areas have been highly used for waterfowl hunting and bird watching for many years. It is currently used for all of the above activities listed.

Purpose of Division Ownership

- The legislative bill that created the Willard Spur WMA identified specific beneficial purposes for land management. These purposes include: propagating and sustaining waterfowl, upland game birds, desirable mammals, shorebirds, and other migratory and non-migratory birds that use the Great Salt Lake ecosystem and the Great Salt Lake ecosystem's surrounding wetlands;
- preserving and enhancing the natural function, vegetation, and water flows under existing or acquired water rights to provide productive habitat for the species listed in Subsection (2)(d)(i);
- providing recreational opportunity for traditional marsh-related activities, including hunting, fishing, trapping, and wildlife viewing; and
- providing public access in the management area for purposes of hunting, fishing, trapping, and wildlife viewing, including access with airboats and other small watercraft. Similar to how UDWR manages other waterfowl management areas on Great Salt Lake, additional purposes include: management to preserve, restore, and enhance both aquatic and terrestrial habitat for wildlife; protect cultural resources; and provide recreational opportunities that are compatible with the purpose of upland and wetland ecosystems.

Key Wildlife Species Occurring on the WMA

The Willard Spur WMA provides crucial year-round habitat for a variety of waterfowl and shorebirds. A detailed review[4] of UDWR avian population database for 1999-2012 was completed by Dr. Cavitt at Weber State University to determine which species of birds were using the Willard Spur area[3]. Fifty-six species were recorded in the database. The results

showed a wide array of avian species present on the WMA in all seasons, ranging from large birds such as the American white pelican, to smaller birds such as the American avocet. The Willard Spur was also included in a west-wide survey of breeding colonial birds in 2014 (Cavitt et. al 2014). This survey also reported a high number of breeding birds around the GSL wetlands, including almost 100,000 breeding California Gulls and 27,333 breeding White-faced Ibis. The wide array of bird species is likely due to the wide array of foraging and nesting habitat provided by the Spur. Based on these studies, the principle waterfowl that inhibit the WMA include Canada Geese and a variety of ducks such as the Gadwall, Mallard, Cinnamon Teal, Northern Shoveler, American green-winged Teal, Canvasback, Common Goldeneye, and Ruddy Duck. There are also large numbers of shorebirds found at the WMA, such as the American Avocet, Marbled Godwit, Least Sandpiper, Black-necked Stilt, Long-billed Dowitcher, Wilson's and Red-necked Phalaropes. The American Coot, Snowy Egret and White-faced Ibis were also found in significant numbers. A full list of all common species documented in the vicinity of the Spur is in Appendix D. All sensitive species and species of conservation concern known to occur on the WMA are discussed in the "Sensitive Species" section of this plan, and are also summarized in in Appendix D and Table 1.

A study[3] conducted at Utah State University by Hannah Moore and Wayne Wurtsbaugh examined the Fish diversity of Willard Spur in 2011. The results showed a total of five species present at their four stations. The fish present were: Common Carp (*Cyprinus carpio),* Utah Chub (*Gila atraria),* Hybrid Bass Wiper (striped bass x white bass; *Morone chysops x saxatilis),* Yellow Perch (*Perca flavascens),* and Black Crappie (*Pomoxis nigromaculatus)*. Carp made up 71% of the biomass, followed by Wiper (21%), Utah Chub (7.8%), Black crappie (0.2%), and Yellow Perch (0.2%). (See Chart 1)

Another study[5] on the Willard Spur fishery was conducted by Chris Penne at the Utah Division of Wildlife Resources in 2012, a particularly dry year at the Willard Spur. Attempts were made to sample for fish in the same areas as Moore (2011) but it was too dry/shallow in areas to do so. The UDWR were able to catch 107 fish representing seven different species during the investigation. They found that 45% of the fish were carp, 19% catfish, 17% shad, 15% Bullhead, 2% Perch, 1% Crappie, and 1% Chub. As in the previous study by Moore, Carp dominated the total catch in both biomass and numbers; however, it was about 35% lower. (See Chart 2 and Table 3)

Public Recreation Opportunities and Restrictions

The Willard Spur WMA offers a variety of recreational opportunities. It is most known for its waterfowl hunting opportunities (in appropriate season) and bowfishing. It is a popular site for bird watching, particularly during the spring and fall migration periods. It is also a popular site for photography and kayaking. Statewide fishing limits will apply. The WMA will be open year-round.

Conservation Partners Involved in Acquisition

Acquisition of land and management rights for Willard Spur WMA has been accomplished with the cooperation of various agencies throughout time. Those agencies cooperating with the UDWR include the United States Bureau of Reclamation, the Utah Division of Forestry, Fire and State Lands, and Weber Basin Water Conservancy District (WBWCD).

Property Inventory

Existing Capital Improvements

- **Roads:** There are currently two primary access points to the WMA. One access point is from the Willard Bay West Access Road that begins at W 4000 N. The road is located along the base of the Willard Bay Reservoir dike and passes by both the Willard Bay UGA and Harold Crane WMA. The road is approximately 5.43 miles long and ends on the north side of the reservoir dike, at a gate owned by the BOR. This road is very rutted and is difficult to maintain due to the moisture levels in the soils. It is in need of major improvements, including re-grading and re-graveling. A grant proposal is currently being drafted, in coordination with the Bureau of Reclamation (BOR), to address these needs. If granted, it will become an appendix to this plan.

  The second access road is located on the north eastern side of the Willard Spur WMA. This road provides access to the north eastern side of the Willard Spur WMA and a boat launch.
- **Fences:** There are currently no boundary fences at the WMA.
- **Facilities:** There are currently no facilities (bathrooms) provided at the Willard Spur WMA. There are some informational and boundary signs that govern the area. There is one boat ramp at the northern end of the main southern access road. There is an additional boat ramp on the eastern side of the WMA. This boat ramp is owned by Utah Division of State Parks and Recreation. There are at least two parking lots and two airboat parking lots along the main southern access road.
- **Water Rights:** There are currently no water rights associated with the Willard Spur WMA. There was a water right filed by the Utah Division of Wildlife in 1966 for 638 cfs (29-1478) that has not yet been approved.
- **Boat Ramps:** The Willard Spur southern access road leads to a gravel boat ramp at the NW corner of the reservoir dike. This small gravel boat ramp can be used for kayaks and other smaller watercraft, such as airboats, to launch into the spur. There are also small pull-outs to park vehicles.

  An additional concrete boat ramp is located on the northeastern side of the WMA, north of the reservoir dike, and south of the Perry City Wastewater Treatment Plant.

    - The northeastern boat ramp is on BOR/State Parks land. The UDWR will work with BOR and State Parks to provide help with (if capable) on any maintenance issues that may occur for this particular boat ramp.
- Currently, aside for the aforementioned roads and boat ramps, there is no infrastructure on the WMA.
- There are 17 duck blinds in the Willard Spur Area. These duck blinds are not affiliated with the State of Utah, but will remain open for public use.
- All private land ownership around the west entrance road is marked, as well as the State's property. The United States Fish and Wildlife Service (USFWS), Bear River Migratory Bird Refuge (BRMBR) property is marked as well, but it is poor signage that is often over-grown from transitioning aquatic vegetation (phragmites, cattail) changes, as well as poor sign quality. They are often very difficult to read and should be updated in the future to clarify boundaries.

Water Developments

There are no impoundments, dikes or water control structures for the management of the Willard Spur WMA. The legislation creating the WMA specifically states: "The division shall provide the habitat, recreational opportunities, and public access described in without construction or use of an impounding dike, impounding levee, or other impounding structure."

Wood Products: There are no wood products on the WMA.

Cultural Resources:

The Willard Spur Wildlife Management Area (WMA) has had four cultural resource inventories occur over the past several decades. Three surveys are located along the edges of this WMA, and one is within the property boundary, and is related to human remains. Inventories consist of: Willard Bay Sale Parcels (SITLA U16UM0780), South Ditch Piped Utility Corridor (Big Horn Archaeological Consultants U11HO0940), Bureau of Reclamation Lands Around Willard Bay Reservoir (BYU Office of Public Archaeology U92BC0043), Willard Bay Human Remains (Utah State University U01UJ0691). Very few sites (n=2) are documented within the property as the Willard Bay Spur WMA is mostly covered in marsh. However, human remains have been recovered by Utah State University on exposed low lying areas where ground stone, chipped stone, ceramics and tools have also been documented. Two sites with human remains are located northwest

of Willard Bay. There is evidence of high populations of indigenous Americans living in the marshes along the edges of the Great Salt Lake for thousands of years.

South, southwest of Willard Bay several hundred prehistoric sites have been documented in the late 1980's and early 1990's during low lake levels. *Prehistoric Human Skeletal Remains and the Prehistory of the Great Salt Lake Wetlands* (Simms et al. 1991) documents the recovery of 75 human individuals and associated archaeological contexts. The skeletons date to the period after A.D. 400 and possibly to as late as the protohistoric period (pre-white contact). No historic materials were encountered during these excavations. The extensive marsh areas along the eastern margin of the Great Salt Lake between Salt Lake City and Brigham City have been the focus of intensive human occupation. Based on the above, the Willard Spur WMA has the potential to contain hundreds of archaeological sites and human remains.

One of the purposes of a Utah DWR WMA is to protect these cultural resources. Protection actions can include, but are not limited to: not drawing attention to known sites; and having cultural resource surveys completed prior to any ground or water disturbing actions (ie, habitat improvement activities, water management/delivery actions).

Sensitive Species

Twenty-one species considered either a Species of Greatest Conservation Need (SGCN) (as identified in the Utah Wildlife Action Plan, 2015-2025), or a Utah state Sensitive Species are known to presently or historically occur either on or adjacent to the Spur at Harold Crane WMA or at Willard Bay UGA.. Habitats present on the Spur could also support these species.

Table 1. Species observed on or near/adjacent to the Willard Spur Waterfowl Management Area that are designated as Utah Species of Greatest Conservation Need (SGCN) or on the Sensitive Species List (SSL). This table can also be found in Appendix A.

Species	Scientific Name	SGCN	SSL
American Bittern	*Botaurus lentiginosus*	X	
American White Pelican	*Pelecanus erythrorhynchos*	X	X
Bald Eagle	*Halioeetus leucocephalus*	X	X
Burrowing Owl	*Athene cunicularia*	X	X
Caspian Tern	*Hydroprogne caspia*	X	
Ferruginous Hawk	*Buteo regalis*	X	X
Flammulated Owl	*Psiloscops flammeolus*	X	
Golden Eagle	*Aquila chrysaetos*	X	
Lewis' Woodpecker	*Melanerpes lewis*	X	
Peregrine Falcon	*Falco peregrinus*	X	
Snowy Plover	*Charadrius nivosus*	X	
Long-billed Curlew	*Numenius americanus*		X
Short-eared Owl	*Asio flammeus*		X
White-faced Ibis	*Plegadis chihi*	X	
Northern Leopard Frog	*Lithobates pipiens*	X	
Little Brown Myotis	*Myotis lucifugus*	X	
Utah Milksnake	*Lampropeltis triangulum taylori*	X	
Preble's Shrew	*Sorex preblie*		X
Townsend's Big-eared Bat	*Corynorhinus townsendii*		X
Bobolink	*Dolichonyx oryzivorus*		X
California Floater/Winged Floater	*Anodonta californiensis*		X

A full list containing all species of conservation concern, their classification, state tier level, preferred habitat, season present and relative abundance that is thought to occur on or near the Spur is available in Appendix D. This list was compiled by either direct observations of the species in or near/adjacent to the area or could be found due to the habitat types present on the WMA

Important Fish and Wildlife Habitats

The Willard Spur WMA is managed primarily to optimize habitat conditions for waterfowl and shorebirds, although it provides important habitat for other wildlife, including other migratory waterbird species such as the White-faced Ibis as well. Nesting, brooding, summering, staging and wintering habitats are all available for the variety of avian species on the WMA. Great Salt Lake and the surrounding area, including the WMA, lie in the pathway of a major migration corridor utilized by millions of birds each year. The WMA provides important feeding and resting habitat for these migratory birds.

The Utah Wildlife Action Plan (WAP; see additional information in Section III, Management Goals and Objectives), identifies several key aquatic habitats that occur on the Willard Spur WMA (Table 2). The WAP includes a state-wide threat assessment which identifies threats to each key habitat, and then ranks the impact of that threat (the scope and severity; S&S) according to the number of Species of Greatest Conservation Need that could be affected from that threat. The following habitat types occur on the Willard Spur WMA. These values were gathered from studies conducted on a larger area, referred to as "The Spur" that exceed the area of the WMA; therefore, the values reflect what habitat occurs on the Willard Spur WMA and the vicinity.

Emergent Vegetation: Emergent marsh aquatic key habitats include palustrine (marsh-like) wetlands with emergent vegetation, often associated with groundwater discharge or shallow surface flows. According to Downard et. al (2013), about 25-30% of the Willard Spur WMA and vicinity consist of emergent vegetation habitats.

- The priority threats include: Drought Conditions (High S&S) and Water Allocation Policies (High S&S).

Open Water: Open water aquatic key habitats include perennial bodies of standing water, including natural lakes, reservoirs and ponds. The majority of open water habitats on the Willard Spur WMA occur naturally from freshwater inflows from the Bear and Weber river watersheds. These areas provide important areas for foraging, staging and loafing for many water bird species throughout the year. According to Downard et. al (2013)[1] there are about 13,608 acres of open water (approximately 36% of the Spur and the vicinity ("The Spur"). See Map 2.

- The priority threats include: Agricultural/Municipal/Industrial Water Usage (Very High S&S); Water Allocation Policies (Very High S&S); and Drought Conditions. (High S&S).

Other important wildlife habitat:

Uplands: Although uplands are not considered a key wildlife habitat in the WAP, they provide important nesting habitat for migrating waterfowl, shorebirds and passerine species. According to Downard et. al (2013), less than 1% (28 acres) of the Willard Spur WMA and the surrounding vicinity ("The Spur") contains upland habitat (See Map 2 and Table 2).

Mudflat/playa: Although not considered key habitats in the WAP, mudflats/playas are important habitats for staging, foraging and loafing water birds. According to Downard et. al (2013) about 12,377 acres or approximately 32% of the Willard Spur WMA and surrounding area ("The Spur") contains mudflat/playa habitat.

Most of these threats are unable to be addressed directly at WSWMA. However, management at WSWMA addresses threats to these key aquatic habitats to the extent possible by managing for a diverse range of habitats in various successional stages which maintain and benefit the wide variety of wildlife species found on the WMA. The natural flows and uniqueness of the Willard Spur will be maintained and the DWR will keep in contact with other agencies, such as the DWQ, to address water issues in the area as well as engage in water discussions as needed to bring to light the importance of spring flushing flows, etc.

The majority of the Species of Greatest Conservation Need and Utah State Sensitive Species do not have specific management plans to guide their management. In the future, as species management plans are written and adopted by the Utah Wildlife Board, they may be implemented at WSWMA.

General Conditions of Habitats

Habitat Types

Because the Willard Spur WMA is located on the edge of GSL, when lake levels exceed 4,201.9 the fresh and saline waters mix. When GSL levels fall below that value, the Spur no longer mixes with the salty waters of GSL and as a result, the habitat is then controlled mostly by freshwater inflows[1].

As inflows to Willard Spur decrease and water levels in Willard Spur drop, a natural rise in the lake bottom on the western boundary of Willard Spur (locally known as the "sand bar") disconnects the waters of Willard Spur from Bear River Bay and the waterbody becomes a natural impoundment[1,2,].

