

**2025** HABITAT MANAGEMENT PLAN

# Timpanogos Wildlife Management Area



*Prepared by the Utah Division of Wildlife Resources Central Region*



UTAH DIVISION OF WILDLIFE RESOURCES

# Timpanogos Wildlife Management Area

## Habitat Management Plan

Central Region Habitat Section

04/01/2025

DRAFT



Timpanogos Wildlife Management Area

Habitat Management Plan

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# Habitat Management Plan for Timpanogos Wildlife Management Area

*Executive Summary - April 2025*

This habitat management plan (HMP) contains the following sections:

- **Background information** (purpose of Division ownership, public recreation opportunities, historic uses, key wildlife species, etc.)
- **Property information** (property description, acquisition history, encumbrances, etc.)
- **Property inventory** (capital improvements, existing habitats, etc.)
- **Management goals and objectives**
- **Strategies for property management**
- **Strategies for habitat management**
- **Appendices** contain location maps of the WMAs and an access plan which explains public access opportunities.

This WMA was originally purchased for big game habitat values. As a result, mule deer and elk are the primary beneficiaries of the WMA, especially during winter months when they come down from higher elevation summer ranges to winter.

This HMP provides management direction to Utah Division of Wildlife Resources personnel. Listed below is a short summary of the contents of the HMP.

**PRIMARY PURPOSE OF THE WMA:** To preserve and protect big game winter and transitional range and protect wintering wildlife.

**WILDLIFE SPECIES:** The WMA contains habitat for the following wildlife species: mule deer, elk, rocky mountain bighorn sheep, bear, cougar, and coyote. A variety of upland game species also inhabit this WMA including chukar partridge, dusky grouse, Rio Grande turkey, cottontail rabbit, and mourning dove. Neotropical migratory birds can also be found in sagebrush and mountain brush habitats during their breeding and nesting seasons in spring and early summer months.

**SPECIES OF GREATEST CONSERVATION NEED:** Golden Eagle (*Aquila chrysaetos*) have been documented using the WMA. There are also some aquatic species of greatest conservation need that can be found south of the WMA along the Provo River. See appendix C for a full list of species found in close proximity to the WMA.

**HABITAT CONDITIONS/PROBLEMS:** The WMA contains a variety of habitat types beginning with big sagebrush at the lower elevations, transitioning to Gambel oak and mixed mountain brush. Some scattered aspen conifer habitat can be found at the highest elevations. Vegetation cover is good but lacks diversity. Cliffrose, mahogany and sagebrush have been eliminated in areas of past fires. Competition from introduced perennial grasses that were seeded in the past make shrub recruitment difficult. Noxious/invasive weeds can be found on the WMA including cheatgrass, jointed goatgrass, whitetop, thistle, myrtle spurge and toadflax. Yellow star thistle is found on adjacent Forest Service and private lands and is a threat to invade the WMA.

The creation of unauthorized trails on the WMA is an on-going problem that is difficult to control. The Division will work with user groups and law enforcement agencies to manage recreation activity in a responsible manner that does not negatively impact the WMA and still allows for

management goals to be met. The Division will work with WMA visitors to ensure that all activities are in compliance with administrative rule R-657-28, Use of Division Lands.

**ACCESS PLAN:** The WMA has limited motorized vehicle access due to the protection of the WMA for crucial big game winter range and as a culinary watershed for Orem and Lindon cities. Motorized vehicle travel is authorized only during the fall deer hunts on an existing 3 mile stretch of the Alta Ditch Road. Vehicle access to this road is via the Bonneville Shoreline Trailhead located on Orem City property. Due to the properties close proximity to the Wasatch Front, various outdoor recreation occurs on the WMA in the form of Mountain biking, hiking, trail running and horseback riding. Access is located at the vehicle access point and along the Great Western, Bonneville Shoreline, and Dry Canyon trails.

**MAINTENANCE ACTIVITIES:** Inspection, repairs, replacement of gates, boundary signs, entry signs, trail signs and kiosks and noxious weed control will occur annually. Annual weed control is a priority to keep weeds from expanding.

**HISTORY OF WILDFIRES:** Wildfire has had a significant impact on the WMA with the destruction of winter forage in the form of big sagebrush and bitterbrush, both of which are not fire tolerant. A large portion of the WMA was burned in the 1996 Tank fire and about 80% of the property was burned in the 2020 Range fire.

**HABITAT IMPROVEMENT:** In order for the WMA to reach its potential as a critical big game winter range, browse communities need to be enhanced and protected from fire. Gambel oak is the only browse species of significant quantity on the WMA currently. In order for big game to have maximum use of the area, there needs to be a greater variety and quantity of browse available on the critical winter range areas of the property. In order to establish a greater variety of browse species, the grass cover may have to be disturbed by mechanical or chemical treatments. Seeding shrubs and planting shrub seedlings will be done to get preferred shrub species established.



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# Habitat Management Plan Timpanogos Wildlife Management Area 2025

## I. BACKGROUND INFORMATION

### INTRODUCTION

This management plan has been developed to guide management on the Timpanogos Wildlife Management Area (WMA) owned by the Utah Division of Wildlife Resources (DWR). The WMA was originally purchased for big game habitat values. As a result, mule deer and elk are the primary beneficiaries of the WMA.

### PURPOSE OF DIVISION OWNERSHIP

The Timpanogos WMA was acquired primarily to protect, preserve, and enhance critical big game winter and transitional ranges. The WMA also provides a variety of recreational opportunities including hunting, hiking, mountain biking, horseback riding and primitive camping. These types of recreation are allowed as long as they are compatible with the primary purpose of the WMA.

### HISTORIC USES

The WMA was historically used primarily for livestock grazing. Hunting, camping, hiking, off-highway-vehicle (OHV) use, and antler hunting were also common activities.

### PUBLIC RECREATION OPPORTUNITIES

All activities occurring on Division lands are managed under the direction of the Division's Land Use Rule. Rule R657-28 discusses approved uses, prohibited activities, and the process for applying and receiving the various permits required to use Division lands. The Division will work with WMA visitors to ensure that all activities are in compliance with this rule.

Due to its location and close proximity to heavily populated and urbanized areas, the Timpanogos WMA is used heavily for outdoor recreation in the form of hiking, trail running, mountain biking, horseback riding, hunting and primitive camping.

The WMA is surrounded by private lands and/or roadless National Forest lands managed by the Uinta-Wasatch-Cache National Forest, Pleasant Grove Ranger District. The only authorized motorized access occurs during the general deer hunting season when 3 miles of the Alta Ditch Road is open to motorized vehicles via Orem City property. The access point for the Alta Ditch Road is the Bonneville Shoreline Trail trailhead located north of the Orem City Cemetery and the Central Utah Water Treatment Plant. The Division negotiated this access to provide sportsmen some motorized access even if for only a limited portion of the year. Refer to the Access Management Plan in appendix B for more information on public access on the WMA.

Dogs may be used to locate and retrieve upland game during open hunting seasons (R657-6-25), but at all other times, dogs must be kept on a leash (R675-28). Additional access information including the access map for the WMA can be found in the Access Management Plan found in Appendix B.

## PUBLIC ACCESS

There are three primary access points to the WMA. The Bonneville Shoreline trailhead above the Orem Cemetery, the Dry Canyon Trailhead to the west of the WMA and north of Timpanogos Park in Provo Canyon. Additional information on public access and motorized vehicle use on the WMA can be found in the access management plan which is included as Appendix B.

## CAMPING

There are no camping areas on the WMA and no motorized access during most of the year. Primitive camping is permitted on the WMA and unless posted otherwise, is limited to 10 days. The Division reserves the right to change the length of camping days if needed to reach the goals and objectives of the habitat management plan. Any changes in camping regulations will be posted.

## CAMPFIRES

Fireworks and open fires are not allowed on the WMA due to the high wildfire potential of this area and its close proximity to population centers. Activities which are not compatible with the preservation of wintering big game and their habitats will be limited or restricted on the WMA.