The Willard Spur, although unique in terms of its large size and dynamic hydrology, is similar to other wetlands around Great Salt Lake. The USFWS has developed five management categories describing different habitats in the Willard Spur wetlands within the boundaries of the BRMBR[8]. The extent of each of these categories is largely dependent on the hydrology in a given growing season. The Willard Spur contains deep submergent wetlands, shallow

submergent wetlands, mid-depth emergent wetlands, shallow emergent wetlands and vegetated mudflats [1,2,8]) (See Map 2, Appendix 1; UDEQ)

The deep submergent wetlands are dominated by sago pondweed (*Stuckenia pectinata)* and typically hold 18-24 inches of water. The shallow submergent wetlands are also dominated by sago pondweed and have sparse emergent vegetation. These are typically 4-18 inches deep with water. The mid-depth emergent wetlands hold 8-12 inches of water, with roughly half being emergent vegetation with alkali bulrush (*Schoenoplectus maritmus)* for the most part in shallower areas and hardstem bulrush (*Schoenoplectus acutus)* in deeper areas, larger stands of cattails (*Typha latifolia and T. angustifolia)* and phragmites (*Phragmites australis).* The shallow emergent wetlands are dominated by alkali bulrush and some stands of cattails and phragmites with the water being anywhere between 2 and 8 inches deep. The vegetated mudflats have anywhere between 0 and 2 inches of water during high inflow periods or large precipitation events. They contain highly saline soils, are often unvegetated, but can support shallow-rooted vegetation such as pickleweed (*Salicornia rubra and S. utahensis),* saltgrass (*Distichils spicata),* and seepweed (*Suaeda calceoliformis and S. moquini)* (UDWQ). These habitat types can be seen in Map 2 in Appendix 1 (UDWQ map) and were summarized by USFWS and UDWQ[1,2,8].

A study conducted by UDWQ on the potential effects of water quality due to the Perry-Willard Wastewater Treatment Plant discharging into the spur. Their findings showed that the Willard Spur was healthy overall and there were no violations of Class 3B numerical metal water quality criteria in the open water of the Spur. They did find some violations of PH, temperature and ammonia, but these violations occurred during the latter stages of hydrologic isolation and might be the result of naturally occurring conditions[1,2,8]. An important part of the Willard Spur's ecology are the flushing flows that reset the nutrient concentration clock[,8] .

Habitat Limitations

A key approach for managing and preserving the quality attributes of the unimpounded area is through direct control of invasive plants, such as *phragmites.*The WMA is affected by seasonal dry spells because it relies on sufficient amounts of outflow from the Bear River Migratory Bird Refuge to maintain a significant wetland complex; therefore, sometimes the amount of freshwater for the Spur is limited on the amount available to BRMBR; and The Willard Bay

Reservoir spillway is another source of water in some years. In the fall, as temperatures cool and the irrigation season closes, water volumes on the WMA increase slightly[8].

During CAP meetings conducted by UDWQ to wrap up the Willard Spur project the Perry-Willard POTW representatives discussed their *phragmites* and summer time water management. One of the things that came out of the Willard Spur studies is that the health of the Spur is most sensitive when water levels are low and it is disconnected from Bear River Bay. Because of this, the POTW is required

to apply their wastewater to an upland pasture during the summer months. Usually that water wouldn't make it to the central part of the Spur during the summer anyways, but it is another complication in the water management and a potential conflict between maintaining water quality and water quantity. (Dr. Downard, UDWQ, pers. Comm.)

Human Use-Related Problems

The poor condition of the main southern access road along the base of the Willard Bay Reservoir dike is the primary concern with public access to the area. A grant proposal is currently being developed to try and resolve this issue. The vandalism of fences, gates and signs is a constant problem and is likely related to the close proximity of the WMA to a large metropolitan area. Litter is also problematic. If the road is improved, it is expected that there will be more frequent patrols and a reduction in these issues.

Adjacent Land Uses and Potential Impacts

The WMA is bordered on the east by Willard Bay Reservoir (BOR), on the north by the Bear River Migratory Bird Refuge (USFWS), and on the south by Harold Crane WMA (UDWR) [See Map 2]. To the west of the WMA is Bear River Bay of Great Salt Lake, which provides important habitat for millions of migrating birds, salt and mineral extraction, brine shrimp harvesting, boating and other recreational activities. Wildlife and habitat management in the Refuge extends downstream into the Spur and provides important wildlife habitats. For example, sometimes the Refuge might need to push water out of some units and that water may get delivered to the Spur. Communication on these potential management actions between agencies will be important for the Spur.

To the northeast, the WMA is near the Willard Bay State Park, which is managed by the United States Bureau of Reclamation through partnerships with the Weber Basin Water Conservancy District, the Utah Division of State Parks and Recreation, and the Utah Division of Wildlife Resources. Use of the area is recreational in nature and does not conflict with WMA management, except for the complex overlapping jurisdiction that has hampered some items such as roadway improvement and public recreational usage. The Willard Bay Upland Game
Area (UGA) lies south of the WMA. The land is owned by the United States Bureau of Reclamation, but is managed for wildlife purposes by the Utah Division of Wildlife Resources. Uses of the UGA are similar to many of those of the Spur WMA, such as waterfowl and upland game hunting (in appropriate seasons), trapping, and bird watching, but the UGA also includes developed facilities for dog training.

Private lands border portions of the north-eastern boundary. The majority of these lands support agricultural activities. The Willard City Wastewater Plant, which is also located in this area, discharges into a ditch, which subsequently enters the WMA.

Management Goals and Objectives

Willard Spur WMA management is based primarily upon goals, objectives, and strategies of the various Division planning efforts. These other plans are briefly discussed below.

UDWR Strategic Plan (2019)

The management of Willard Spur WMA has relevance to the following goals and objectives outlined in the Division's strategic plan:

Resource Goal: Conserve, enhance and actively manage Utah's protected wildlife populations.

> *Objective R1- Increase, decrease or maintain wildlife populations, as needed, to meet the objectives in our management plans.*
> *Objective R2- Maintain existing wildlife habitat and increase the quality of critical habitats and watersheds throughout the state.*
> *Objective R3- Increase our knowledge of crucial fish and wildlife habitats and migration patterns.*

Constituency Goal: Strengthen support for wildlife management by demonstrating the value and importance of wildlife to all Utahan's.

> *Objective C1- Increase participation in fishing, hunting and other wildlife-related activities.*
> *Objective C6- Increase hunting and fishing opportunities.*

These goals and objectives will be accomplished by properly managing the vegetation, wildlife and human components of the WMA according to those strategies mentioned in the property and habitat management sections below. The sections detail property maintenance and development, wildlife and habitat management, and access and fire management on the WMA.

Wildlife Action Plan

The current Wildlife Action Plan (WAP), effective 2015-2025, is entitled the "Utah Wildlife Action Plan: A plan for managing native wildlife species and their habitats to help prevent listing under the Endangered Species Act." This document outlines a state-wide approach for the planning, cooperation, coordination, and implementation of wildlife and habitat conservation practices. The WAP address the following elements:

- Wildlife distribution and abundance, especially for Species of Greatest Conservation Need
- The habitat extent and conditions essential for the conservation of rare and declining species.
- The major problems impacting rare and declining wildlife species and their essential habitats.
- The research or surveys needed for identifying and understanding the key factors in effective restoration and conservation.
- Prioritized actions to be taken to conserve rare and declining wildlife species and their habitats.
- The need for periodic monitoring of selected species or their habitats, to gauge the effectiveness of conservation actions, and to adapt conservation to better information or changing conditions.

The WSWMA HMP process is used to address wildlife species and habitats found on the WMA, by explicitly including their needs in routine, novel, and emergency management activities. This aligns well with the intent of the WAP, which identifies specific management actions that can be taken to reduce priority threats to these species and habitats.

The WSWMA has several aquatic habitats of statewide and local concern, which include emergent marshes and open water. One of the intents of the WAP in identifying these habitats is that local-area management efforts can better focus actions on those specific habitats where actions can have the most benefit for species of greatest conservation need. Most of the threats to the key aquatic habitats are unable to be addressed directly at WSWMA. However, management at WSWMA attempts to address threats to these habitats to the extent possible by managing for a diverse range of habitats in various successional stages which maintain and benefit the wide variety of wildlife species found on the WMA. For more information, please see the discussion in this plan, Section II Property Inventory, Wildlife Action Plan.

Great Salt Lake Comprehensive Management Plan

In order to more specifically articulate the Utah Department of Natural Resources (DNR) management objectives for the resources of GSL, and to reconcile the diverse mandates of the seven divisions within DNR, the Great Salt Lake Planning Project was initiated. The UDWR has

26 authorities for managing wildlife in, on and around the Great Salt Lake, and participated in the development of both the Great Salt Lake Comprehensive Management Plan and the Mineral Leasing Plan (both documents final, March 2013). The Utah Division of Forestry, Fire and State Lands has been given authority (via Utah State Code 65A-2; and Utah Administrative Code R652-90) to prepare and

adopt comprehensive management plans for sovereign lands and resources, including the GSL, and was the lead agency in developing this GSL Plan. The purposes of the Great Salt Lake Planning project are:

- To establish unifying DNR management objectives and policies for GSL trust resources
- To coordinate the management, planning, and research activities of DNR divisions on GSL
- To improve coordination among DNR divisions, establish a decision-making proposal review and appeal process, resolve some issues between divisions, and improve management of the lake and its resources.
- To develop a sovereign land and resource management plan for the lake that balances multiple-uses and sustainability issues
- To establish processes for plan implementation, monitoring, evaluation, and amendment.

The comprehensive management plan covers a wide range of elements of the Great Salt Lake including information about the hydrology, chemistry, water quality, air quality, biology, ecosystem, land, minerals & hydrocarbons, recreation, tourism & cultural resources, commercial & industrial use, agriculture, transportation, law enforcement, search & rescue, open space, critical lands, and visual resource management. It also developed a GSL lake level matrix and lake level management strategies to help guide the timing of various management strategies to minimize impacts to trust resources The mineral leasing plan identifies the extractive resources found on, in, adjacent to or under the GSL. It further identifies critical wildlife habitat areas where habitat protection is the preferred option. One of the goals of this planning effort is to integrate mineral resource planning with other resources and resource planning efforts.

The Willard Spur has been designated as a Class 5 area.

Class 5: Managed to Protect Potential Resource Preservation Options

- This classification includes lands that the legislature has authorized DWR to use for wildlife purposes under UTAH CODE § 23-21-5 (Map 2.10) and a 1-mile buffer zone around islands in the North Arm. No surface occupancy for oil and gas exploration will be allowed in established WMAs or in the island buffer zones. Elsewhere, oil and gas surface occupancy constraints shall be determined in consultation with DWR. Mitigation strategies for developments not related to wildlife management in these areas shall also be determined in consultation with DWR.

Strategies for Property Management

Development Activities

- Boundary fence needs

  If funding is provided, a fence along the side of the 5.43-mile main access road will be put in place. The fence will be used to help manage illegal vehicle use and trespassing. Currently, there is no grazing on the WMA.

  The gates at the Spur WMA will be maintained and repaired as needed. If a new gate is deemed necessary, it will be added to the Access plan within the Habitat Management Plan.

- Sign needs

  Since this is a newly created WMA, a number of signs will be needed including, but not limited to: entrance signs; boundary signs; and various regulatory signs (parking lots, boat launch ramps, directional, etc.) The signs will be repaired, maintained and/or replaced as necessary.

- Public Access Needs

  The main access road is in need of major repair. It is heavily used by the public, but also is a constant source of complaints from the public. It potentially poses a safety risk as it is difficult for emergency vehicles and Conservation Officers to travel quickly along it. The DWR and partners are working towards a solution to help repair the road and if they are successful, it will be added to the Access Plan in this HMP.

  The DWR and partners are also working to secure funding for additional parking lots and boat ramps at the new Willard Spur WMA. If successful, the newly created parking lots and boat ramps will be added to the Access Plan in this HMP. The

  UDWR will continue to address this issue, and, if needed, create an MOU with State Parks/BOR in regards to the northeastern boat ramp ownership and maintenance responsibilities.

- Habitat needs

  Utilize herbicide supplemented with prescribed burns and other techniques as a mechanism to aid in the control of noxious weeds as per weed and vegetative management plans.

Annual Maintenance Activities

All maintenance items are annually assessed and identified as a part of the waterfowl program's annual work schedule. The general waterfowl WMA Procedure Manuals also have additional information.

- *Fence maintenance:* Repair and replace dilapidated or damaged fences, walk-throughs and gates.
- *Road maintenance/closures:* Pursue opportunities to fund a road improvement project. Assure that appropriate signs are in place to indicate any rules or restrictions. Grade access road if necessary.
- *Parking areas:* maintain existing parking areas and boat ramps.
- *Noxious weed control:* Noxious weeds will be monitored and controlled with the use of herbicide, prescribed burning, integrated pest management activities, etc. as appropriate.
- *Sign replacement:* Install and maintain boundary, entrance, and regulatory signs to clearly identify ownership, access, vehicle restrictions, and rules and regulations enforced on the WMA.
- *Wildlife Census*: All annual wildlife and public census, surveys, and bag check information required is listed and detailed in the waterfowl section's Standard Operating Procedures (SOP) available at the UDWR Salt Lake Office. There are no current on the ground survey activities at the Willard Spur. The species listed in Appendix D are species known to occur at the Spur through smaller studies, along with species that have been seen at the Harold Crane WMA which is nearby. Aerial surveys of the area do occur during the spring and fall months and will continue into the future.

****The Willard Spur WMA will be primarily managed by the Assistant Manager of the Ogden Bay WMA****

Zoning and Land Use Ordinances

The WMA lies within the Great Salt Lake, in unincorporated Box Elder County, Utah. There is no specific zoning identified for this area. Any proposed management uses will be compatible with existing surrounding land uses.

Strategies for Habitat Management

Currently, there are no water control structures or impoundments on the WMA and none will be developed as per the language in HB 265. The available habitat management activities include:

- Monitor wildlife populations and vegetative communities and encourage research investigations on the WMA according to specific management plans and continue cooperation with other agencies and university research personnel. (See *Wildlife Census* information above).
- Protect and preserve cultural resources on WMA and continue cooperation with State Historical and University archeological personnel.
- Provide for public consumptive and non-consumptive uses on WMA that are compatible with wildlife and wetland ecology.
- Control animal and plant species, based on all available information, which are considered detrimental to the primary purpose of a WMA. Included but not limited to: the protection of human health and the control of invasive exotic species. Continue cooperation with other government pest control agencies.
- Install, restore, repair and replace capital facilities as needed to maintain the integrity of the WMA.
- Foster cooperation and communication between UDWR and other government agencies, sportsmen and women, special interest groups and adjacent residents.
- Develop an annual coordination process with FF&SL to maintain communication on issues regarding Spur management.
- Coordinate with outside organizations to ensure the best management practices are being used.
- Determine the entity responsible for the northeastern boat ramp maintenance.
- According to UDWQ, the water quality of the Spur did decline during low water periods when the Spur was disconnected from GSL due to natural biological processes and, because the Spur is so expansive and grows healthy SAV, it has a high assimilative capacity for nutrient cycling. Maintaining a mosaic or patches of open water, emergent vegetation, and mudflats over time should help the Spur support a wide variety of bird guilds. One of the important issues that the acquisition of water rights could help with, is making sure there are periodic flushing flows periodically to push all the accumulated decomposed matter and nutrients out to GSL. (Dr. Downard, UDWQ, pers. Comm).

- To accomplish this objective, UDWR will look for opportunities to purchase or lease available water rights

Habitat Improvement Plan

- Aggressively combat invasive weeds, especially *Phragmites* along the borders of the WMA, and improve habitat by using previously described methods.
- Upgrade and improve main access road conditions. Reseed all disturbed areas with wildlife beneficial plant species.
- The Utah Division of Wildlife Resources will pursue efforts to get the water right previously filed (29-1478) approved for the Willard Spur WMA.
- The Utah Division of Wildlife Resources will also try to get more water rights for the Willard Spur
    - Look into potential water rights from the Perry-Willard Treatment plant effluent
    - Look into all potential water rights for the Willard Spur area

Access Management Plan

The access management plan for the Willard Spur WMA is included in Appendix C. It discusses access to the WMA, rules and regulations for motorized vehicle operation in the area, and how this system is compatible with achievement of WMA management goals and objectives. A map is included, which shows authorized road, boat launch ramps and parking facilities.

Fire Management Plan

The Utah Division of Forestry, Fire and State Lands will continue to burn the Spur as much as possible each spring, targeting previously sprayed areas in order to combat Phragmites.

The use of fireworks is prohibited on the WMA (R657-28-4, n).

Summary Statement of Proposed Uses

The goals and objectives of the Willard Spur WMA are primarily to: (a) propagate and sustain waterfowl, upland gamebirds, desirable mammals, shorebirds, and other migratory and non-migratory birds that use the Great Salt Lake ecosystem and the Great Salt Lake ecosystem's surrounding wetlands; (b) preserve and enhance the natural function, vegetation, and water flows under existing or acquired water rights to provide productive habitat for the species listed in Appendix D; (c) provide recreational opportunity for traditional marsh-related activities, including hunting, fishing, trapping, and wildlife viewing, including access with airboats and other small watercraft.

Monitoring and Evaluation

The area supervisor, assistant wildlife manager and regional wildlife manager will be responsible for monitoring the overall effectiveness of the program. Appropriate sections will provide expertise as required. The area supervisor will oversee the effectiveness of the WMA and coordinate management efforts with Utah Division of Forestry, Fire and State Lands. The regional team will amend this plan as needed.

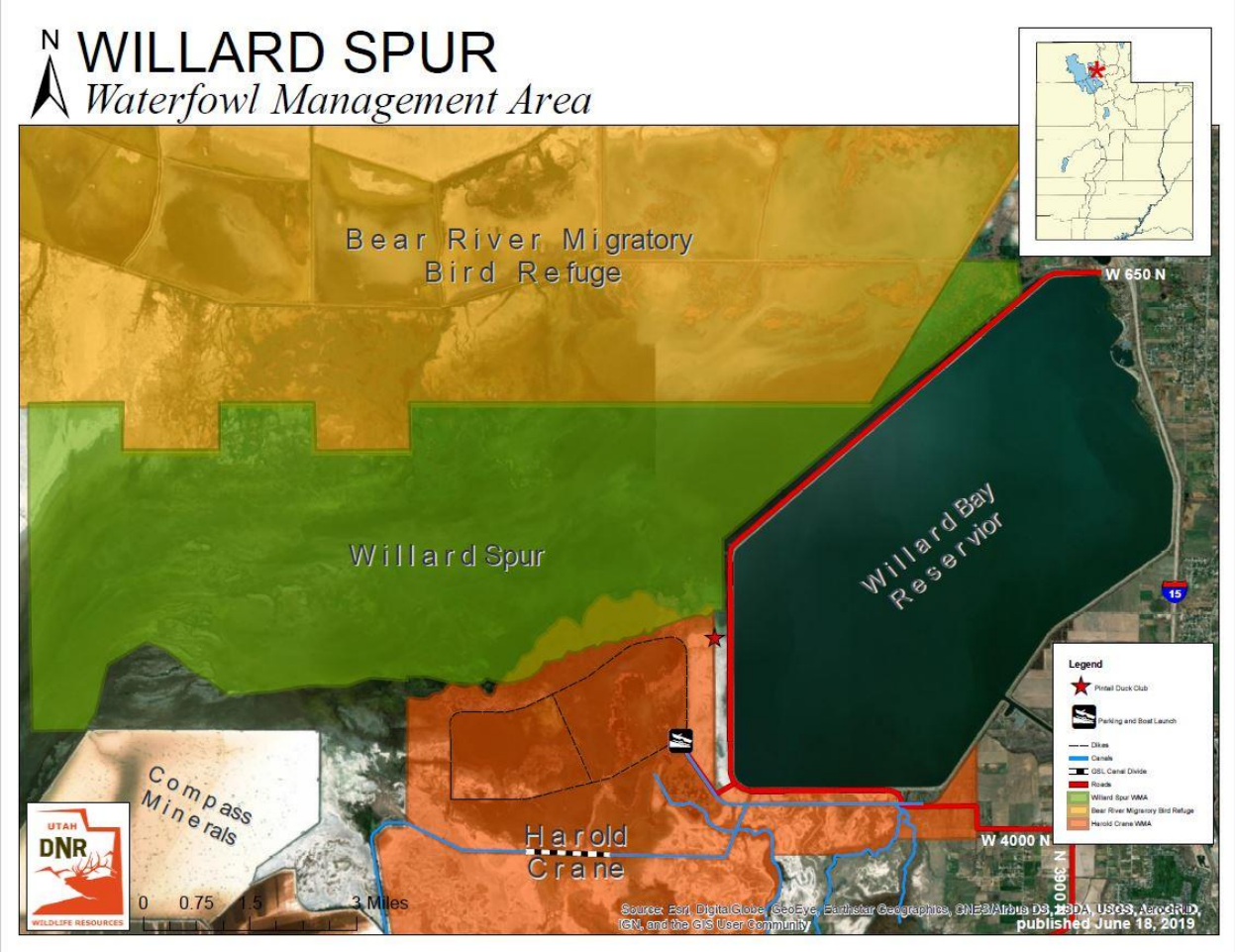
Appendices

- Appendix A- Maps, Charts, Tables, Figures and Pictures
    - Location (Map 1)
    - Surrounding land ownership (Map 2)
    - Willard Spur and Vicinity Vegetation (Map 3)
    - Willard Spur and Vicinity *Phragmites* (Map 4)
    - Willard Spur prescribed burn map (Map 5)
    - Harold Crane and surrounding areas 2019 *Phragmites* spray (Map 6)
    - Willard Spur 2018 *Phragmites* spray area (Map 7)
    - Fish Biomass (Moore 2011) (Chart 1)
    - Fish Biomass (Penne 2012) (Chart 2)
    - Willard Spur aerial photo (dry year) (Figure 1)
    - Willard Spur and surrounding areas- sand bar (Figure 2)
    - Willard Spur aerial photo (wet year) (Figure 3)
    - Willard Spur aerial photo (Figure 4)
    - Willard Spur aerial photo (Figure 5)
    - Algal Mat in Willard Spur (Figure 6)
    - Nutrient Study Microcosms (Figure 7)
    - Common Wetland Vegetation (Table 2) (Downard et al 2013)
    - Wetland Vegetation Area (Table 3) (Downard et al 2013)
    - Fish catch and size (Table 4) (Penne 2012)
- Appendix B- Legal Description and Encumbrances
    - Land Parcels and Legal Information
    - Bill HB 265
    - MOU between UDWR and UDFF&SL
- Appendix C- Access Management Plan
    - Public Access (Map 8)
- Appendix D- Wildlife Species and Noxious Weed Information
    - Sensitive Species and Species of Greatest Conservation Need
    - Common Wildlife Species
    - List of Noxious Weeds

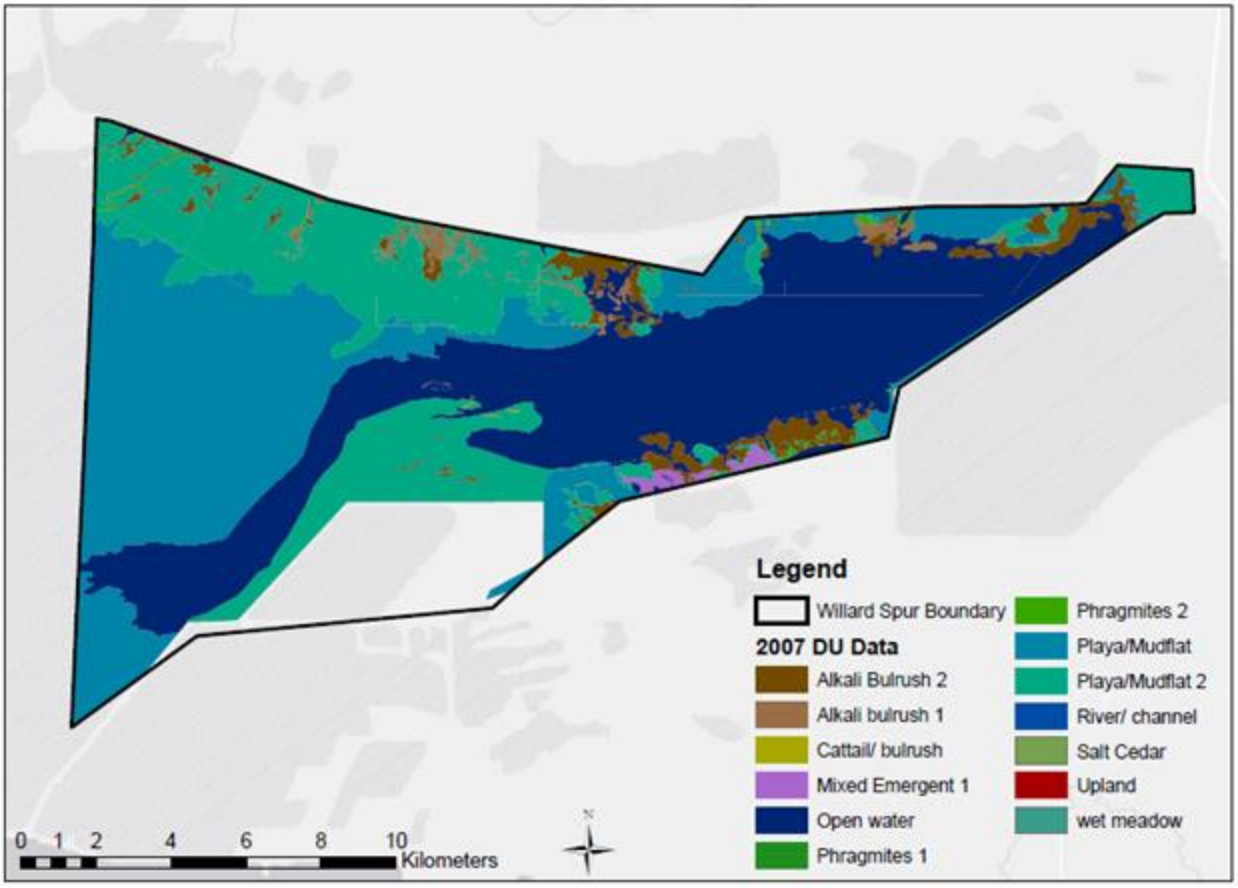
Appendix A

Maps, Charts, Tables, and Pictures

Map 1. This map shows the general location of the Willard Spur WMA near Great Salt Lake, Utah.

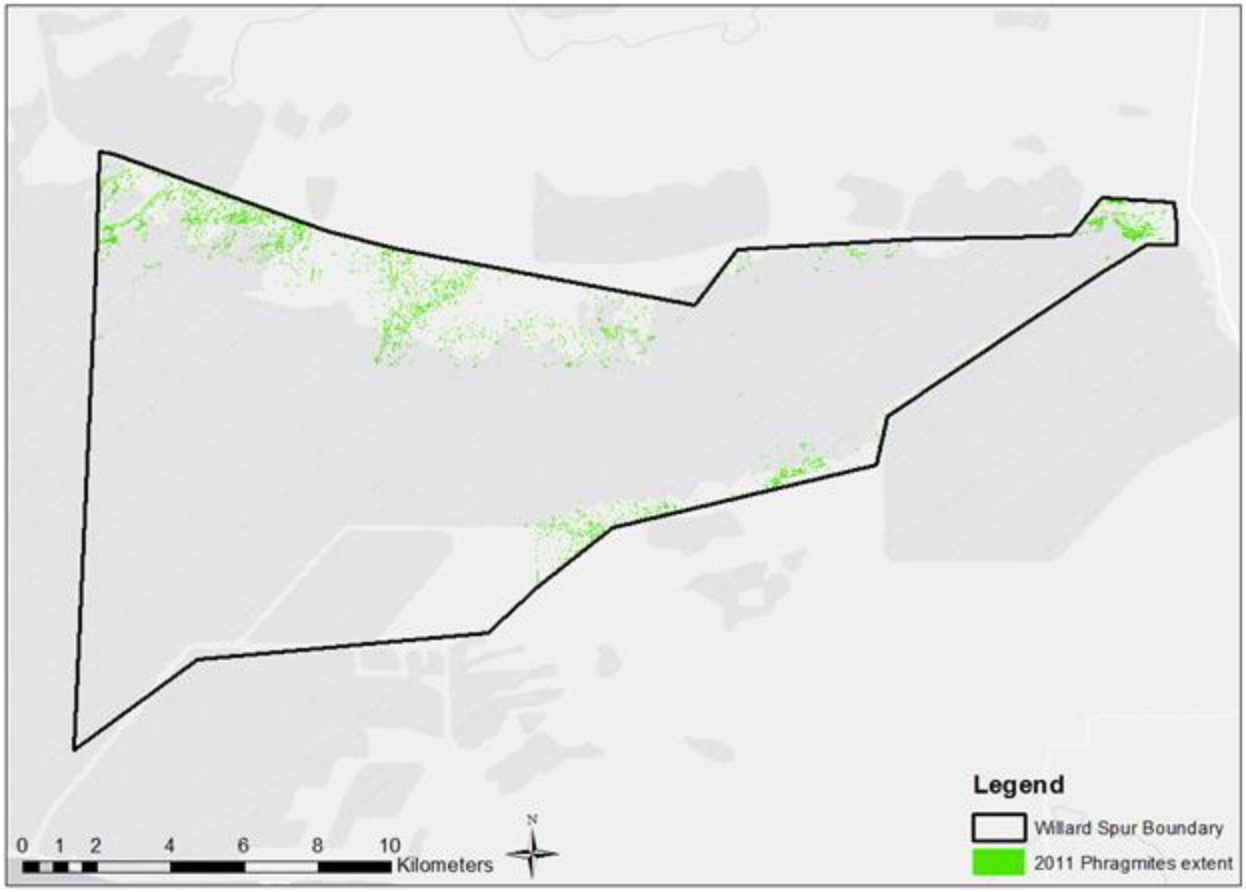


Map 2: This map shows the area of the Willard Spur WMA (in green) and the adjacent properties: Willard Bay Reservoir (Bureau of Reclamation) to the east, Harold Crane WMA (Utah Division of Wildlife Resources) to the south and Bear River Migratory Bird Refuge (U.S. Fish and Wildlife Service) to the north.