## OHV USE

The Timpanogos WMA is a non-motorized property. The only motorized access is the three mile section of the Alta Ditch road during the deer hunts September through October.

## KEY WILDLIFE SPECIES

As previously described, this WMA was originally purchased for big game habitat values, primarily for mule deer. As such, mule deer and elk are the primary beneficiaries, especially during winter months.

The WMA provides crucial big game winter range for mule deer (*Odocoileus hemionus*), elk (*Cervus elaphus*), moose (*Alces alces*), and Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*). Bighorn sheep were reintroduced into the area in 2000 and 2001. This area also supports upland game such as cottontail rabbit (*Sylvilagus nuttalli*), dusky grouse (*Dendragapus obscurus*), ruffed grouse (*Bonasa umbellus*), Rio Grande turkey (*Meleagris gallopavo intermedia*) (introduced into Provo Canyon in 1997-99), chukar (*Alectoris chukar*), ring-necked pheasant (*Phasianus colchicus*), California quail (*Callipepla californica*) and mourning dove (*Zenaida macroura*). Peregrine falcon (*Falco peregrinus*) and red-tailed hawk (*Buteo jamaicensis*) nest on cliff faces just south of the WMA.

## GRAZING

The WMA is not grazed because the WMA lies within the culinary watershed for Orem and Lindon cities. Fencing would have to be updated for grazing as well.

## II. PROPERTY INFORMATION

### PROPERTY DESCRIPTION

The Timpanogos Wildlife Management Area (WMA) is a 2,397 acre parcel located in Utah County north of the mouth of Provo Canyon and east of Orem and Lindon cities (Appendix A). It is bordered on the north and east by the Uinta National Forest, and on the west and south by private lands. The WMA lies within the following full or partial sections: Township 5S, Range 2E, Section 36; Township 6S, Range 2E, Section 1; Township 5S, Range 3E, Sections 31, 32; and Township 6S, Range 3E, Sections 5 & 6.

The WMA property is fee title land owned by the Utah Division of Wildlife Resources (DWR) acquired with the cooperation of the US Fish and Wildlife Service, Federal Aid Division. Copies of deeds for the WMAs can be found in either DWR's Salt Lake Office, 1594 West North Temple, Salt Lake City, UT, 84114 or the Central Region office at 1115 North Main Street, Springville, UT, 84663.

### **LAND ACQUISITION HISTORY**

The Timpanogos WMA was purchased with Federal Aid Grant W-10-L in 1946 from co-owners J. Mac, Amanda, Fern Roundy, Clayton and Lyda Roundy and Nellie R. Greer. Eight acres were donated to the Division by Cherapple Farms in 1989.

Because federal funds were used in the acquisition of this property, the Division is required to comply with National Environmental Policy Act (NEPA) guidelines when considering actions that could affect the environment. The USFWS is the responsible party for issuing the record of decision with regards to proposed actions on these WMAs.

### **ENCUMBRANCES**

The mineral rights to the property were not acquired by DWR, and there are no water rights associated with the property. Easements on the property include:

- Utility easement to Telluride Power Co. (3/21/1904) across lot 1, Sec. 1, T6S, R2E
- Utah Power and Light for flume and access (5/17/1924)
- Utah Power & Light, perpetual Utility Pole Line, Sec. 1, T6S, R2E; Sec. 6, T6S, R3E (7/28/1950) (Ref. # W-10-L; #10469)
- Alta Ditch & Canal Co. for water pipeline, Sec. 6, T6S, R2E (6/27/1956)
- Alpine Aqueduct, CUP (USA), for perpetual access road, maintenance & structures, NE1/4SE1/4, Sec. 1, T6S, R2E (5/25/78) (#78-5166), (Fed. Aid 39-L)
- Lindon City Corporation for Dry Canyon Debris Basin in NW1/4SW1/4 Sec. 36, T5S, R2E, for 5.5 acres for 30 years (began 1987, renewed 1999), (#88-1835)
- Orem City, easement for ingress, egress, & maintaining 400,000 gallon buried concrete culinary water tank in NW1/4, Sec. 1, T6S, R2E for 30 years; signed May 2, 2000 and for access to the entire length of the Alta Canal Road (#70-0348)
- Central Utah Water Conservancy District to the entire Alta Canal Road
- The Bonneville Shoreline and Great Western trails go through the west and south portions of the WMA (Appendix B, Access Management Plan travel map)



### **III. PROPERTY INVENTORY**

#### **EXISTING CAPITAL IMPROVEMENTS**

Most of the existing improvements on the WMAs include roads, fences, and guzzlers. Roads and fences are maintained on an annual basis or as needed. Guzzlers that collect water for wildlife use have also been constructed on the WMA. See the Access Management plan in appendix B for maps showing roads and authorized trails on this property.

#### **ROADS**

The main road on the property is the Alta Ditch Road that crosses the southern portion of the WMA. There are a few other access roads that Orem city water uses to access springs and water lines. All of these roads are for administrative access only. The only road open to the public for a few weeks during the deer hunting season is a three mile section of the Alta Ditch Road.

#### **FENCES**

There are few fences on the Timpanogos WMA. There is a 1,935 foot long 8 foot high wildlife exclusion fence along the south border adjacent to the former Cascade golf course property. There is also a property boundary fence along the western WMA boundary consisting of barbed wire and post and rail fence sections which are adjacent to residential areas.

#### **GUZZLERS**

Guzzlers are devices that capture rainwater and store it for use by wildlife. There are three 1,800 gallon big game guzzlers located on the WMA. Two 1,800 gallon Boss Tank guzzlers were installed at higher elevations on the WMA in 2002. An additional Boss Tank guzzler was added in 2017. Guzzler locations are not public information and not shown on any maps. This is primarily to protect these structures from human disturbance, vandalism and hunting pressure.

#### **HABITAT IMPROVEMENT PROJECTS**

As part of a cooperative effort involving the Forest Service and several municipalities, the Division ripped and reseeded all of the upper trails on the WMA in 1989. Only the Alta Canal Road was left open. This road was graded and improved, and two parking areas were also constructed along the route. Lodgepole pine fencing has been placed around the parking areas to restrict access to foot or horse traffic beyond the parking areas. The end of the motorized vehicle access along the Alta Canal Road is gated. Lodgepole pine barricades and signs have been placed where unauthorized roads and trails have been closed.

Beginning in 2002, the Division, the Pleasant Grove Ranger District of the Uinta-Wasatch-Cache National Forest, and various sportsmen's and volunteer groups, began a cooperative effort to close unauthorized trails and roads along the foothills east of Orem, Lindon, and Pleasant Grove. As part of this effort, rock barriers and post and rail fence were installed along parts of the west boundary of the WMA to close user created roads through Division lands that extended onto the National Forest. Unauthorized roads and trails were ripped, mulched and seeded, and planted with shrub seedlings. This work will continue as necessary to control trespass and unauthorized uses on the WMA.

In 1996, the Tank Fire engulfed a large portion of the WMA, consuming 2,480 acres of wildlife habitat on Division and National Forest lands. This fire improved stands of old growth oak (*Quercus gambelii*) and big tooth maple (*Acer grandidentatum*) which were unavailable to big game species. Regeneration of these stands provides a greater quantity and quality of forage for big game. However, remnant stands of sagebrush and cliffrose, which are not fire tolerant and more preferred by big game, were largely destroyed by the fire. A small portion of the WMA at lower elevations was reseeded to mitigate erosion and siltation into the Provo River fishery. Two hundred and twenty-five acres were reseeded with western wheatgrass (*Pascopyrum smithii*), bluebunch wheatgrass (*Pseudoroegneria spicata*) and alfalfa (*Medicago sativa*).

From 1997-1999, thousands of cliffrose (*Cowania mexicana stansburiana*), big sagebrush (*Artemisia tridentata* spp.), rabbitbrush (*Chrysothamnus* spp.), true mountain mahogany (*Cercocarpus montanus*), curleaf mahogany (*Cercocarpus ledifolius*) and bitterbrush (*Purshia tridentata*) seedlings were planted in close proximity of the access road using boy scouts, dedicated hunters, and Division personnel.