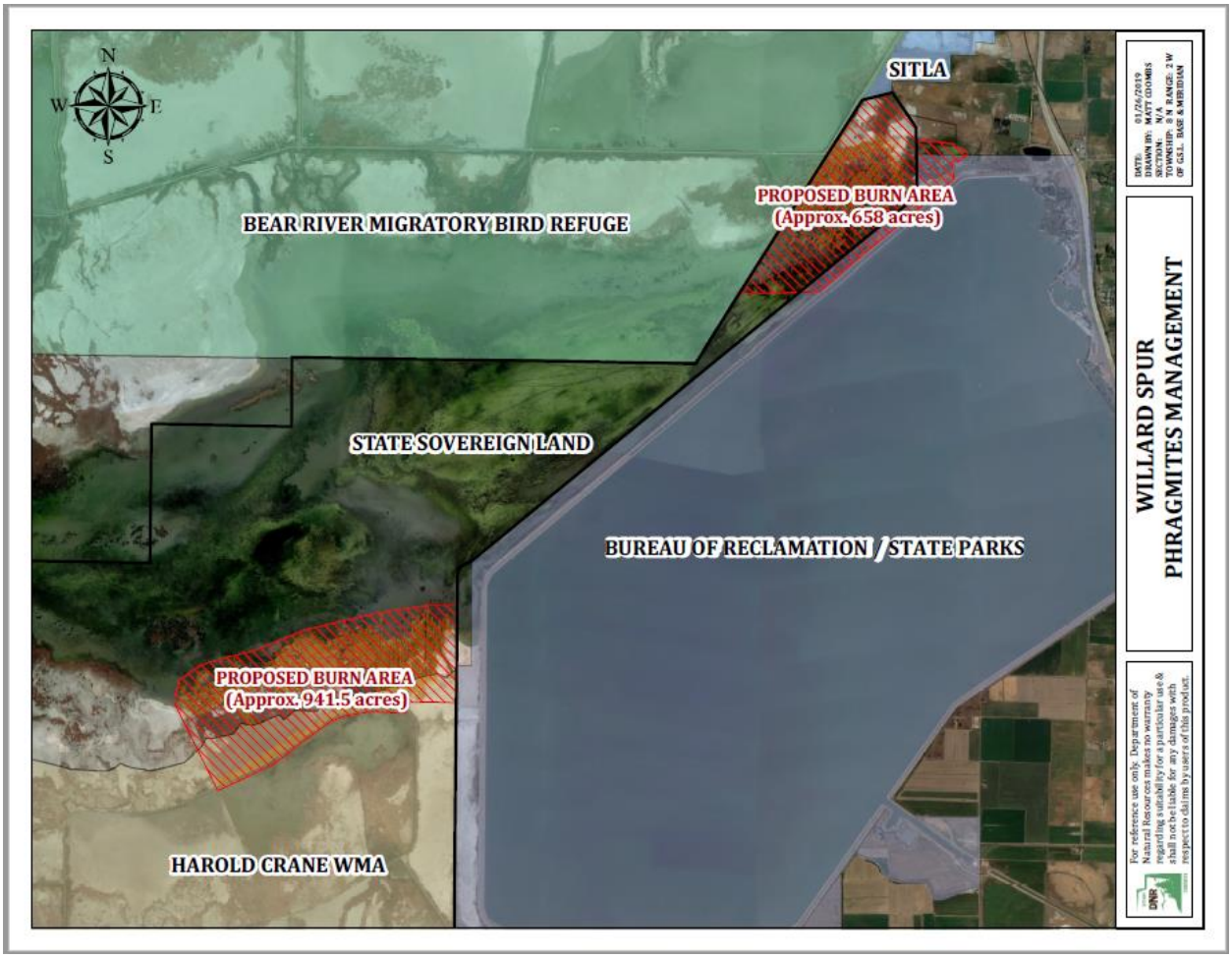
Map 3. This map was created by Lexine Long for Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp.

The map represents the Classified wetland vegetation of the Willard Spur from the 2007 Ducks Unlimited mapping efforts. Note that this area is larger than the Willard Spur WMA and includes the surrounding area known as “The Spur.”

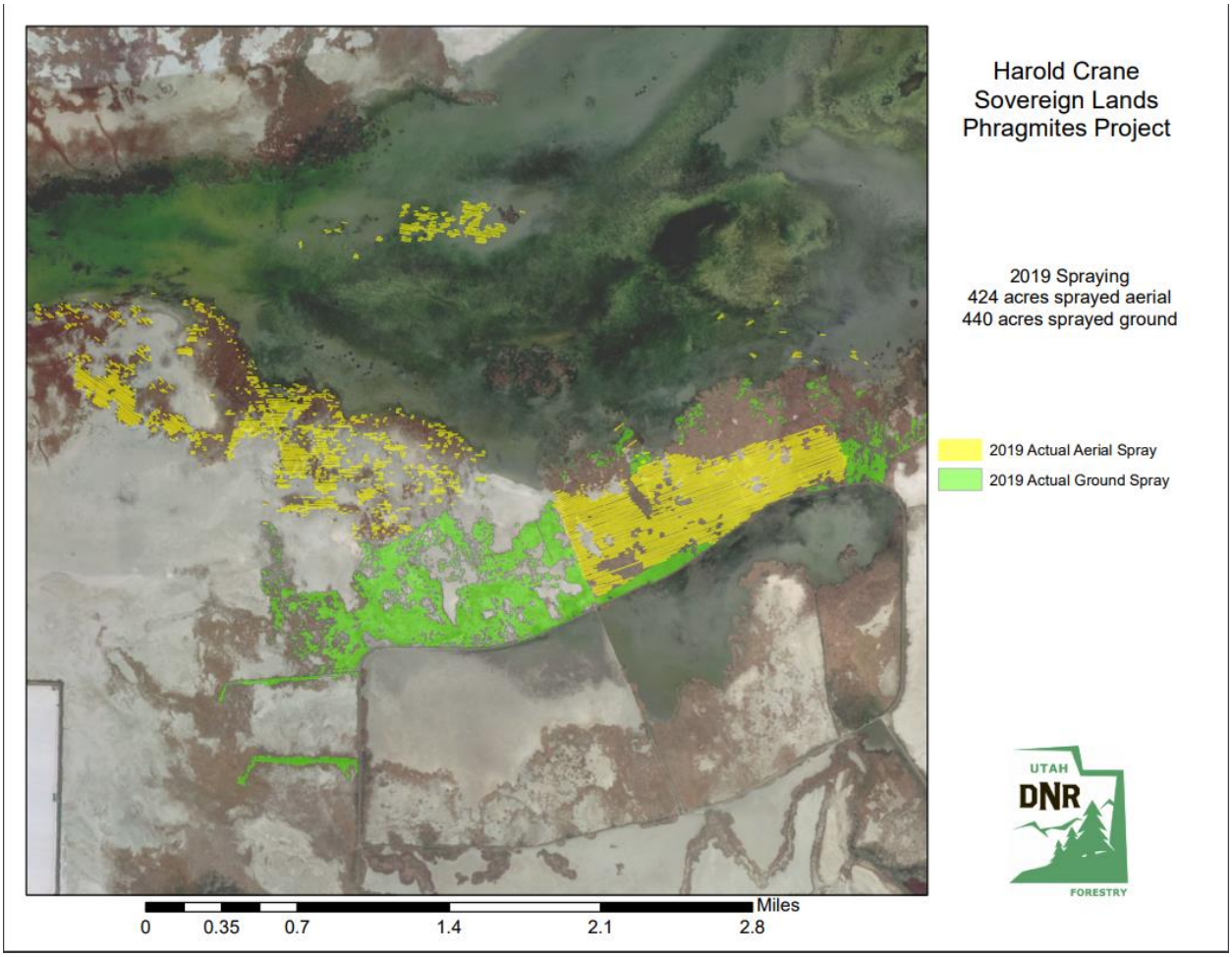


Map 4. This map was created by Lexine Long for Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp.

The map represents the 2011 Great Salt Lake Wetland Vegetation Classification Project 1m classified data, only *Phragmites*. Note that this area is larger than the Willard Spur WMA and includes the surrounding area known as “The Spur.”



Map 5. This map provided by the Utah Division of Forestry, Fire and State Lands (UDFF&SL) shows the proposed burn (2020) area to help combat *Phragmites*.



Map 6. This map provided by the Utah Division of Forestry, Fire, and State Lands (UDFF&SL) shows the locations of their 2019 *Phragmites* spraying efforts at the Harold Crane WMA and vicinity (Willard Spur).

Map 7. This map provided by the Utah Division of Forestry, Fire and State Lands (UDFF&SL) shows the actual spraying that happened in 2018 at the Willard Spur. About 360 acres were sprayed in 2018 by FFSL. The green outline represents the border of the Willard Spur near the most northeastern section.

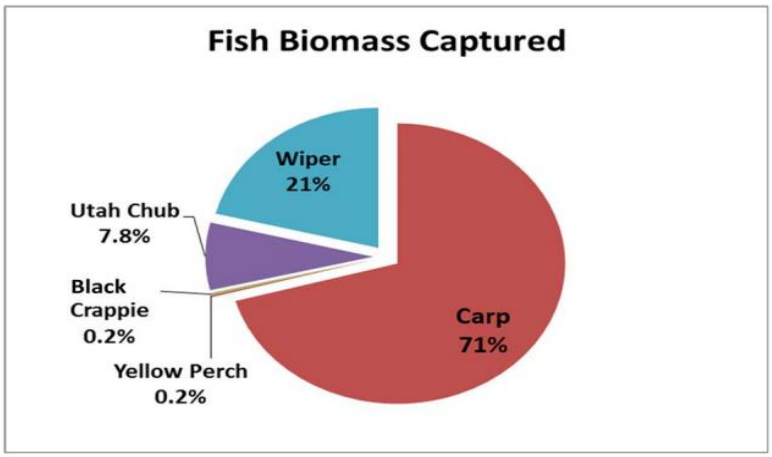


Chart 1. This chart represents the total biomass of fish captured during the 2011 study conducted by Moore et. al at the Willard Spur. A total of 22.7 kg of fish were captured in this study.

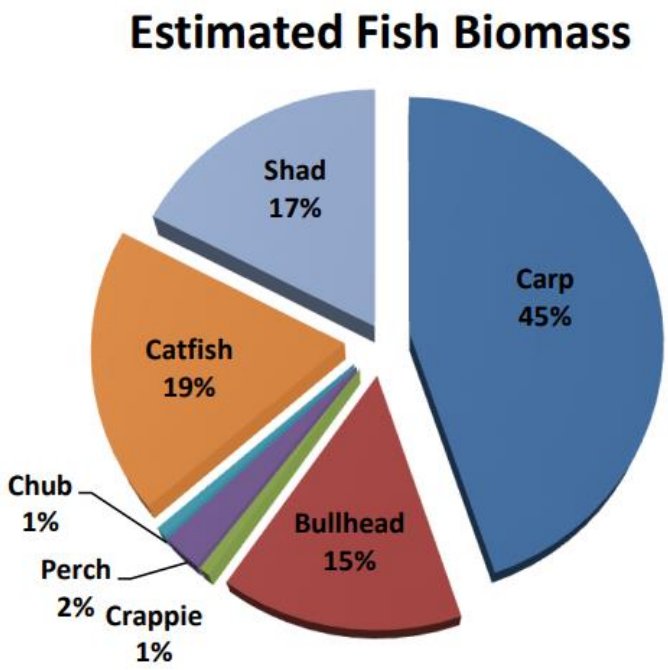


Chart 2. This chart represents the estimated composition of fish biomass caught from the Willard Spur in 2012 by the UDWR (Penne 2012).

Figure 1. This is an aerial photograph of the Willard Spur (to the north of the dike) and the Willard Bay (to the south of the dike). The conditions were dry during the time this photo was taken and showed the Spur at low water levels. (Photo courtesy of UDWR photo; GSLEP).

Figure 2. This photograph shows the view from satellite imagery of Willard Spur and the surrounding areas. The area circled in blue is the sandbar that appears when GSL elevations fall below 4201.9.

Figure 3. This is an aerial photograph of the Spur taken from the northeast side of Willard Bay. It shows the Willard Spur area in 2011, a wetter year. (Photo courtesy of John Luft).

Figure 4. This is a photograph of a dry mudflat/playa at the Willard Spur in July 2013. (Photo courtesty of Jeff Denbleyker).

Figure 5. An aerial photo of the Willard Spur area in 2013. (Photo courtesy of Jeff Denbleyker).

Figure 6. This picture shows an algal mat at the Willard Spur in 2013. (Photo courtesy of Jeff Denbleyker).

Figure 7. This picture shows a mesocosm being examined in the Willard Spur for the Nutrients study (UDWQ 2015). (Photo courtesy of Dr. Downard, DWQ).

Table 1. Species observed on or near/adjacent to the Willard Spur Waterfowl Management Area that are designated as Utah Species of Greatest Conservation Need (SGCN) or on the Sensitive Species List (SSL).

Species	Scientific Name	SGCN	SSL
American Bittern	*Botaurus lentiginosus*	X	
American White Pelican	*Pelecanus erythrorhynchos*	X	X
Bald Eagle	*Halioeetus leucocephalus*	X	X
Burrowing Owl	*Athene cunicularia*	X	X
Caspian Tern	*Hydroprogne caspia*	X	
Ferruginous Hawk	*Buteo regalis*	X	X
Flammulated Owl	*Psiloscops flammeolus*	X	
Golden Eagle	*Aquila chrysaetos*	X	
Lewis' Woodpecker	*Melanerpes lewis*	X	
Peregrine Falcon	*Falco peregrinus*	X	
Snowy Plover	*Charadrius nivosus*	X	
Long-billed Curlew	*Numenius americanus*		X
Short-eared Owl	*Asio flammeus*		X
White-faced Ibis	*Plegadis chihi*	X	
Northern Leopard Frog	*Lithobates pipiens*	X	
Little Brown Myotis	*Myotis lucifugus*	X	
Utah Milksnake	*Lampropeltis triangulum taylori*	X	
Preble's Shrew	*Sorex preblie*		X
Townsend's Big-eared Bat	*Corynorhinus townsendii*		X
Bobolink	*Dolichonyx oryzivorus*		X
California Floater/Winged Floater	*Anodonta californiensis*		X

Table 1. Common wetland vegetation around GSL, target water depths, and observed or threshold salinity.

Habitat type	Dominant plant species[αγθε]	Water depth (cm)	Goal of water depth recommendation	Salinity (mmhos/cm)	Target habitat or species
Open Water	*Stuckenia pectinata*	46-91[λ]	deep submerged marsh	1.3[θ]	open water wetlands
	Stuckenia filiformis	10-46[λ]	shallow submerged marsh	14-31[α]	open water wetlands
	Ruppia maritima	>25[η]	swan & diving duck use	32[β]	*Stuckenia pectinata*
	Zannichellia palustris	46[ν]	open water vegetation		
Emergent	*Schoenoplectus maritimus*			1.3[θ]	*Phragmites*
	Schoenoplectus acutus	30-60[λ]	deep	1.8[θ]; 3[α]	*Typha*
	Schoenoplectus americanus	5-20[λ]	shallow	1.0-6.9[θ] 5-7[β]	*Schoeplectus acutus*
	Distichlis spicata	0-10[η]	geese	2.6-14.2[θ]; 7-9[β]	*Schoenoplectus maritimus*
	Typha spp.			8[α]	deep emergent marsh
	Phragmites australis			12-13[α]	shallow emergent marsh
Hemi-marsh	combination of open water and emergent species	20-30[λ]	hemi-marsh	2.8-27.9[ν]	most to least productive conditions for hemi-marsh
		5-25[η]	dabbling duck use		
Playa	*Salicornia rubra*	0-5[λη]	small shorebird use	<27.9[θ]	vegetated mudflat
	Sarcorcia utahensis	0-10[η]	larger shorebird use	6.26[ε] total salts	*Salicornia rubra*
	Suaeda calceoliformis			3.31[ε] total salts	*Suaeda calceoliformis*

α CH2M Hill 2005 – observational study at PSGWMA and FBWMA
β Christiansen and Low – experimental greenhouse study maximum tolerances for germination
γ Cox and Kadlec – observational study at BRMBR
ε Flowers 1934 – observational study in northern Bear River Bay
η Jasmer 2000 – target water depths for waterfowl use
θ Kadlec 1982 – observational study at OBWMA
λ Olson et al. 2004 – target water levels
ν Robel 1962 – Observational study at Bear River Club

Table 2. This table represents the common wetland vegetation around Great Salt Lake, target water depths, and observed or threshold salinity for each habitat and/or species. **Source:** R. Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp. Note that this area is larger than the Willard Spur WMA and includes the surrounding area known as “The Spur.”