The 2020 Range Fire burned about 3,450 acres or approximately 80% of the WMA. Many of the shrubs previously planted were destroyed. There are very few shrubs on the property with the exception of the fire tolerant species Gambel oak and bigtooth maple.

Other improvements include habitat improvement projects which are mentioned here. See the following table for information about projects that have occurred on the WMA after 2006. These projects can be found on the Watershed Restoration Initiative database ([wri.utah.gov](http://wri.utah.gov)) which includes details of the projects, budgets, funding sources and pictures.

Project No.	Project Name	acres
<a href="#">4383</a>	Timpanogos Guzzler Apron Installation	0.25
<a href="#">4615</a>	Timpanogos shrub planting project	0.60
<a href="#">5542</a>	Range Fire Rehab Project	1,967
<a href="#">5735</a>	Timpanogos WMA Fire Shrub Planting FY22	8.5
<a href="#">5956</a>	Timpanogos WMA Fire Rehab and Access Management Project - FY23	10.00
<a href="#">6534</a>	Timpanogos WMA Shrub Restoration - FY24	8.50
<a href="#">6935</a>	Timpanogos WMA Mule Deer Winter Range Restoration Project FY25	1.40
	Total	1,996.25

## CULTURAL RESOURCES

Some cultural surveys have been conducted on the WMA prior to habitat improvement projects. No significant cultural sites have been identified on the WMA. However, much of the WMA has not been surveyed so caution should be used before any ground disturbing activities are planned or approved to ensure that cultural resources are adequately identified and avoidance measures are taken.

## **SPECIES OF GREATEST CONSERVATION NEED**

A search of the Division's Natural Heritage database resulted in the following species of greatest conservation need (SGCN) which are found on or in close proximity to the WMAs in this HMP. See appendix C for a complete list of species found in proximity to the Timpanogos WMA.

### **BIRDS**

Golden Eagle (*Aquila chrysaetos*) can also be found using the WMA and surrounding areas.

### **AMPHIBIANS**

Columbia spotted frog (*Rana luteiventris*) can be found in the Provo River just south of the WMA.

### **AQUATIC SPECIES**

Green River pebble snail (*Fluminicola coloradoensis*) have been found in the Provo River just south of the WMA.

## **IMPORTANT FISH AND WILDLIFE HABITATS**

The Timpanogos WMA provides an abundance of habitats for a variety of wildlife species. The south and west exposures are particularly important for wintering big game species. There are approximately 500 deer and 100 elk that migrate from higher summer ranges and winter on this WMA. There is also a smaller "year round" residential herd of deer and elk which use the area. Due to increased residential development and the encroachment of homes on the east benches of Utah Valley, the Timpanogos WMA provides some of the last remaining crucial big game winter range in the area. Other wildlife species that use the management area to a lesser degree include bear, cougar, coyote, bobcat, moose and bighorn sheep. Because perennial water sources are lacking on the WMA, moose use on the WMA is limited mainly during winter months. The lack of rocky out-cropping limits bighorn sheep use mainly to migration corridors.

Upland game species consist of Rio Grande turkey, cottontail rabbit, forest grouse, chukar, quail, and mourning dove. The unit provides nesting, brooding, summering and/or wintering habitat for these species. The abundance of Gambel oak and maple provides habitat for passerine and neotropical birds as well.

The upper elevation also provides important transition habitat for big game traveling to and from winter range. Mammalian carnivores, primarily mountain lions, also frequent the property in winter months as they follow annual winter migrations of big game herds. The vegetation zones occupied by sagebrush, oakbrush and other mountain browse species provide important breeding and nesting habitats for neotropical migratory birds.



## GENERAL CONDITIONS OF HABITATS

### HABITAT TYPES

Most of the WMA has a south to southwest aspect which retains less snow depth and cover. A large portion is located just above the historic Lake Bonneville shoreline and consists of rolling hills. The WMA has a mixture of browse, forbs and grasses. Cheatgrass and other invasive species occupy a large portion of the steeper south and west exposures due to lower site potential from shallow soils and less effective moisture. Perennial grasses and alfalfa have been seeded on the WMA as part of rehabilitation efforts following wildfires. They are abundant on the benches and rolling hills where slopes are flat to moderate. The more desirable browse species, such as big sagebrush and cliffrose, have been almost entirely eliminated by wildfire. Competition from seeded grasses and cheatgrass is largely preventing their re-establishment. Upper elevations of the WMA are dominated by Gambel oak with a mix of big-tooth maple.

Habitat treatments are necessary to improve these habitats and maintain the sagebrush types vital for wintering big game animals. Mountain shrub habitats are also numerous on the WMA at higher elevations. These habitat types are generally stable and in good condition.

### RANGE AND WATERSHED CONDITIONS

The Division's Big Game Range Trend Studies program monitors big game habitat conditions statewide by sampling permanently placed vegetation transects established in key areas. Transects are read on a 5-year rotational schedule based upon the Division's five administrative regions.

There is one range trend study site located on the WMA, Orem Water Tank, #17-26. The site monitors a mixed oak-sagebrush-grass site which burned prior to site establishment in 1983, and again in 1996 and in 2020. The site was most recently monitored in 2022. In 1997, the overall condition of the range was good. The area provides an abundant but low diversity diet for big game. What little sagebrush and cliffrose that remained on the WMA was destroyed by the wildfire in 1996. Since the fire, seeded grasses and oakbrush have dominated the area. Cheatgrass has increased since the 2020 Range fire, but with the abundance of seeded perennial grasses, it should be held in check. Trends for soil and vegetation appear stable. Protective ground cover is abundant and there is minimal soil erosion occurring at the transect location. Gambel oak is the only significant browse sampled on the site since 1997, and has shown little use by wildlife. Gambel Oak provides some cover but it is deciduous and provides poor winter forage.

Statewide range trend data and digital photographs for specific sites can be found at the following web address: <https://wildlife.utah.gov/range-trends.html>

### HABITAT LIMITATIONS

Vegetation cover is very good but lacks diversity. Both the herbaceous and browse components are dominated by only a few species. Presently, oak brush (Gamble oak) is the only browse species of significant quantity on the WMA. Attempts have been made since the fires of 1996 and 2020 to improve the variety of shrubs available to big game and other wildlife species. Several seedling transplants involving sagebrush, bitterbrush, cliffrose, rabbitbrush and mahogany have been attempted in past years, however, these have been largely unsuccessful

due to high competition with invasive weeds and seeded grasses and browsing pressure from mule deer.

A more detailed discussion of these limitations and their associated solutions can be found in the habitat improvement section of this HMP.

## **HUMAN USE - RELATED PROBLEMS**

Motorized vehicle use has been prohibited on the WMA, except during the general deer hunt, when motorized vehicle access is allowed but restricted to the Alta Canal Road. Motorized access via the Alta Canal Road is monitored by Orem City and the Division. The most significant human related problem is associated with horseback riding and mountain bike use. There is also significant use by hikers, trail runners and some camping. Depending on the season of use and extent, these activities may disturb wintering big game animals. Many hikers and horseback riders are bringing unleashed dogs onto the WMA, which has the potential for increased disturbance and harassment to wildlife, especially during winter months. These activities may be limited or restricted in the future if they reach levels that are not compatible with the goals and objectives of the WMA.

## **ADJACENT LAND USES AND POTENTIAL IMPACTS**

Some of the land south of the WMA is owned by Orem City and is managed as a watershed. The Cascade Golf Center used to border the WMA on the south. The golf course closed in 2013. Some of the old golf course is in private ownership. Adjacent lands are extensively used by hikers, cyclists, and OHV's which have created numerous trails onto and through the WMA. Areas to the west are generally under private ownership and consist mainly of residential housing. The WMA is surrounded on the east and north by National Forest lands administered by the Uinta-Wasatch-Cache National Forest, Pleasant Grove Ranger District. National Forest lands are managed as a watershed, are not grazed by livestock, and provide critical wildlife habitats. A portion of the National Forest lands east of the WMA are managed as wilderness and have more restricted use. These forest lands provide abundant summer range for a number of big game species which migrate to the WMA for winter refuge.

Currently, housing developments along the south and west boundaries of the WMA have greatly increased human activity in the area. Urbanization has both decreased the amount of undeveloped buffer lands around the WMA and placed residential subdivisions and golf courses immediately adjacent to the WMA. The high concentration of people in close proximity to the WMA make it a target for outdoor recreation and trespass which are often incompatible with wildlife. Wintering wildlife adjacent to urbanized areas often result in conflict situations such as damage to golf courses and residential landscaping.

## **ZONING AND LAND USE ORDINANCES**

Utah County has designated the south part of the WMA as CE-1 (Critical Environment). The land use for the Critical Environment zone is compatible with managing the WMA for wildlife.

Lindon City has zoned section 36 (of which 480 acres are under DWR ownership) as RMU-E (Recreational Mixed Use-East). The purpose and intent of this zone (open and generally undeveloped lands with steep slopes, reduction of public utilities on higher elevations, promotion of health, safety, convenience, order, prosperity and general welfare of the community) is generally compatible with the management of the Timpanogos WMA for

preserving and protecting big game winter range. While a variety of permitted and conditional uses are allowed within this zone, that portion of the WMA zoned as RMU-E will limit or exclude these potential uses as they are not compatible with the goals and objectives of the WMA. However, issuance of conditional use permits for golf driving ranges, BMX biking tracks and facilities, general resorts, group or organized camps, even if located on nearby private lands, could affect wildlife or their habitat on the WMA.

Land within the Orem City boundary that are adjacent to the west and south borders of the WMA, are zoned R12 (low density with 3.6 or fewer dwellings/acre). The lands adjacent to the southeast border of the WMA are zoned PF, *City-Wide Public Facility Rezone* or OS5, open space.

#### **IV. MANAGEMENT GOALS AND OBJECTIVES**

The management of these WMAs will take into account the goals, objectives, and strategies of other Division planning efforts. These other plans are briefly discussed below.

##### DWR Strategic Plan

###### Mission

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

###### Resource Goal

Conserve, enhance and actively manage Utah's protected wildlife populations, their habitats and the water resources they rely on, using the best available science.

The management of the WMA in this plan has relevance to the following goals and objectives outlined in the Division's most current 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 R5: Conduct management work to help prevent species of concern from being federally listed as threatened or endangered, and work to delist those species that are currently listed.*
- *Objective R7: Decrease the number of wildlife-related incidents — including property damage, crop depredation and threatened or endangered species listings — that negatively affect private property owners.*

*Constituency Goal: Strengthen support for wildlife management by demonstrating the value and importance of wildlife to all Utahns.*

- *Objective C6: Increase hunting and fishing opportunities.*

These goals and objectives will be achieved through a variety of measures specified in the property and habitat management sections of this plan and include development and maintenance activities, habitat improvements, access management and fire management.

Current and future partnerships and cooperative efforts will also aid the Division in addressing and reaching these goals and objectives. Examples of this are the Division's participation in local Coordinated Weed Management Area's (CWMA's) and watershed planning committees.

## **WILDLIFE ACTION PLAN**

The 2015-2025 edition of the Utah Wildlife Action Plan (WAP) was created with the express purpose and goal of managing native wildlife species and their habitats to help prevent listings under the Endangered Species Act. To help achieve this goal, the WAP provides a statewide approach for the partnership-based, coordinated planning and implementation of wildlife and habitat conservation practices. The WAP addresses the following elements:

- Conservation targets include: species of greatest conservation need, and those species' key habitats; information about the status and distribution of these species; information about the location and condition of these key habitats.
- Threats and limiting factors facing these species and habitats, and research required to help managers more effectively address these problems. Threats are measured and prioritized on a statewide basis, based on how many targets they impact, and how severely the targets are impacted.
- Conservation actions required to abate the highest-priority threats, and improve the supply of these limiting factors.
- Monitoring the status of these targets, and in particular the effectiveness of these actions.
- Approaches for including the public, partners, and stakeholders, in consideration of the mission and authority of partners.
- Provisions for coordinating the WAP with other natural resource management plans.

## **WILDLIFE ACTION PLAN KEY HABITATS**

The Utah Wildlife Action Plan identifies several key terrestrial habitats that occur on the WMAs in this plan. The WAP includes a statewide threat assessment which identifies threats to each key habitat and then ranks the impact of that threat (scope and severity (S&S) according to the number of species of greatest conservation need that could be affected from that threat. These key habitats and their priority threats include:

- Mountain Big Sagebrush: Mountain big sagebrush habitats on the Timpanogos WMA are widespread areas and often interspersed with Gambel oak before transitioning into the Gambel oak type at high elevations. The dominant type consists of Inter-Mountain Basin Montane Sagebrush Steppe - mountain sagebrush type. These types are key to providing browse forage for wintering big game animals on the WMAs.
  - Priority threats include:
    - Roads - transportation network (medium)
    - Droughts (high)
    - Inappropriate fire frequency and intensity (medium)
    - Problematic plant species native upland (very high)
    - Problematic plant species – non-native (medium)
    - Seeding non-native plants (medium)
    - Utility and service lines (low)

- Gambel Oak: Gambel oak type habitats are common on the property consisting primarily of the Rocky Mountain Gambel oak - mixed montane shrubland - patchy and continuous types. There are extensive areas of the Rocky Mountain Gambel oak - mixed montane shrubland - continuous type on most of the Timpanogos WMA.
  - Priority threats include:
    - Invasive Plant Species – Non-native (medium)
    - Inappropriate fire frequency and intensity ( high)
- Mountain Shrub: Mountain shrub key habitats on the WMA are common and scattered throughout the WMA. The Rocky Mountain Bigtooth maple ravine woodland is the most common type. Inter-Mountain Basins curl-leaf mountain mahogany woodland is less common and occurs mostly on the lower elevations of the property. This habitat includes some species which resprout after fires, while other species do not resprout.
  - Priority threats include:
    - Invasive Plant Species – Non-native (medium)
    - Seeding non-native plants (medium).
- Aspen Conifer: Aspen conifer key habitats only occur in an isolated area on the north west corner of the WMA adjacent to Dry Canyon. This habitat type consists of Intermountain basin aspen-mixed conifer forest and woodland - high elevation.
  - Priority threats include:
    - Problematic insects - native (high)
    - Inappropriate fire frequency and intensity (very high)
    - Drought (medium)
    - Problematic animal species - native (medium)

The Timpanogos WMA HMP is designed to address wildlife species and habitats found on this WMA by including their needs in 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.

One of the intentions 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. Management of the WMA 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 property.

## UNIT MANAGEMENT PLANS FOR WILDLIFE SPECIES

### Wildlife Species Management Plans

The Timpanogos WMA lies within the boundaries of management unit 17, Wasatch Mountains. Individual unit mule deer and elk management plans were completed for this unit in 2023. The management of the WMA will address the limiting factors and habitat needs identified in those plans and seek to implement habitat management strategies that are needed to reach population objectives. Revisions to these plans are typically done every 5 years, and will be incorporated into the management of the WMA as needed.

Deer and elk management plans can be found at the following web addresses:

Deer [Unit #17 \(Wasatch Mountains\) | Deer Herd Unit Management Plan | 2023](#)  
Elk [Management Plan | Elk Herd Unit #17: Wasatch Mountains | December 2023](#)

## V. STRATEGIES FOR PROPERTY MANAGEMENT

### DEVELOPMENT ACTIVITIES

The Division will maintain existing capital improvements on the WMA. The Timpanogos WMA have established boundaries and fences in some areas. These are maintained regularly. Surveys will be completed where boundary disputes occur and fences will be constructed to establish legal boundaries. Where fences are in disrepair, replacement fences will be constructed. Property boundaries are marked with signs and additional signage identifying road closures, rehabilitation areas, etc. will be placed as needed. Perennial water sources are limited. Unauthorized roads and trails will be closed and rehabilitated. Authorized roads and trails are marked with signs and maintained to ensure access and safety to the public.