Class name	Description	Area (acres)	Percent
Open water	**Sago pondweed habitat**	**13,608**	**36**
Playa / mudflat	**Non-vegetated**	**12,377**	**32**
Playa / mudflat 2	**More than 25% cover of *Salicornia* spp. or *Distichlis spicata***	**9,629**	**25**
Alkali bulrush 2	**Between 51-75% *Schoenoplectus maritimus***	**1,666**	**4**
Alkali bulrush 1	**≥75% *Schoenoplectus maritimus***	**482**	**1**
Mixed emergent 1	**Any vegetation other than what is already classified**	**217**	**<1**
***Phragmites* 2**	**51-75% cover of *Phragmites***	**167**	**<1**
Upland	**All upland**	**28**	**<1**
***Phragmites* 1**	**More than 75% *Phragmites***	**23**	**<1**
Cattails / Bulrush	**≥75% *Typha / Schoenoplectus acutus***	**12**	**<1**
Salt cedar	***Tamarix* spp.**	**8**	**<1**

Table 3. This table was created by R. Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp.

It represents the Vegetation in Willard Spur according to 2007 Ducks Unlimited wetland vegetation mapping project and was a table adapted from 2007 Ducks Unlimited Project report. Note that this area is larger than the Willard Spur WMA and includes the surrounding area known as “The Spur.”

Species	Catch	Length range (mm)	Mean length (mm)	Mean length (SE)	Est. mean weight (g)
Common carp	43	70 - 326	138.1	10.7	74
Utah chub	9	80 -250	129.7	8.3	5
Black bullhead	23	97 -155	110.3	5.5	47
Black crappie	5	85 - 265	172.6	21.7	10
Yellow perch	12	25 -110	65.3	12.0	18
Gizzard Shad	14	86 - 109	94.4	3.9	89
Channel catfish	1	514	514	-	1349

Table 4. This table represents the number of fish caught in the Willard Spur in 2012 and their relative size. (Penne 2012, UDWR).

Appendix B

Legal Description and Encumbrances

Legal Description and Encumbrances for the Willard Spur Waterfowl Management Area

Grantor: *Utah Division of Forestry, Fire and State Lands**

Utah State Code:

The Wildlife Board is authorized to use any and all unsurveyed state-owned lands below the 1855 meander line of the Great Salt Lake within the following townships for the creation, operation, maintenance and management of wildlife management areas, fishing waters and other recreational activities[.]

Township 2 South, Range 5 West, S.L.B. and M.; Township 2 South, Range 4 West, S.L.B. and M.; Township 1 South, Range 5 West, S.L.B. and M.; Township 1 South, Range 4 West, S.L.B. and M.; Township 1 South, Range 3 West, S.L.B. and M.; Township 1 North,Range 3 West, S.L.B. and M.; Township 1 North, Range 2 West, S.L.B. and M.; Township 2 North, Range 3 West, S.L.B. and M.; Township 2 North, Range 2 West, S.L.B. and M.;Township 2 North, Range 1 West, S.L.B. and M.; Township 3 North, Range 3 West, S.L.B.and M.; Township 3 North, Range 2 West, S.L.B. and M.; Township 3 North, Range 1 West,S.L.B. and M.; Township 4 North, Range 3 West, S.L.B. and M.; Township 4 North, Range 2West, S.L.B. and M.; Sections 1, 2, 11, 12, 13, 14, 23, and 24, Township 4 North, Range 4West, S.L.B. and M.; Township 5 North, Range 3 West, S.L.B. and M.; Township 5 North,Range 4 West, S.L.B. and M.; Sections 1, 2, 3, 4, 11, and 12, Township 5 North, Range 5 West, S.L.B. and M.; Township 6 North, Range 5 West, S.L.B. and M.; Township 6 North, Range 4 West, S.L.B. and M.; Township 6 North, Range 3 West, S.L.B. and M.; Township North, Range 5 West, S.L.B. and M.; Township 7 North, Range 4 West, S.L.B. and M.; Township 7 North, Range 3 West, S.L.B. and M.; Township 7 North, Range 2 West, S.L.B. and M.; Township 8 North, Range 5 West, S.L.B. and M.; Township 8 North, Range 4 West, S.L.B. and M.; Township 8 North, Range 3 West, S.L.B. and M.; Township 8 North, Range 2 West, S.L.B. and M.; Township 9 North, Range 5 West, S.L.B. and M.; Township 9 North, Range 4 West, S.L.B. and M.; Township 11 North, Range 11 West, S.L.B. and M.; Township 11 North, Range 10 West, S.L.B. and M.; Township 11 North, Range 9 West, S.L.B. and M.; Township 11 North, Range 8 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 10 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 9 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 8 West, S.L.B. and M.

WILDLIFE MANAGEMENT AREA AMENDMENTS

2019 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Casey Snider

Senate Sponsor: Allen M. Christensen

Cosponsor:

Joel Ferry

LONG TITLE

General Description:

This bill creates and provides for the use of the Willard Spur Waterfowl Management Area.

Highlighted Provisions:

This bill:

- addresses definitions;
- creates the management area and describes the land included in the management area;
- requires a memorandum of understanding with the Division of Forestry, Fire, and State Lands;
- provides for management of the management area by the Division of Wildlife Resources in accordance with specified purposes and a management plan;
- permits the division to restrict public access or recreational opportunity under certain circumstances; and
- makes technical changes.

Money Appropriated in this Bill:

None

Other Special Clauses:

None

Utah Code Sections Affected:

AMENDS:

23-21-.5, as enacted by Laws of Utah 1998, Chapter 218

23-21-5, as last amended by Laws of Utah 1975, Chapter 60

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **23-21-.5** is amended to read:

23-21-.5. Definitions.

As used in this chapter:

(1) "General plan" means a document that a municipality or county adopts that sets forth general guidelines for proposed future development of the land within the municipality or county and includes what is commonly referred to as a "master plan."

(2) "Management plan" means a document prepared in accordance with this chapter that describes how one or more tracts of land owned or managed by the Division of Wildlife Resources are to be used.

(3) "Regional advisory council" means a council created pursuant to Section 23-14-2.6.

(4) "Wildlife management area" means:

(a) a single tract of land owned or managed by the division; or

(b) two or more tracts of land owned or managed by the division that are within close proximity of each other and managed as a single unit.

Section 2. Section **23-21-5** is amended to read:

23-21-5. State-owned lands authorized for use as wildlife management areas, fishing waters and for other recreational activities.

(1) The Wildlife Board is authorized to use any and all unsurveyed state-owned lands below the 1855 meander line of the Great Salt Lake within the following townships for the creation, operation, maintenance and management of wildlife management areas, fishing waters and other recreational activities[-]:

Township 2 South, Range 5 West, S.L.B. and M.; Township 2 South, Range 4 West,

S.L.B. and M.; Township 1 South, Range 5 West, S.L.B. and M.; Township 1 South, Range 4 West, S.L.B. and M.; Township 1 South, Range 3 West, S.L.B. and M.; Township 1 North, Range 3 West, S.L.B. and M.; Township 1 North, Range 2 West, S.L.B. and M.; Township 2 North, Range 3 West, S.L.B. and M.; Township 2 North, Range 2 West, S.L.B. and M.; Township 2 North, Range 1 West, S.L.B. and M.; Township 3 North, Range 3 West, S.L.B. and M.; Township 3 North, Range 2 West, S.L.B. and M.; Township 3 North, Range 1 West, S.L.B. and M.; Township 4 North, Range 3 West, S.L.B. and M.; Township 4 North, Range 2 West, S.L.B. and M.; Sections 1, 2, 11, 12, 13, 14, 23, and 24, Township 4 North, Range 4 West, S.L.B. and M.; Township 5 North, Range 3 West, S.L.B. and M.; Township 5 North, Range 4 West, S.L.B. and M.; Sections 1, 2, 3, 4, 11, and 12, Township 5 North, Range 5 West, S.L.B. and M.; Township 6 North, Range 5 West, S.L.B. and M.; Township 6 North, Range 4 West, S.L.B. and M.; Township 6 North, Range 3 West, S.L.B. and M.; Township 7 North, Range 5 West, S.L.B. and M.; Township 7 North, Range 4 West, S.L.B. and M.; Township 7 North, Range 3 West, S.L.B. and M.; Township 7 North, Range 2 West, S.L.B. and M.; Township 8 North, Range 5 West, S.L.B. and M.; Township 8 North, Range 4 West, S.L.B. and M.; Township 8 North, Range 3 West, S.L.B. and M.; Township 8 North, Range 2 West, S.L.B. and M.; Township 9 North, Range 5 West, S.L.B. and M.; Township 9 North, Range 4 West, S.L.B. and M.; Township 11 North, Range 11 West, S.L.B. and M.; Township 11 North, Range 10 West, S.L.B. and M.; Township 11 North, Range 9 West, S.L.B. and M.; Township 11 North, Range 8 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 10 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 9 West, S.L.B. and M.; North 1/2 of Township 10 North, Range 8 West, S.L.B. and M.

(2) (a) The Wildlife Board shall establish a wildlife management area known as the "Willard Spur Waterfowl Management Area" on the unsurveyed state-owned lands below the 1855 meander line of the Great Salt Lake in Sections 26, 35, 36 of Township 8 North, Range 4 West, S.L.B. and M.; Township 8 North, Range 3 West, S.L.B. and M.; Sections 1, 2, 11, 12 of Township 7 North, Range 4 West, S.L.B. and M.; Township 7 North, Range 3 West, S.L.B. and M.; Sections 20, 21, 29, 30, 31 of Township 8 North, Range 2 West, S.L.B. and M.;

excepting the following:

(i) lands within the May 14, 2019, boundaries of the Bear River Migratory Bird Refuge;

(ii) lands within the May 14, 2019, boundaries of Harold Crane Waterfowl Management Area;

(iii) lands within the May 14, 2019, boundaries of Willard Bay Reservoir; and

(iv) lands within the May 14, 2019, boundaries of state mineral leases.

(b) The division shall execute a memorandum of understanding with the Division of Forestry, Fire, and State Lands recognizing the division's use of the state-owned lands described in Subsection (2)(a) as a wildlife management area.

(c) The division shall manage the state-owned lands described in Subsection (2)(a) as a wildlife management area and consistent with:

(i) the beneficial purposes identified in Subsection (2)(d); and

(ii) a management plan created consistent with the procedures in this chapter for a management plan.

(d) The division shall manage the Willard Spur Waterfowl Management Area for the following beneficial purposes:

(i) propagating and sustaining waterfowl, upland gamebirds, desirable mammals, shorebirds, and other migratory and nonmigratory birds that use the Great Salt Lake ecosystem and the Great Salt Lake ecosystem's surrounding wetlands;

(ii) preserving and enhancing the natural function, vegetation, and water flows under existing or acquired water rights to provide productive habitat for the species listed in Subsection (2)(d)(i);

(iii) providing recreational opportunity for traditional marsh-related activities, including hunting, fishing, trapping, and wildlife viewing; and

(iv) providing public access in the management area for purposes of hunting, fishing, trapping, and wildlife viewing, including access with airboats and other small watercraft.

(e) The division shall provide the habitat, recreational opportunities, and public access

described in Subsection (2)(d) without construction or use of an impounding dike, impounding levee, or other impounding structure.

(f) Notwithstanding the purposes identified in Subsection (2)(d), the division may not prohibit year-round public airboat and small watercraft access in the management area except in selected areas during limited periods of time to protect habitat, nesting birds, or vulnerable wildlife.

State of Utah
Department of Natural Resources
Division of Wildlife Resources

Contract No.
Amendment No.

PAYABLE CONTRACT INFORMATION

Date: 9/3/2019 Grant: Yes No

Vendor No.

Vendor Name: Division of Forestry, Fire and State Lands

Address: 1594 West North Temple

City: Salt Lake City State: Utah Zip Code: 84114

BRIEF DESCRIPTION OF WORK

MOU describing Division of Wildlife Resources and Division of Forestry, Fire and State Lands managerial responsibilities for the Willard Spur Wildlife Management Area

MOU
Land Acquisition

PURCHASING DOCUMENT NUMBERS (RQM, RQS, Grant)

	Date Aquired
Performance	

Effective Date: 9/3/2019
Expiration Date:

Total Amount to be Paid.

Description	Amount
TOTAL	$0.00

Are there additional FEIN's?	Yes	No
Does this involve Federal Funds?	Yes	No
Are there indirect costs?	Yes	No
Is this a new program number?	Yes	No
Is the Budget Change form attached?	Yes	No

How Many?

Unit	Appr	Activity	Function	Program	Object	Amount	Encbr
					TOTAL	$0.00	

Contract Monitor: Blair Stringham
Regional Supervisor Approval:
Section Chief Approval:

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into this 3rd day of September, 2019, between the **State of Utah, Division of Fire, Forestry, and State Lands**, with an address of 1594 W North Temple, Salt Lake City, Utah 84116("FFSL"), and the **State of Utah, Division of Wildlife Resources**, with an address of 1594 W. North Temple, Suite 2110, P.O. Box 146301, Salt Lake City, Utah 84116, ("UDWR"), describing each respective entity's management responsibilities on the Willard Spur Wildlife Management Area. FFSL and the UDWR are collectively referred to as "the Parties".

EXHIBIT

A	Map and Legal Description of Willard Spur WMA

RECITALS

WHEREAS, by virtue of the Equal Footing Doctrine, FFSL owns certain property in Box Elder County, Utah lying generally between the Bear River Migratory Bird Refuge, Harold Crane Waterfowl Management Area and Willard Bay State Park that has high quality wildlife recreation and habitat values, known generally as the "Willard Spur" and approximately depicted and described in Exhibit A; and

WHEREAS, in the 2019 General Legislative Session, the Utah Legislature passed House Bill 265, which, among other things, required the Wildlife Board to establish a wildlife management area known as the "Willard Spur Waterfowl Management Area" ("WMA") on the aforementioned lands, and directed FFSL and UDWR to enter into a memorandum of understanding recognizing UDWR's use of those state-owned lands within the Willard Spur; and

WHEREAS, lands owned by the State of Utah by virtue of the Equal Footing Doctrine below the Ordinary High Water Mark of Great Salt Lake ("sovereign lands") are subject to the Public Trust Doctrine and must be managed consistent with applicable laws, and the state's ownership of the lands was confirmed by the United States Supreme Court in *Utah vs. United States*, 403 U.S. 9 (1971); and

WHEREAS, Utah Code § 65A-1-4 specifies that FFSL is the executive authority for the management of sovereign lands, and

WHEREAS, Utah Code § 65A-10-2 allows FFSL to delegate management of lands to the Division of Wildlife Resources; and

WHEREAS, Utah Code § 65A-2-1 requires that state lands shall be managed using multiple-use sustained yield principles; and

WHEREAS, Utah Admin. Code R.652-2-200 indicates, "The State of Utah recognizes and declares that the beds of navigable waters within the state are owned by the state and are among the basic resources of the state, and that there exists, and has existed since statehood, a public trust over and upon the beds of these waters. It is also recognized that the public health, interest, safety, and welfare require that all uses on, beneath or above the beds of navigable lakes and streams of the state be regulated, so that the protection of navigation, fish and wildlife habitat, aquatic beauty, public recreation, and water quality will be given due consideration and

balanced against the navigational or economic necessity or justification for, or benefit to be derived from, any proposed use;" and

WHEREAS, House Bill 265 further detailed UDWR's management obligations for the WMA.

NOW, THEREFORE, in consideration of the mutual covenants set forth in this MOU, the UDWR and the FFSL agree as follows:

AGREEMENT

1. **Incorporation of Recitals**. The Recitals set forth above are incorporated herein by reference.