### PROPERTY MANAGEMENT STRATEGIES:

- Establish property boundary
  - Survey along south and west borders to verify boundaries.
  - Install fencing to delineate WMA boundaries.
  - Resolve existing trespass issues with neighbors.
  - Install structures and signs to reduce and prevent vehicle trespass and damage to the WMA.
- Signage
  - Establish information kiosks at entry points to the WMAs
  - Install signs relating to harassment of wildlife, particularly relating to domestic dogs.
  - Mark authorized trails with signs.
  - Mark unauthorized trails/roads with signs and explain closures and rehabilitation efforts.
  - Place boundary signs on south and west boundaries.
  - Maintain seasonal closure signs.
- Public access
  - Work with agencies, adjacent landowners and user groups to prepare access plans or agreements that enhance wildlife habitat, range conditions, escape

opportunities for big game, hunting opportunities and that reduce trespass from unauthorized vehicles. Such plans or agreements may emphasize a mix of permanent and seasonal road and trail closures and vehicle type restrictions.

## **ANNUAL MAINTENANCE ACTIVITIES**

Assessments by Division personnel will be made annually, and a maintenance budget will be requested for the following types of activities:

- Inspect boundaries and fences and repair as needed to prevent unauthorized access into additional areas, especially by ATVs.
- Road maintenance/closures: Maintain existing roads and road closures to protect habitat and minimize abuse. Maintain close relationship with Orem city on access agreement along the Alta Canal Road.
- Trail maintenance/closures: Maintain authorized trail system. Work with user groups and trail adoptees to maintain trails, signs and prevent additional social trails from being created.
- Noxious weed control:
  - Implement an integrated weed management program using herbicide applications and biological controls. Target species include whitetop, Myrtle spurge, Dalmatian toadflax and thistle.
  - Monitor for yellow starthistle which is found on adjacent Forest Service and private lands and will likely invade onto the WMA.
  - Work cooperatively with the Utah County and Forest Service weed crews to address weed infestations. Work cooperatively with the Utah County CWMA (Coordinated Weed Management Area) on noxious weed activities on the WMA.
- Sign replacement: Annual inspection and replacement of missing or vandalized signs. Maintain main entrance signs to identify ownership; utilize additional signs for WMA restrictions and problems.

## **VI. STRATEGIES FOR HABITAT MANAGEMENT AND IMPROVEMENT**

### **WILDLIFE MANAGEMENT UNIT PLANS FOR WILDLIFE SPECIES**

- Strategies for habitat management will be consistent with those outlined in the individual unit deer and elk management plans for Wildlife Management Unit 17 Wasatch Mountains, previously mentioned. Strategies consistent with the WMA in this HMP include:
  - Cooperate with federal land management agencies and private landowners in carrying out habitat improvement projects.
  - Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by cheatgrass with desirable perennial vegetation.
  - Cooperate with partners to maintain, improve and expand availability of water for deer in arid/limiting areas on the unit using guzzlers, improved springs, and/or other water systems.
  - Cooperate with federal land management agencies and local governments in developing and administering access management plans for the purposes of habitat protection and escape or security areas.

## HABITAT STRATEGIES SPECIFIC TO THE TIMPANOGOS WMA

- Increase preferred shrub populations with targeted planting of shrub seed and seedlings.
- Maintain guzzlers and other water sources.
- Maintain the approved trail system and close and rehabilitate social trails.
- Control noxious weeds and identify new infestations.

## HABITAT IMPROVEMENT PLAN

Specific, detailed habitat improvement plans are beyond the scope of this HMP. However, when needed and as determined by Division personnel, habitat improvement projects will be submitted to the Division's Habitat Council and other potential partners for funding. Habitat improvement project plans will include specific recommendations including treatment methods, seed mixes and a total acreage targeted for treatment.

## IMPROVE BROWSE COMMUNITIES

In order for the WMA to reach its potential as a critical big game winter range, browse communities need to be enhanced and improved. The Division will employ a variety of methods to achieve this including reseeding and seedling transplants, and mechanical treatments.

## ACCESS MANAGEMENT PLAN

The Access Management Plan for the Timpanogos WMA is found in Appendix B.

## FIRE MANAGEMENT PLAN

All activities dealing with wild and prescribed fire will be coordinated with the Division of Forestry, Fire and State Lands (DFFSL) according to guidelines established in the Memorandum of Understanding (2005) between DWR and DFFSL. Fire management provisions include:

- When prescribed fire is needed as a habitat management tool, DWR will provide all applicable information to DFFSL to ensure burn plans are complete and submitted by deadlines.
- Wildfires will be aggressively battled at lower elevations in sagebrush habitats to protect the browse communities on crucial winter ranges.
- As needed, green strips will be seeded to reduce the threat and spread of wildfire.
- The use of fireworks and explosives are prohibited on the WMA (R657-28).

## VII. SUMMARY STATEMENT OF PROPOSED USES

The primary goals and objectives of the Timpanogos WMA presented in this HMP are to preserve, enhance and protect big game winter range and wintering wildlife and reduce deer and elk depredation on surrounding private lands. The Division will allow for and provide wildlife-related recreational activities that are consistent with the goals and purposes for which this WMA was acquired.



## **VIII. MONITORING AND EVALUATION**

Regional habitat section personnel, the area wildlife biologist and the district conservation officer will be responsible for monitoring overall effectiveness of the program. Appropriate sections will provide expertise as required. The lead and assistant habitat maintenance specialists will monitor the needs and effectiveness of physical facilities and improvements. Range Trend program personnel will continue to monitor the existing trend studies on a 5-year rotation and will add additional monitoring sites as needed. The regional habitat section will amend this habitat management plan as needed.