2. **Purpose**. The general purpose of this MOU is to describe the responsibilities of UDWR and FFSL in the management of the WMA and to satisfy the general requirements identified in House Bill 265 (2019).

3. **General FFSL Responsibilities**. FFSL will:

   a. Consultation. Consult with and direct UDWR regarding land-use requests and management activities to ensure compliance with the Public Trust Doctrine.

4. **General UDWR Responsibilities**. UDWR will:

   a. Maintain access points, signage, assume primary law enforcement responsibility; and

   b. Consult with FFSL, as needed, on land-use requests and management activities and evaluate guidance regarding proper management of FFSL property consistent with the Public Trust Doctrine and FFSL Management Plans.

5. **Specific Activities on the WMA**.

   a. Special uses. Any request by a third party that would necessitate an easement, lease, or special use permit under the UDWR Land Use Rule R657-28, or that would require a mineral lease, special use lease, easement, right of entry, or general permit, under FFSL rules R652-20, R652-30, R652-40, R652-41, or R652-70 will first be directed to FFSL for initial review. If FFSL approves the proposed use, it will be forwarded to UDWR for their review. No use will be approved without written approval from both parties.

   b. Duck Clubs. The WMA is currently used for commercial guiding for waterfowl hunters. All commercial guiding activities must be permitted through FFSL.

   c. Permanent or Temporary Structures. No permanent or temporary structures may be constructed on the WMA without prior written approval of both parties.

   d. Public Access Points. The Parties will jointly identify public access points and boat launches. Signage will be provided and maintained by UDWR.

   e. Invasive Species Control and Vegetative Treatments. UDWR will identify and select vegetation treatment projects on the WMA. UDWR will notify FFSL of completed projects

on an annual basis. Use of prescribed fire may be included as part of a vegetation treatment project. The project(s) may encompass WMA lands, adjacent FFSL properties, and other lands as necessary. The parties agree to jointly pursue funding to accomplish vegetation objectives for the WMA.

f. Public Trust Doctrine. FFSL will consult with UDWR regarding best management protocols for WMA lands to ensure that proposed uses under the Management Plan identified in Section 6 are consistent with Public Trust Doctrine concepts.

6. **Management Plan**. The parties will participate in the drafting of a WMA Management Plan that will, among other things, identify:

   a. how the parties will collaborate in accomplishing the requirements of Utah Code. Ann. § 23-21-5(2)(d);

   b. requirements for establishing seasonal closures on the WMA, consistent with the provisions of House Bill 265;

   c. each party's specific roles in accomplishing the objectives in Section 5 of this MOU; and

   d. other management priorities and challenges that arise.

7. **Term Dates**. This MOU shall become effective upon execution and shall remain effective until revoked. Any request to amend, modify, or revoke this MOU must be done in writing.

8. **Laws and Regulations.** Each Party shall responsible for ensuring their individual compliance with all applicable federal and state constitutions, laws, rules, codes, orders, and regulations, including applicable licensure, certification, and permitting requirements.

9. **Counterparts and Facsimile Signatures**. This MOU may be signed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute the same instrument. This MOU and any amendment thereto as the Parties may in the future agree to may be executed and communicated by facsimile transmission which shall have the force and effect of binding and obligating the party thereto, without the need to further transmit the original signature.

10. **Liability**. Each Party shall be responsible for any claims, losses, suits, actions, damages, and costs of every name and description arising out of their own performance under this Cooperative Agreement. If one or more parties are found negligent, they each shall bear their proportionate share of any allocated fault or responsibility. Nothing herein shall be construed as waiving any immunity, the monetary damage limitations, or any other provision set forth in the Utah Governmental Immunity Act, Utah Code §§ 63G-7-101 through 63G-7-904.

APPROVED AS TO FORM:
Utah Attorney General

By: _____
Fredric Donaldson
Assistant Attorney General, Counsel for FFSL

By: _____
Greg Hansen
Assistant Attorney General, Counsel for UDWR

THE PARTIES have executed this MOU, binding on the date of the last signature below.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES, DIVISION OF FIRE, FORESTRY, AND STATE LANDS

By: _____
Brian Cottam
Director

Date: 8-28-19

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WILDLIFE RESOURCES

By: _____
Michal D. Fowlks
Director ACTING DIRECTOR

Date: 9/3/19

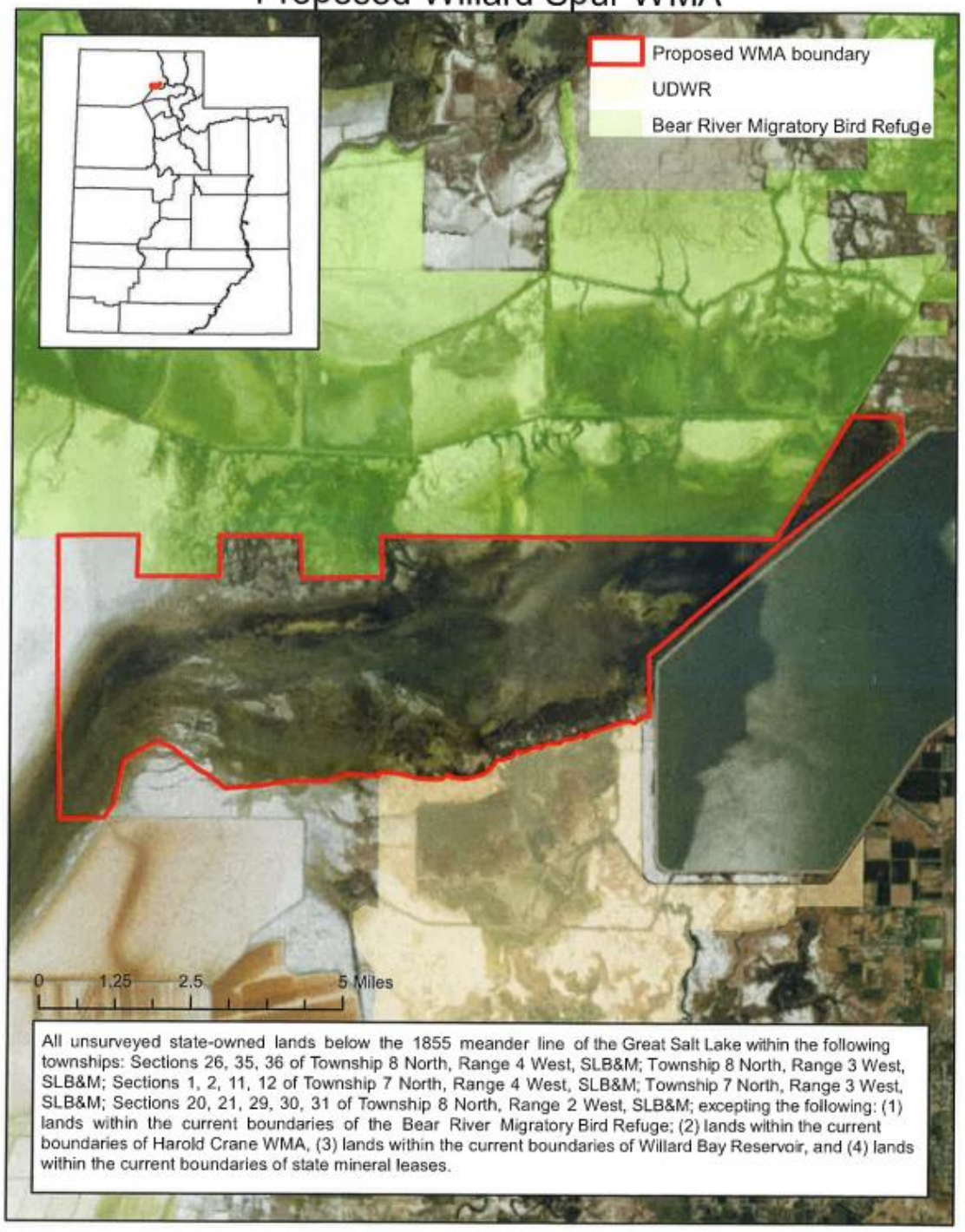
Funding Approvals:
Division of Wildlife Resources Fiscal Management

By: _____
Financial Manager

Date: 9/3/2019

EXHIBIT A

Proposed Willard Spur WMA



All unsurveyed state-owned lands below the 1855 meander line of the Great Salt Lake within the following townships: Sections 26, 35, 36 of Township 8 North, Range 4 West, SLB&M; Township 8 North, Range 3 West, SLB&M; Sections 1, 2, 11, 12 of Township 7 North, Range 4 West, SLB&M; Township 7 North, Range 3 West, SLB&M; Sections 20, 21, 29, 30, 31 of Township 8 North, Range 2 West, SLB&M; excepting the following: (1) lands within the current boundaries of the Bear River Migratory Bird Refuge; (2) lands within the current boundaries of Harold Crane WMA, (3) lands within the current boundaries of Willard Bay Reservoir, and (4) lands within the current boundaries of state mineral leases.

Appendix C

Access Management Plan

Willard Spur Waterfowl Management Area
Access Management Plan

Purpose

To ensure that the public use and access on the Willard Spur Waterfowl Management Area (WSWMA) is done in a manner that assists the Utah Division of Wildlife Resources (UDWR) in achieving the goals and objectives outlined in the habitat management plan.

Background

The primary purposes of the WMA are: (a) to propagate and sustain waterfowl, upland gamebirds, desirable mammals, shorebirds, and other migratory and non-migratory birds that use the Great Salt Lake ecosystem and the Great Salt Lake ecosystem's surrounding wetlands; (b) preserve and enhance the natural function, vegetation, and water flows under existing or acquired water rights to provide productive habitat for the species listed in Appendix D; (c) provide recreational opportunity for traditional marsh-related activities, including hunting, fishing, trapping, and wildlife viewing, including access with airboats and other small watercraft. Notwithstanding the purposes identified in Subsection (2)(d) of H.B. 265, the Division may not prohibit year-round public airboat and small watercraft access in the management area except in selected areas during limited periods of time to protect habitat, nesting birds, or vulnerable wildlife.

Access to the WMA

The Willard Spur WMA contains two access roads. The main road creates access to the south and west ends of Willard Reservoir, the north end of Harold Crane WMA, and the east end of the massive Willard Spur area of the Bear River Bay Arm of Great Salt Lake. This road provides tens of thousands of recreational visitors' free access year-round for activities such as hunting, fishing, dog training, bird watching, boating, and sight-seeing. However, the road is listed as a major issue item within both the Willard UGA and Harold Crane WMA Habitat Management Plans, and is a constant cause of public complaints. It is in need of major improvements, such as re-grading and re-graveling. The other road provides access to the northeast section of WSWMA and it provides access to a boat ramp.

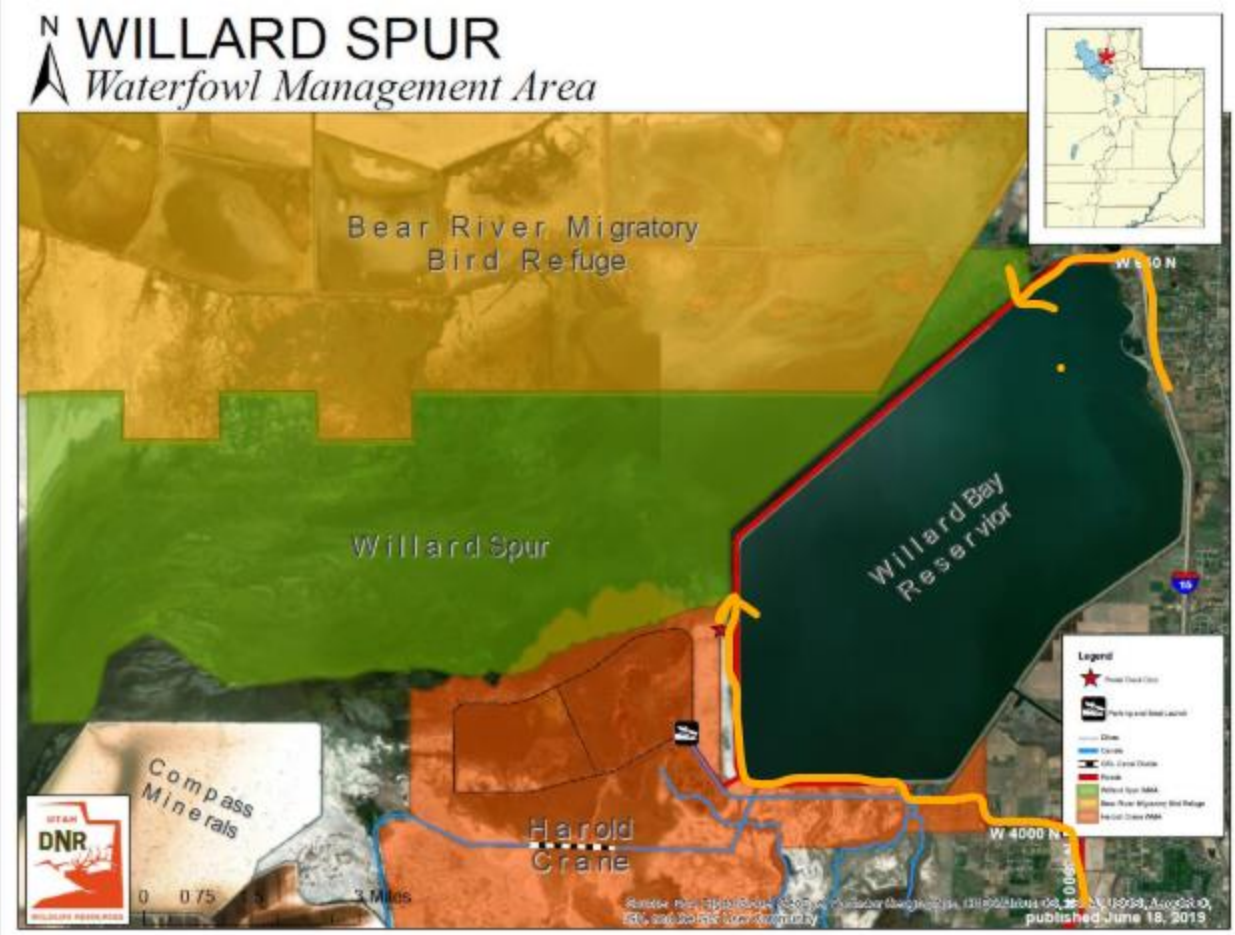
There are currently two primary access points to the WMA. One access point is from the Willard Bay West Access Road that begins at W 4000 N. The road stops at a gate owned by the BOR at 5.43 miles. Near the end of the road is a boat ramp for which boats and kayaks may be launched into the spur. This road is very rutted and is difficult to maintain due to the moisture levels in the soils. It is in need of major improvements, including re-grading and re-graveling. A grant proposal is currently being drafted, in coordination with the BOR, to address these needs. If granted, it will become an appendix to this plan. The other main access point is from the northeastern side on W 650 N. This road allows users to access the most northeastern side of the Spur and also provides access to a boat launch.

Enforcement of Access Management Plan
Division personnel will enforce this access plan in conjunction with local law enforcement agencies.

Informing the Public
Signs will be posted at entrances, roads, parking areas, fence lines and gates to notify the public of access boundaries, rules and regulations. Seasonal closures or other access issues will be included in the annual UDWR hunting guide books, which are available in hard copy at the UDWR office and where licenses are sold, or online at https://wildlife.utah.gov/hunting/hunting-regulation.html.

The UDWR will work with local, county, other state, and federal agencies to coordinate access plans that are consistent with the objectives and goals of the Willard Spur WMA. The access management plan will be reviewed and changed as needed.