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## **IX. Appendices**

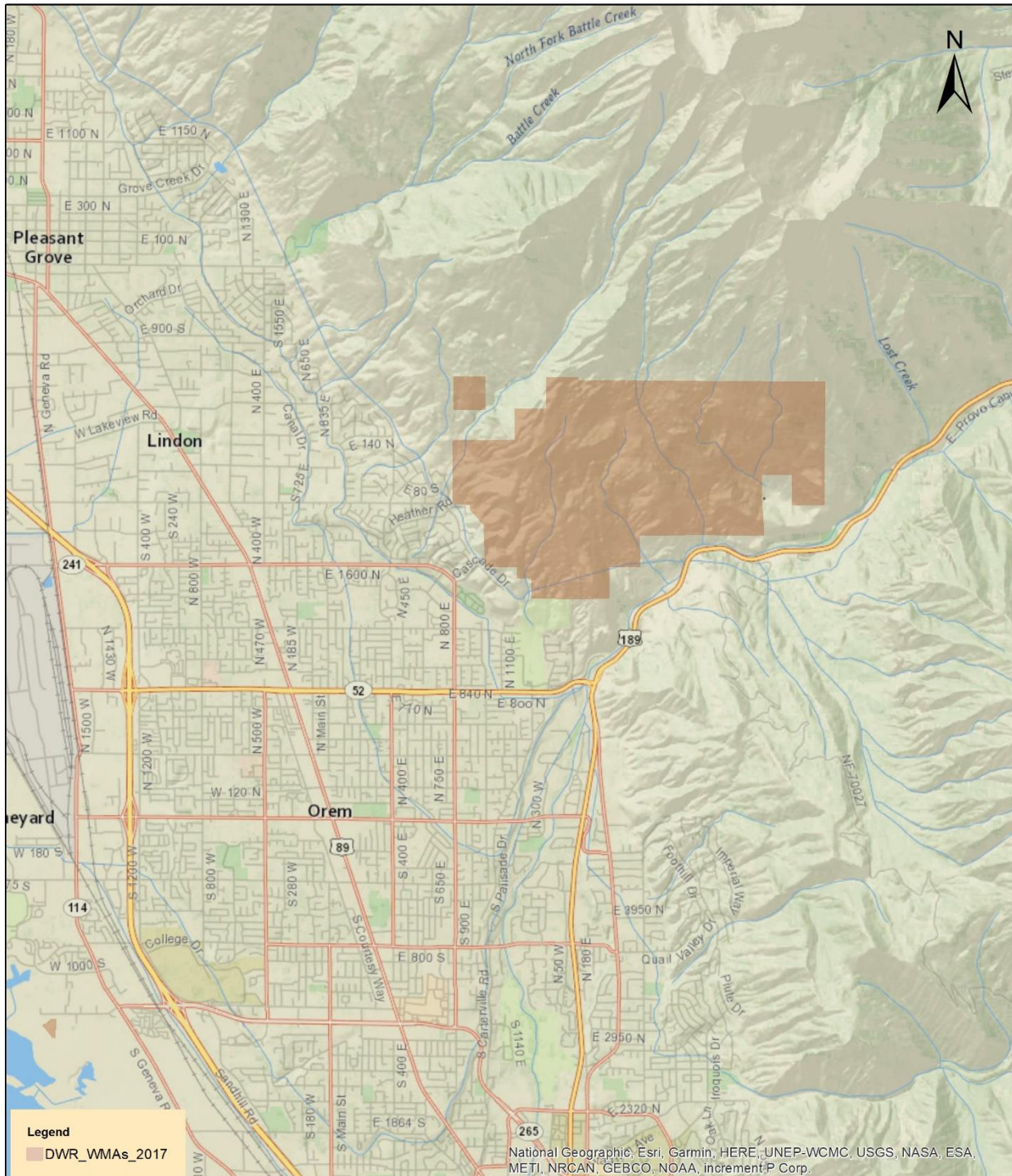
- Appendix A - Maps
  - A1 – General location
  - A2 – Timpanogos WMA area landownership
- Appendix B - Access Management Plan
  - B1 – Timpanogos WMA access map
  - B2- Timpanogos WMA winter closure map
- Appendix C – Wildlife Habitat Analysis report

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## Appendix A – Maps

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# Map A1 - Timpanogos WMA General Location

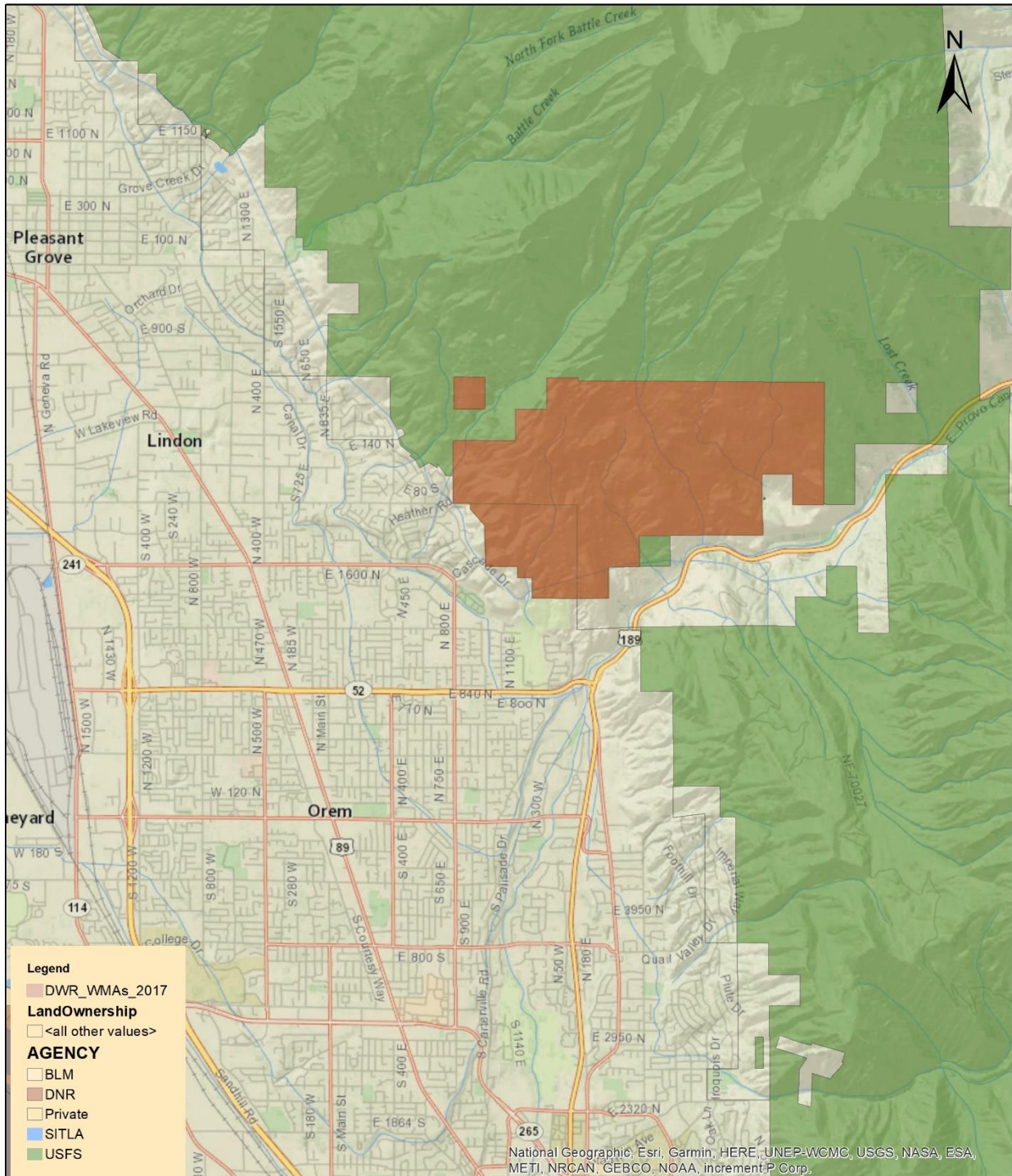


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# Map A2 - Timpanogos WMA Area Landownership



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## Appendix B – Access Management Plan

# **ACCESS MANAGEMENT PLAN – TIMPANOGOS WMA**

## **PURPOSE**

The WMA contained in this plan was acquired to preserve and protect big game winter range and wintering animals. These lands provide crucial winter and spring habitat for big game in this area. The access management plan will ensure that public access and use of the WMA is done in a manner that assists the Division in achieving the goals and objectives outlined in the habitat management plan.

## **BACKGROUND**

The WMA is experiencing increased outdoor recreation in the form of mountain biking, horseback riding, hiking, trail running and some primitive camping. The creation or expansion of new social trails by mountain bicycles is an on-going problem which has increased dramatically since the original Habitat Management Plan was adopted in 2009. In 2015 Division personnel reached out to mountain bike groups to address unauthorized trail creation and use on the WMA. In 2018 a trails group, the Utah County Trails Alliance was established to address trails and users in Utah County. Division and Forest Service personnel were involved in this group. Trails in the County were mapped, including trails on the Timpanogos WMA. During this process, a trail system was approved in 2020 that would reduce the amount of trails on the WMA but keep the most popular routes and provide access in a manner that would reduce impacts to wildlife.

Although this trail system provides non-motorized access to much of the WMA, equestrian and pedestrian use during winter months is a concern due to the likelihood of increased wildlife disturbance and/or harassment and trail damage when conditions are muddy. A winter closure of the WMA to bicycling, horseback riding and other recreation may need to be instituted.

## **ROAD DESIGNATION**

Roads are typically categorized as one of three types: Open year round, seasonally closed, or permanently closed. The only roads on the Timpanogos WMA are for administrative access only. The only exception is the 2.5 miles of the Alta Ditch road which is open to motorized vehicles during the deer hunting season (Sept - Nov).