The H.B. 265 can be found here: https://le.utah.gov/~2019/bills/static/HB0265.html



Map 8. This map shows the two main access points to the Willard Spur area (in orange).

Appendix D

Wildlife Species and Noxious Weed Information

Birds of Willard Spur W.M.A. and VICINITY

Key to codes

Relative abundance:

C= Common (Found consistently in fair numbers in appropriate habitat and season)
U= Uncommon (Found inconsistently in small numbers in appropriate habitat and season)
R= Rare (Found infrequently in very small numbers in proper habitat and season)
O= Occasional (Seldom found and not reported annually)
I= Irregular (Abundance varies greatly from year to year - may be common one year and absent the next)

Status

P= Permanent Resident (Found year round or at least early spring to late fall)
S= Summer resident (Present during the nesting season)
W= Winter Visitant (Present during January and/or February)
T= Transient (Migrates through in spring and/or fall)

LOONS

__ Common Loon OT

GREBES

__ Pied-billed Grebe CS
__ Horned Grebe RT
__ Eared Grebe CS
__ Red-necked Grebe OT
__ Western Grebe CS
__ Clark's Grebe CS

PELICANS & CORMORANTS

__ American White Pelicans CS
__ Double-crested Cormorant CS

BITTERNS & HERONS

__ American Bittern RS
__ Least Bittern OT
__ Great Blue Heron CP
__ Great Egret OT
__ Snowy Egret CS
__ Little Blue Heron OT
__ Cattle Egret CS
__ Black-crowned Night Heron CS

IBISES, SPOONBILLS & STORKS

__ White-faced Ibis

SWANS, GEESE & DUCKS

__ Fulvous Whistling-Duck OT
__ Tundra Swan CT
__ Trumpeter Swan OW
__ Gr. White-fronted Goose OT
__ Snow Goose UT
__ Ross Goose RT
__ Brant OT
__ Lesser Scaup CT
__ Harlequin Duck OT
__ Oldsquaw RT
__ Black Scooter OT
__ Surf Scooter OT
__ White-winged Scooter IT
__ Common Goldeneye CT
__ Barrow's Goldeneye RT
__ Bufflehead CT
__ Hooded Merganser OT
__ Common Merganser CT
__ Red-breasted Merganser CT
__ Ruddy Duck CS
__ Gadwall CS
__ Eurasian Wigeon OT
__ American Wigeon CT
__ Canvasback CT
__ Redhead CS
__ Ring-necked Duck UT
__ Greater Scaup RT
__ Blue-winged Teal CS
__ Cinnamon Teal CS
__ Northern Shoveler CS
__ Northern Pintail US
__ Mallard CP
__ Canada Goose CP
__ Wood Duck OP
__ Green-winged Teal CT

HAWKS, FALCONS & VULTURES

__ Swainson's Hawk US
__ Red-tailed Hawk UP
__ Ferrunginous Hawk US
__ Rough-legged Hawk CW
__ Golden Eagle UT
__ American Kestrel CS
__ Turkey Vulture UT
__ Osprey RT
__ Bald Eagle CW
__ Northern Harrier CP
__ Cooper's Hawk CT
__ Merlin UT
__ Peregrine Falcon US
__ Sharp-shinned Hawk CT
__ Prairie Falcon CT
__ Northern Goshawk UT

GROUSE, PHEASANTS, TURKEY & QUAIL

__ Gray Partridge RP
__ Ring-necked Pheasant CP
__ Sage Grouse OR
__ California Quail RP

PLOVERS AND SANDPIPERS

__ Black-bellied Plover UT
__ Lesser Golden-Plover RT
__ Semi-palmated Plover UT
__ Killdeer CS
__ Mountain Plover OT
__ Black-necked Stilt CS
__ American Avocet CS
__ Greater Yellowlegs CT
__ Lesser Yellowlegs CT
__ Solitary Sandpiper UT
__ Willet CS
__ Wandering Tattler O
__ Spotted Sandpiper CS
__ Whimbrel RT
__ Long-billed Curlew US
__ Hudsonian Godwit OT
__ Marbled Godwit CT
__ Semi-palmated Sandpiper RT

__ Western Sandpiper CT
__ Least Sandpiper CT
__ Baird's Sandpiper UT
__ Pectoral Sandpiper UT
__ Dunlin RT
__ Stilt Sandpiper RT
__ Buff-breasted Sandpiper OT
__ Short-billed Dowitcher RT
__ Long-billed Dowitcher CT
__ Common Snipe CS
__ Wilson's Phalarope CS
__ Red-necked Phalarope CT
__ Red Phalarope OT
__ Sandhill Crane US
__ Snowy-Plover US
__ Ruddy Turnstone RT
__ Red Knot RT
__ Sanderling IT

CRANES, RAILS, GALLINULES AND COOTS

__ Common Gallinule IP
__ American Coot CS
__ Sora CS
__ Virginia Rail CS
__ Ancient Murrelet OT

GULLS, TERNS AND ALCIDS

__ Parasitic Jaeger OT
__ Long-tailed Jaeger OT
__ Franklin's Gull CS
__ Bonaparte's Gull UT
__ Ring-billed Gull UT
__ California Gull CS
__ Herring Gull UW
__ Glaucous-winged Gull OT
__ Glaucous Gull RW
__ Sabine's Gull RT
__ Caspian Tern US
__ Common Tern RT
__ Forster's Tern CS
__ Black Tern US

PIGEONS AND DOVES

__ Eurasian Collared Dove CP
__ Rock Dove CP
__ Morning Dove US

OWLS

__ Barn Owl CP
__ Flammulated Owl US
__ Western Screeh-Owl UT
__ Great Horned Owl CP
__ Long-eared Owl UT
__ Short-eared Owl CS
__ Great Gray Owl OT
__ Burrowing Owl US

GOATSUCKERS

__ Common Nighthawk US

SWIFTS

__ Vaux's Swift OT
__ White-throated Swift OT

HUMMINGBIRDS

__ Black-chinned Hummingbird US
__ Calliope Hummingbird RS
__ Broad-tailed Hummingbird US

KINGFISHERS

__ Belted kingfisher UT

WOODPECKERS

__ Lewis' Woodpecker UT
__ Red-headed Woodpecker OT
__ Downy Woodpecker CP
__ Northern Flicker CP

FLYCATCHERS

__ Western Wood-Pewee US
__ Hammond's Flycatcher US
__ Dusky Flycatcher US
__ Gray Flycatcher US
__ Black Phoebe US
__ Eastern Phoebe OT
__ Vermillion Flycatcher RS
__ Ash-throated Flycatcher US
__ Western Kingbird CS
__ Eastern Kingbird CS

LARKS

__ Horned Lark CT

SWALLOWS

__ Tree Swallow CS
__ Violet-green Swallow CS
__ N. Rough-winged Swallow CS
__ Bank Swallow CS
__ Cliff Swallow CS
__ Barn Swallow CS

JAYS AND CROWS

__ Steller's Jay OT
__ Pinyon Jay RT
__ Black-billed Magpie CP
__ American Crow UT
__ Common Raven CP

TITMICE, VERDIN &BUSHTIT

__ Black-capped Chickadee UT
__ Mountain Chickadee UT

NUTHATCHES & CREEPERS

__ Red-breasted Nuthatch UT

WRENS

__ Rock Wren RT
__ Canyon Wren RT
__ Marsh Wren CS

DIPPERS

__ American Dipper RT

KINGLETS & GNATCATCHERS

__ Ruby-crowned Kinglet UT
__ Blue-gray Gnatcatcher RT

THRUSHERS

__ Western Bluebird OT
__ Mountain Bluebird UT
__ Townsend's Solitaire UT
__ Swainson's Thrush UT
__ Hermit Thrush UT
__ American Robin CP

THRASHERS

__ Gray Catbird RS
__ Northern Mockingbird UT
__ Sage Thrasher US

PIPITS

__ American Pipit UT

WAXWINGS & PHAINOPEPLA

__ Cedar Waxwing IT

SHRIKES

__ Northern Shrike RW
__ Loggerhead UP

STARLINGS

__ European Starling CP

VIREOS

__ Solitary Vireo US

WARBLERS

__Orange-crowned Warbler RS
__ Yellow Warbler US
__ Yellow-rumped Warbler RT
__ Black-throated Gray Warbler RT
__ American Redstart RT
__ MacGillvray's Warbler RT
__ Common Yellowthroat RT
__ Wilson's Warbler OT
__ Yellow-breasted Chat RT

TANAGERS

__ Western Tanager RT

GROSBEAKS & SPARROWS

__ Black-headed Grosbeak IT
__ Lazuli Bunting UT
__ Indigo Bunting RS
__ Green-tailed Towhee UT
__ Rufous-sided Towhee UT
__ American Tree Sparrow UW
__ Chipping Sparrow UT
__ Clay-colored Sparrow OT
__ Brewer's Sparrow UT
__ Vesper Sparrow UT
__ Lark Sparrow UT
__ Savannah Sparrow UT
__ Le Conte's Sparrow OT
__ Song Sparrow CT
__ Lincoln's Sparrow UT
__ Swamp Sparrow UT
__ White-crowned Sparrow CW
__ Harris' Sparrow UT
__ Dark-eyed Junco CT
__ Snow Bunting RW

BLACKBIRDS & ORIOLES

__ Bobolink RS
__ Red-winged Blackbird CS
__ Western Meadowlark CS
__ Yellow-headed Blackbird CS
__ Brewer's Blackbird UP
__ Great-tailed Grackle RS
__ Common Grackle RS
__ Brown-headed Cowbird CS
__ Northern Oriole CS

FINCHES

__ House Finch UT
__ Lesser Goldfinch US
__ American Goldfinch US
__ Evening Grosbeak IT

WEAVER FINCHES

__ House Sparrow CP

OCCASIONAL SPECIES-STATUS UNDETERMINED

__ American Flamingo
__ Black Duck
__ Upland Sandpiper
__ Parakeet Anklet
__ Curlew Sandpiper
__ White-faced Tree Duck
__ Ruddy Shelduck
__ Western Flycatcher
__ Whooping Crane
__ Brown Pelican
__ Gyrfalcoln

****Please report unlisted and status undetermined sightings to:**

The assistant manager at Ogden Bay WMA
4786 South 7500 West
Hooper UT 84315

Common Wetland Associated Birds, Mammals, Amphibians, Reptiles, Invertebrates, and Fish of Howard Slough, Harold Crane, Ogden Bay W.M.A. and Vicinity

Key to Codes

Common Usage Types
f = Foraging and/or loafing
n = Nesting or denning
y = Young, rearing
w = Wintering
c = Climax Species (Numbers increase or persist or dominate in the rest of their group unless disturbance renovated areas.)

es = Early successional species (Species that are numerically highest within the first five years of a wetland being new or disturbance renovated. Their numbers decrease rapidly as primary production, forage base, and open water, mudflat, or short grass acreage, from vegetation over growth, decreases through time. Other species decrease because they do best at higher salinity and the area species composition changes as fresh water inflows flush out salinities.)

wd = Water foraging depth preferences, includes average range and assumes all species use terrestrial (*- water table > 6 inches deep) or moist soil (ms – water table >4 to 0 inches deep) ecoedge at times, such as loafing.

p = Predator (Over 50% of diet is animal matter throughout the year. Numbers often increase in time, particularly if they are a climax species.)

BIRDS

GREBES
_Pied-billed Grebe (es, wd: 18 to > 60)
_Western Grebe (es, wd: 12 to > 60)
_Eared Grebe (wd: 18 to > 60)

PELICANS & CORMORANTS (P)
_American White Pelican (es, wd: 6 to 24)
_Double-crested Cormorant (c, wd: 36 to > 60)

WADERS (P)
_Great Blue Heron (c, wd: 2 to 18)
_Snowy Egret (es, wd: 2 to 10)
_Black-crowned Night Heron (wd: 2 to 12)

WATERFOWL
_Tundra Swan (es, wd: 12 to 36)
_Canada Goose (es, wd: T to 24, 18 to > 60)

**Small Dabblers*
_Green-winged Teal (es, wd: + to 2, 5 to 7)
_Cinnamon Teal (es, wd: + to 4, 6 to 8)
_Northern Shoveler (es, wd: + to 4, 6 to 8)

**Large Dabblers*
_Mallard (c, wd: 4 to 15)
_Northern Pintail (es, wd: + to 5, 7 to 16)
_Gadwall (c, wd: 4 to 15)

**Divers*
_Redhead (es, wd: 6 to 36)
_Ruddy (wd: 6 to 12, 16 to 48)
_Common Goldeneye (c, p, wd: 12 to 48)
_Common Merganser (c, p wd: 18 to 60)

HAWKS & FALCONS (P)
_Northern Harrier (c, wd: + to 6, above surface)
_Rough-legged Hawk (c)
_Peregrine Falcon (es, wd: + to 4, above surface)
_Prairie Falcon (es)

PHEASANTS
__Ring-necked Pheasant (es, wd: + to ms)

RAILS & COOTS
__Virginia Rail (wd: 3 to 12)
__Sora (es, wd: + to 6)
__American Coot (c, wd: 11 to 18)

SHOREBIRDS (P)
**Small Gleaners*
__Snowy Plover (es, wd: + to 1)
__Killdeer (es, wd: + to 3)
__Spotted Sandpiper (es, wd: 2 to 12)
__Western Sandpiper (es, wd: + to 2)
__Least Sandpiper (es, wd: + to 1)

**Large Gleaners*
__Greater Yellowlegs (wd: 2 to 7)
__Lesser Yellowlegs (es, wd: 1 to 5)
__Wilson's Phalarope (es, wd: + to 3)
__Red-necked Phalarope (wd: 1 to 3, 12 to > 60)

***Gleaner/Sweepers**

__Black-necked Stilt (wd: 4 to 7)
__American Avocet (es, wd: 3 to 6)

***Prober**

__Willet (es, wd: 2 to 6)
__Long-billed Curlew (es, wd: + to 6)
__Marbled Godwit (es, wd: + to 3)
__Long-billed Dowitcher (es, wd: 2 to 4)
__Common Snipe (wd: + to 4) White-faced Ibis (es, wd: 2 to 8)

GULLS & TERNS

__Franklin's Gull (es, wd: 2 to 6)
__Ring-billed Gull (wd: + to 2)
__California Gull (c, wd: + to > 60 on surface)
__Forster's Tern (es, wd: 2 to 12)

OWLS (P)

__Barn Owl (es)
__Great Horned Owl (c)
__Burrowing Owl (es, wd: + to 2, above surface)
__Short-eared Owl (es, wd: 2 to 12)

SWALLOWS (P)

__Bank Swallow (es)
__Cliff Swallow (es)
__Barn Swallow (es)

JAYS & CROWS (P- sometimes)

__Black-billed Magpie
__Common Raven

WRENS

__Marsh Wren (wd: 4 to 24 in emergent vegetation)

SHRIKES (P)

__Loggerhead Shrike

SPARROWS

__Song Sparrow
__White-crowned Sparrow

BLACKBIRDS & ORIOLES (P- sometimes)

__Western Meadowlark (es, wd: + to ms)
__Red-winged Blackbird (es, wd: + to 6 in emergent vegetation) Yellow-headed Blackbird (c, wd: 6 to 24 in emergent vegetation)
__Brown-headed Cowbird ©

COMMON MAMMALS

__Beaver (c, wd: 18 to >60, recently adapted to using common reed and tamarisk locally)
__Muskrat (es, wd: 18 to 24)
__Meadow Vole (es, wd: + to 2)
__Raccoon (p, c, wd: + to 6)

COMMON AMPHIBIANS

__Boreal Chorus Frog (es, wd: + to 6)
__Bullfrog (p, c, wd: 2 to >12, in warmer water well fed or ground erupting artesian seeps or spring areas)
__Northern Leopard Frog (es, wd: + to 6)
__Wood House Toad (egg and tadpoles, wd: + to 6)

COMMON REPTILES
__Painted Turtle (wd: + to 4 to 24)
__Four-striped (wandering) Garter Snake (wd: + to 6)

COMMON FISH
__Bullhead Catfish (wd: 12 to > 60)
__Carp (c, es, wd: 6 to > 60, but in young age class numbers and annual growth in larger sizes locally)
__Channel Catfish (es, wd: 24 - > 60, young age class numbers, annual growth)
__Fathead Minnow (es, wd: 4 to 24)

COMMON MACROINVERTEBRATES

Key To Codes

Habitat Preferences
a = Above surface on soil or plants
s = On or near surface (Neuston)
f = Free swimming in water
fl = Floating, but submerged, dispersed by current (Plankton like)
cl = Clinging to structure such as rocks or vegetation (Periphyton)
b = Bottom dwelling or borrowing (Benthon)

WORMS
Freshwater
_Aquatic Worms (several species, es, b)
_Thread Worms (b)

SHRIMP
Freshwater
_Crayfish (c, b, f)
_Cyclops Shrimp (es, f)
_Daphnia Shrimp (es, f)
_Fairy Shrimp (several species, es, f)
_Scuds (c, f) Seed Shrimp (es, f)
_Tadpole Shrimp (es, f)
_Brackish (mixosaline)
_Brine Shrimp (c, s, f)
_Other Fairy Shrimp (es, s, f)

SPIDERS (P)
Freshwater
__Two common unknown species, locally called “web parachute spiders” (c, s)

MAYFLIES (Mostly Nymphs)
Freshwater
_Burrowing Mayflies (c, b)
_Free Ranging Mayflies (es, f)

DRAGONFLIES & DAMSELFLIES (P)

Freshwater Dragonflies

__Western Dragonfly (aeshna, larvae, (c, cl) and adult (a))

Brackish or Mixosaline Dragonflies

__Western Dragonfly (adult only (a,c))

Freshwater Damselflies

__Blue Darners (larvae, (c, cl) and adult (a))

__Bright Blues (larvae and adult)

Brackish or Mixosaline Damselflies

__Blue Darners (adult only (a))

APHIDS

Freshwater

__more than two unknown species that attack emergent vegetation, particularly common reed (a)

BEETLE

Freshwater

__Predacious diving beetle (c, f, p)

TRUE FLIES

Freshwater

__Midges (a, es, b, most numerous and most common of all species)

__Mosquitoes (usually larvae form, a, c, s, in isolated, stagnant, or lentic environments, 5 species, uncommon in WMA lotic water managed areas).

__Deer Flies (c, p, cl, b, larvae mostly)

__Horse Flies (c, p, cl, b, larvae mostly)

Brackish (mixosaline)

__Midges (es, b, larvae and adults, a reduced number of species)

__Brine Flies (es, larvae, b, c, l, pupae, s, and adult, a –huge numbers)

__Deer Flies (larvae, c, -reduced numbers)

BUTTERFLIES & MOTHS *(Major herbivore of some emergent vegetation)*

Freshwater

__Miller Moths (es, a, caterpillars)

__Scape Moths (es, a, caterpillars)

MUSSELS

Freshwater

__At least one unknown Mussel species suspected to as Western Pearlshell / Oregon Floater (b)

Invasive and Noxious Weed List

Common Reed *(Phragmites australis)*
Perennial Pepperweed *(Lepidium latifolium)*
Dyers Woad *(Isatis tinctoria)*
Hoary Cress *(Cardaria spp)*
Field Bindweed *(Convolvulus arvensis)*
Kochia *(Kochia scoparia)*
Canada Thistle *(Cirsium arvense)*
Bull Thistle *(Cirsium vulgare)*
Musk Thistle *(Carduss nutans)*
Scotch Thistle *(Onpordum acanthium)*
Yellow Starthistle *(Centaurea solstitialis)*
Poison Hemlock *(Cicuta maculate)*
Waterhemlock *(Cicuta douglasii)*
Tamarisk *(Tamarix spp)*
Cattail *(Typha spp)*
Purple Loosestrife *(Lythrum salicaria)*
Eurasian Watermilfoil *(Myriphyllum spicatum)*
Curly Pondweed *(Potamogeton crispus)*

Plant species lists from surveys near or in portions of Willard Spur

R. Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp.

A. Species list from BRMBR (BRMBR 2006)

Common Name	***Scientific Name***
GRASSES	
Alkali Grass	*Pucinellia distans*
Alkali Sacaton	*Sporobolus airoides*
Barnyard grass (L.) Beauv.	*Enchinochloa crusgallii*
Bearded Wheatgrass	*Agropyron subsecundum*
Bulbous Bluegrass	*Poa bulbosa*
Cheatgrass, Downy Chess	*Bromus tectorum*
Crabgrass	*Digitaria sanguinalis (L.) Scop*
Crested Wheatgrass	*Agropyron cristatum*
Desert Saltgrass	*Distichlis spicata var. stricta (Torr.) Beetle*
Foxtail Barley	*Hordeum jubatum*

Great Basin Wild Rye	*Elymus anerreus*
Hairy Chess	*Bromus commutatus Schrad.*
Intermediate Wheatgrass	*Agropyron intermediim*
Kentucky Bluegrass	*Poa pratensis*
Medusahead	*Taeniatherum caput-medusa*
Nuttall's Alkaligrass	*Puccinellia nuttaliana*
Prairie Cordgrass	*Spartina pectinata*
Rabbitsfoot Grass	*Polypogon monspeliensis (L.) Desf.*
Reed	*Phragmites communis Trin.*
Scratchgrass	*Muhlenbergia asperifolia (Nees. & Mey.)*
Squirreltail	*Sitanion hystrix*
Streambank Wheatgrass	*Agropyron riparium*
Wildrye	*Elymus glaucus Buckl.*
Witchgrass	*Panicum capillare*

AQUATICS

Alkali Bulrush	*Scirpus maritimus L. (paludosus)*
Berchtold Pondweed	*Potamogeton berchtoldii*
Chara	*Chara spp.*
Common Cattail	*Typha latifolia L.*
Fluted Bulrush	*Scirpus fluviatilis (Torr.)A. Gray*
Hardstem Bulrush	*Scirpus acutus Muhl.*
Hornwort, Coontail	*Ceratophyllum demersum L.*
Mexican Rush	*Juncus mexicanus*
Narrowleaf Cattail	*Typha domingensis*
Narrow-leaved Bur-reed	*Sparganium angustifolium*
Olney Bulrush	*Scirpus olneyi Gray*
Saltmarsh Bulrush	*Scirpus maritimus*
Seaside Arrowgrass	*Triglochin maritimaL.*
Showy Milkweed	*Asclepias speciosa Torr.*
Spikerush	*Eleocharius palustris*
Swamp Milkweed	*Asclepias incarnata L.*
Wire Rush	*Juncus balticus Willd.*

Reed Canarygrass	*Phalaris arundinacea*
Common Reed	*Phragmites australis*

FORBS

Pigweed, Redroot	*Amaranthus retroflexus L.*
Wild Onion	*Allium acuminatum Hook.*
Hound's Tongue	*Cynoglossum officinale L.*
Clammyweed	*Polanisia dodecandra*
Saltwort, Samphire, Pickleweed	*Salicornia rubra*
Pursh Seepweed	*Suaeda depressa*
Alkali Seepweed	*Suaeda fruticosa*
Black Seepweed, Inkweed	*Suaeda nigra (moquinii)*
Yarrow	*Achillea millifolium L.*
Western Yarrow	*Achillea lanulosa*
Mountain Dandelion	*Agoseris glauca*
Annual Ragweed	*Ambrosia artemisifolia L.*
Western Ragweed	*Ambrosia psilostachya*
Smaller Burdock	*Arctium minus*

Wild Aster	*Aster chilensis var. adscendens*
Siskiyou Aster	*Aster hesperius A. Gray*
Beggar's Ticks	*Bidens cernua L.*
Blue Sailors,	*Chickory Chichorium intybus L.*
Canada Thistle	*Cirsium arvense*
Bull Thistle	*Cirsium vulgare*
Curly-cup Gumweed	*Grindelia squarrosa*
Broom Snakeweed	*Gutierrezia sarothrae*
Annual Sunflower	*Helianthus annus*
Marsh Elder	*Iva axillaries*
False Ragweed	*Iva xanthifolia*
Blue Lettuce	*Lactuca pulchella*
Wire Lettuce	*Lactuca serriola*
Pineapple Weed	*Matricaria matricarioides*
Prickly/Spiny Sowthistle	*Sonchus asper*
Dandelion	*Taraxacum officinale*
Goatsbeard, Western Salsify	*Tragopogon dubius*
Field Bindweed, Wild Morning-glory	*Convolvulus arvensis*

Morning Glory	*Convolvulus sepium*
Black Mustard	*Brassica nigra*
Whitetop	*Cardaria draba*
Tansy Mustard	*Descurainia Sophia*
Dyer's Woad	*Isatis tinctoria*
Peppergrass	*Lepidium perfoliatum*
Perennial Pepperweed	*Lepidium latifolium*
Tumble Mustard	*Sisymbrium altissimum*
Common Teasel	*Dipsacus sylvestris Huds.*
Ridgeseed Spurge	*Euphorbia glyptosperma Engelm.*
Redstem Filaree, Storksbill	*Erodium cicutarium*
Bugleweed	*Lycopus asper Greene*
Catnip	*Nepeta cataria L.*
Skullcap	*Scutellaria galericulata L.*
Black Medic	*Medicago lupulina L.*
Alfalfa	*Medicago sativa L.*
White Sweetclover	*Meliotus alba*
Yellow Sweetclover	*Melilitus officinalis*

Clover	*Trifolium fragiferum*
Asparagus	*Asparagus officinalis L.*
Blazing Star	*Mentzelia laevicaulis*
Hollyhock	*Althaea rosea*
Flower-of-an-hour	*Hibiscus trionum*
Cheeseweed	*Malva neglecta*
Sticky willow herb	*Epilobium adenocaulon*
Gaura	*Guara parviflora*
Evening Primrose	*Oenothera biennis*
Plantain	*Plantago major*
Waterspot, Floating Ladysthumb	*Polygonum amphibium*
Knotweed	*Polygonum aviculare*
Curlytop Ladysthumb	*Polygonum lapathifolium*
Spotted Landysthumb	*Polygonum persicaria*
Bushy Knotweed	*Polygonum ramosissimum*
Curly Dock	*Rumex crispus*
Willow Dock	*Rumex salicifolius*
Purslane	*Portulaca aleracea*

Saltwort	*Glaux maritime*
Rocky Mountain Buttercup	*Ranunculus cymbalaria*
Celery-Leaf Buttercup	*Ranunculus sceleratus*
Silverleaf Cinquefoil	*Potentilla anserine*
Catchweed Bedstraw	*Galium aparine*
Annual Paintbrush	*Castilleja exilis A. Nels.*
Mullein	*Verbascum thapsus*
European Bittersweet	*Solanum dulcamera L.*
Tomato	*Lycopersicon esculentum Mill.*
Poison Hemlock	*Conium maculatum*
Slim Stinging Nettle	*Urtica dioca L. ssp. Gracilis (Ait.) Seland.*
Big-bract Verbena	*Verbena bracteata Lag. & Rodr.*
Punctur evine/weed, Caltrop	*Tribulus terrestris L.*
Chamomile	*Chamomile rescuita*
Indianwheat, Woolly Plantain	*Plantago patagonica*
Rocky Mountain Beeplant	*Cleome serrulata*
Flixweed	*Descurainia Sophia*
Field Pennycress	*Thlaspi arvense*

Shepherdspurse	*Capsilla bursa-pastoris*
Common Cocklebur	*Xanthium strumarium*
Western Groundsel	*Senecio integerrimus*
Spreading Alkaliweed	*Cressa truxillensis*
Dodder	*Cuscuta spp.*
Netseed Lambsquarter	*Chenopodium berlandieri*
Purple Aster	*Machaeranthera canescens*
Kochia	*Kochia scoparius*
Goldenpea	*Thermopsis rhombifolia*

TREES AND SHRUBS

Big Sagebrush	*Artemisia tridentata*
Box elder	*Acer negundo*
Dogbane	*Apocynum cannabinum*
Iodinebush	*Allenrolfea occidentalis*
Shadscale	*Atriplex confertifolia*
Nuttall Saltbush	*Atriplex nuttallii*
Spearscale	*Atriplex patula var. hastata*

Fourwinged Saltbush	*Atriplex canescens*
Gray Rabbitbrush	*Chrysothamnus nauseosus*
Green Rabbitbrush	*Chrysothamnus viscidiflorus*
Greasewood	*Sarcobatus vermiculatus*
Hoary Sagebrush	*Artemesia cana Pursh.*
Russian Olive	*Elaeagnus angustifolia L.*
Golden Currant	*Ribes aureum Pursh*
Red Ash	*Fraxinus pennsylvanica*
Oriental Arbor-vitae	*Thuja orientalis*
Wood's Rose	*Rosa woodsii*
Bolleana Poplar	*Populus alba L. var. bolleana Lauche*
Fremont Poplar	*Populus fremontii S. Wats.*
Peachleaf Willow	*Salix amygdaloides Anderss.*
Beak or Bebb Willow	*Salix bebbiana var. perrostrata Sarg.*
Sandbar Willow	*Salix exigua Nutt.*
Tamarisk, Salt Cedar	*Tamarix pentandra Pall.*
Siberian Elm	*Ulmus pumila*

Literature Cited

1. R. Downard, K.A. Sims, A.L. Long, and K.M. Kettenring, 2013. Assessment of wetland vegetation in the Willard Spur, Great Salt Lake, UT: A literature review. Final report to Utah Division of Water Quality. 42pp.

2. [UDWQ] Utah Division of Water Quality. 2018. Summary of Willard Spur Investigations. 24pp. Online: https://documents.deq.utah.gov/water-quality/standards-technical-services/gsl-website-docs/wetlands-program/wetland-monitoring-assessment/DWQ-2018-002622.pdf

3. Wurtsbaugh, W., Moore, H. 2011. Fish Diversity of Willard Spur, Great Salt Lake. Aquatic Ecology Practicum (WATS 4510) Class Report. Watershed Sciences Department. College of Natural Resources. Utah State University.

4. Cavitt, J. 2013. Avian Population Analysis of the Willard Spur. Final Report to the Utah Division of Water Quality. October 30, 2013. 25 pp.

5. Cavitt, J. F., S. L. Jones, N. M. Wilson, J. S Dieni, T. S. Zimmerman, R. H. Doster, and W. H. Howe. 2014. Atlas of breeding colonial waterbirds in the interior western United States. Research Report, U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado.

6. Penne, Chris. *Willard Spur Fishery Investigation.* Utah Division of Wildlife Resources. 2012.

7. Utah Dept. of Natural Resources, Div. of Forestry, Fire, and State Lands. 2013. Final Great Salt Lake Mineral Leasing Plan (GSL MLP). March.

8. Utah Dept. of Natural Resources. Div. of Forestry, Fire, and State Lands. 2013. Final Great Salt Lake Comprehensive Management Plan and Record of Decision. March.

9. https://www.fws.gov/uploadedFiles/BR_HMP.pdf

10. CH2M HILL. 2016a. Hydrology Assessment of Willard Spur, Great Salt Lake, 2011-2013: Development of Water Quality Standards for Great Salt Lake. 45pp.

11. U.S.F.W.S. 1958. A Wildlife Habitat Replacement and Development Report for Willard Reservoir Weber Basin Project, Utah. Albuquerque, New Mexico.