## **ADMINISTRATIVE ACCESS ONLY**

These roads are not for public use but were created to access power lines, power poles and other types of infrastructure.

## **GENERAL ACCESS PROVISIONS**

All authorized roads and trails, including their designation, are shown on the WMA access maps at the end of this plan. Only roads and trails shown on WMA access map are considered authorized. The Division reserves the right to close all unauthorized trails. Authorized trails will be marked with signs to make them easy to distinguish. Trails on the WMA are for non-motorized use only. Ebikes and electric motorcycles are prohibited on the trails on the WMA.

## ENFORCEMENT OF ACCESS MANAGEMENT PLAN

Enforcement of the access management plan will be carried out by Division personnel. However, due to the high amount of public use on the WMAs, the Division will work closely with other local law enforcement agencies to keep motorized vehicle travel on authorized travel routes.

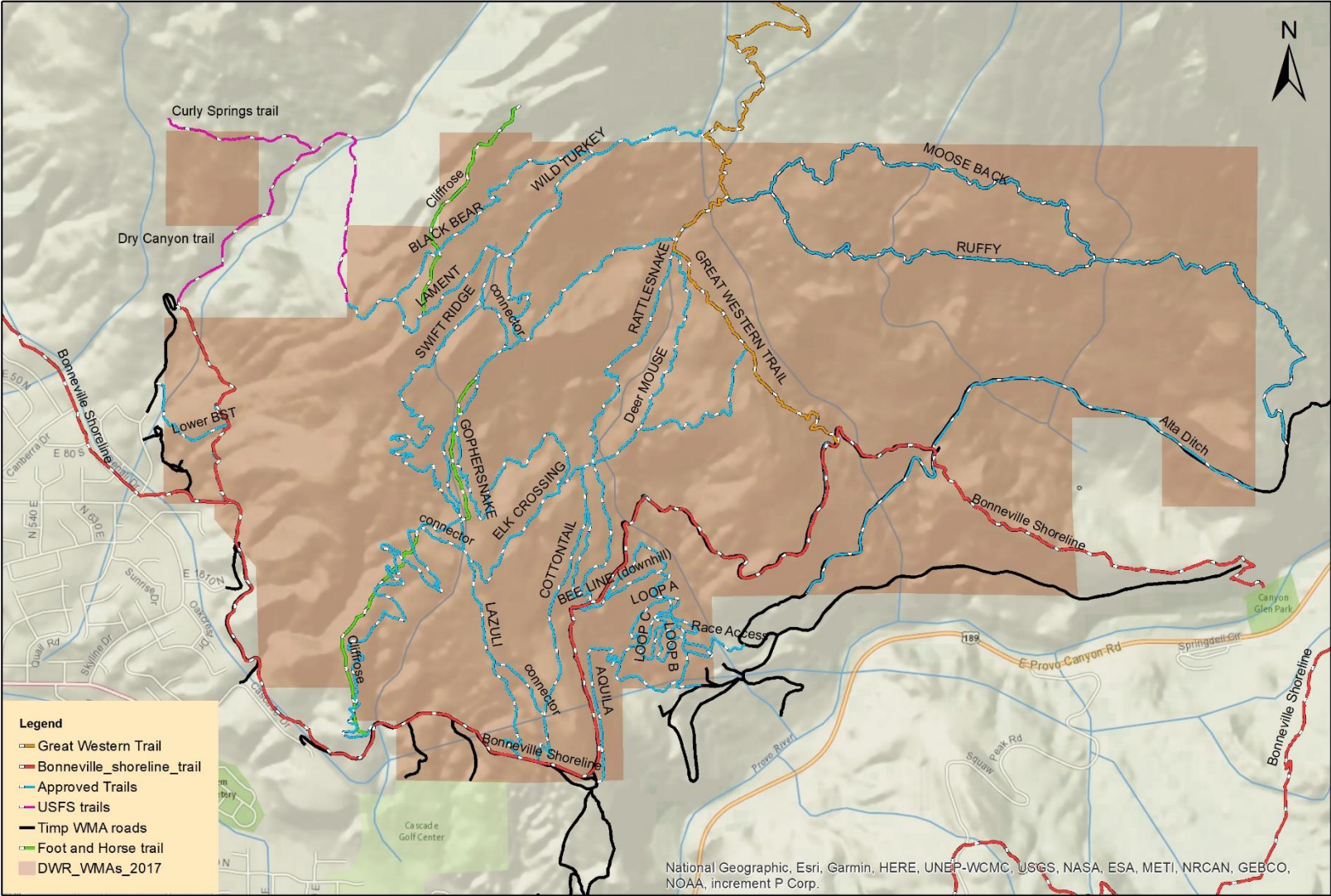
## INFORMING THE PUBLIC


Division personnel will inform the public of the access plan by adequately placing signs at access points, roads and trails, parking areas, and fence lines. In addition, media coverage may be used to disseminate information regarding the access plan and how it relates to the overall goals and objectives of the WMA contained in this plan. Seasonal closures or other issues relating to access will also be included in hunting proclamations that are published annually by the Division.

The Division will work with local municipalities, the county, and other state and federal agencies to coordinate access and travel plans that are consistent with other planning efforts.



# Map B1 - Timpanogos WMA Access Map



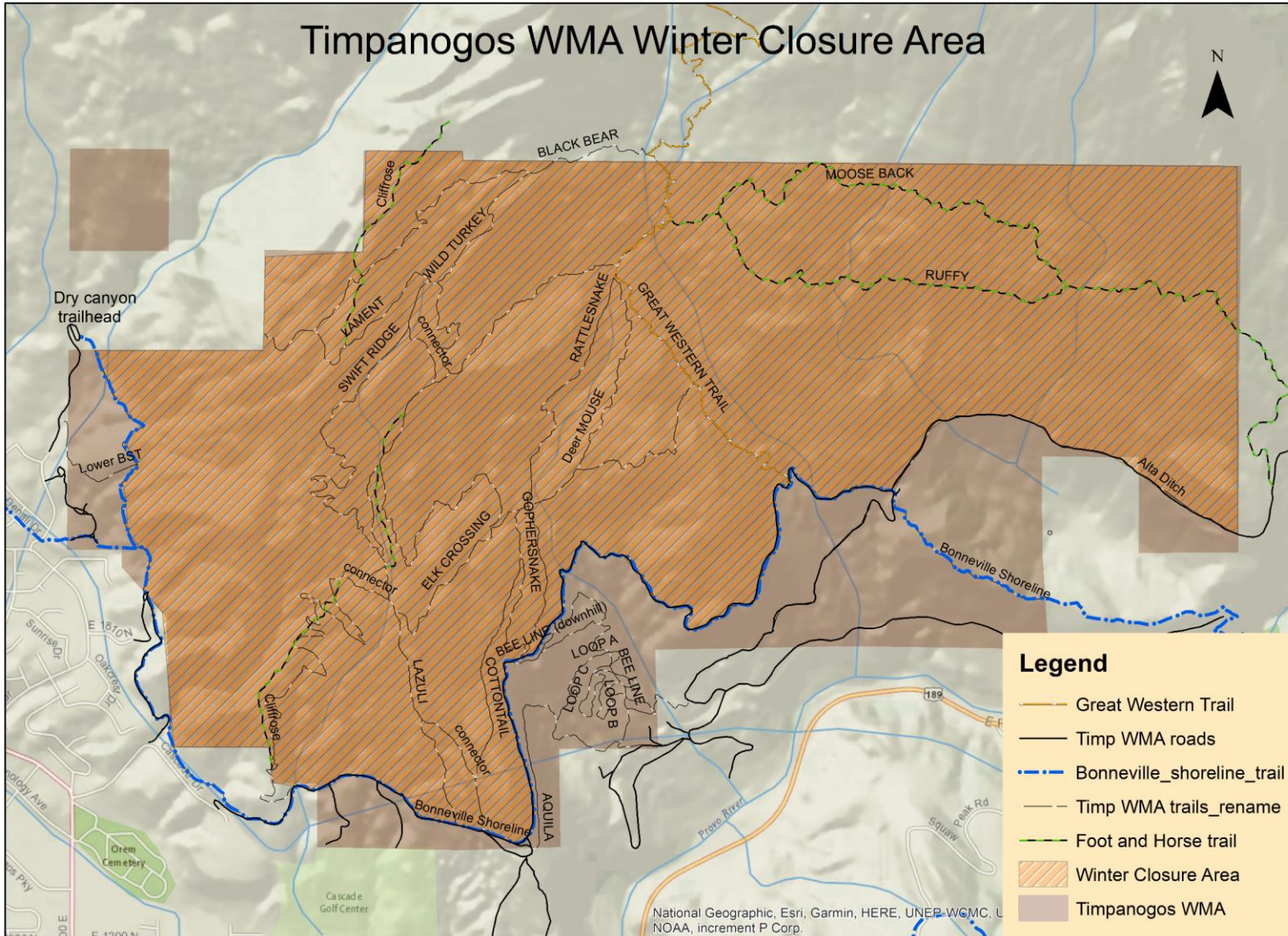

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National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



Map B-2 Timpanogos WMA Winter Closure Area



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## Appendix C – Wildlife Habitat Analysis Report

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Utah Division of Wildlife Resources  
 1594 W. North Temple  
 Salt Lake City, UT 84116  
 (801) 538-4700, [wildlife.utah.gov](http://wildlife.utah.gov)



Report Number: mar\_16250

Report Date: 2024-11-20 07:36:29

# Timpanogos WMA species list

**Location:** Timpanogos WMA

**Description:** Timpanogos HMP















Project Area of Interest with a half-mile and two-mile radius.

## Half-Mile Radius






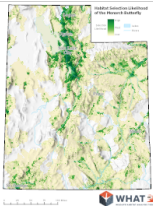

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Bear Lake Springsnail</a>	<i>Pyrgulopsis pilsbryana</i>	SGCN	None	1993-08-02	
<a href="#">Large Marble Butterfly</a>	<i>Euchloe ausonides</i>	None	None	2018-04-27	

























Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Brown Hive</a>	<i>Euconulus fulvus</i>	None	None	2019-05-05	
<a href="#">West Coast Lady Butterfly</a>	<i>Vanessa annabella</i>	None	None	2019-05-02	
<a href="#">Green River Pebblesnail</a>	<i>Fluminicola coloradoensis</i>	SGCN	None	2020-04-06	
<a href="#">Toquerville Springsnail</a>	<i>Pyrgulopsis kolobensis</i>	None	None	2020-04-11	
<a href="#">Rocky Mountainsnail</a>	<i>Oreohelix strigosa</i>	None	None	2020-04-05	
<a href="#">Western Glass-snail</a>	<i>Vitrina pellucida</i>	None	None	1942-PRE	
<a href="#">New Zealand Mudsnaill</a>	<i>Potamopyrgus antipodarum</i>	None	None	2020-03-21	
	<i>Bombus griseocollis</i>	None	None	2018-07-31	
<a href="#">Wasatch Jamesia</a>	<i>Jamesia americana var. macrocalyx</i>	None	None	1995-09-22 00:00:00	
<a href="#">Columbia Spotted Frog</a>	<i>Rana luteiventris</i>	SGCN	None	1926-05-02	
<a href="#">Golden Eagle</a>	<i>Aquila chrysaetos</i>	SGCN	None	1996-07-17	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Rubber Boa</a>	<i>Charina bottae</i>	None	None	2011-06-28	




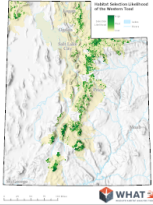



## Two-Mile Radius

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Western Pearlshell</a>	<i>Margaritifera falcata</i>	SGCN	None	1993-08-02	
<a href="#">Western bumble bee</a>	<i>Bombus occidentalis</i>	None	None	2013-07-25	
<a href="#">Large Marble Butterfly</a>	<i>Euchloe ausonides</i>	None	None	2023-05-28	
<a href="#">Utah Wood-Nymph</a>	<i>Cercyonis pegala utahensis</i>	None	None	1988-07-22	
<a href="#">Bear Lake Springsnail</a>	<i>Pyrgulopsis pilsbryana</i>	SGCN	None	1993-08-02	
<a href="#">Monarch butterfly</a>	<i>Danaus plexippus</i>	None	None	2022-10-14	 <a href="#">Full View</a>
<a href="#">Brown Hive</a>	<i>Euconulus fulvus</i>	None	None	2019-05-05	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Carved Glyph</a>	<i>Glyphyalinia indentata</i>	None	None	1942-PRE	
<a href="#">Green River Pebblesnail</a>	<i>Fluminicola coloradoensis</i>	SGCN	None	2022-02-18	
<a href="#">West Coast Lady Butterfly</a>	<i>Vanessa annabella</i>	None	None	2019-05-02	
<a href="#">Morrison's Bumble Bee</a>	<i>Bombus morrisoni</i>	None	None	2017-08-24	
<a href="#">Ash Gyro</a>	<i>Gyraulus parvus</i>	None	None	2022-06-01	
<a href="#">Quick Gloss</a>	<i>Zonitoides arboreus</i>	None	None	1939-05-27	
<a href="#">Toquerville Springsnail</a>	<i>Pyrgulopsis kolobensis</i>	None	None	2020-04-11	
<a href="#">Ubiquitous Peaclam</a>	<i>Pisidium casertanum</i>	None	None	1993-08-02	
<a href="#">Spruce Snail</a>	<i>Microphysula ingersollii</i>	None	None	1939-05-27	
<a href="#">Rocky Mountainsnail</a>	<i>Oreohelix strigosa</i>	None	None	2020-04-05	
<a href="#">Forest Disc</a>	<i>Discus whitneyi</i>	None	None	1939-05-27	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Western Glass-snail</a>	<i>Vitrina pellucida</i>	None	None	2020-03-21	
<a href="#">Tadpole Physa</a>	<i>Physa gyrina</i>	None	None	1993-08-02	
<a href="#">New Zealand Mudsail</a>	<i>Potamopyrgus antipodarum</i>	None	None	2020-03-21	
<a href="#">Marsh Pondsail</a>	<i>Stagnicola elodes</i>	None	None	1993-08-02	
<a href="#">Brown Gardensail</a>	<i>Cornu aspersum</i>	None	None	2018-08-16	
	<i>Bombus fervidus</i>	None	None	2023-07-29	
<a href="#">Wasatch Draba</a>	<i>Draba brachystylis</i>	None	None	2010-06-27 15:03:42	
<a href="#">Wheeler's Angelica</a>	<i>Angelica wheeleri</i>	None	None	1928-08-09 00:00:00	
<a href="#">Wasatch Jamesia</a>	<i>Jamesia americana var. macrocalyx</i>	None	None	1995-09-22 00:00:00	
<a href="#">Garrett Bladderpod</a>	<i>Physaria garrettii</i>	PSGCN	None	1995-09-18 00:00:00	
<a href="#">King's Aster</a>	<i>Herrickia kingii var. kingii</i>	PSGCN	None	1995-09-22 00:00:00	



Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
<a href="#">Welsh's American-aster</a>	<i>Symphyotrichum welshii</i>	PSGCN	None	1995-09-22 00:00:00	
<a href="#">Columbia Spotted Frog</a>	<i>Rana luteiventris</i>	SGCN	None	1926-05-02	
<a href="#">Townsend's Big-eared Bat</a>	<i>Corynorhinus townsendii</i>	SGCN	None	1968-08-23	
<a href="#">Western Toad</a>	<i>Anaxyrus boreas</i>	SGCN	None	1961-05-20	 <a href="#">Full View</a>
<a href="#">Peregrine Falcon</a>	<i>Falco peregrinus</i>	SGCN	None	2005-08-15	
<a href="#">Golden Eagle</a>	<i>Aquila chrysaetos</i>	SGCN	None	1996-07-17	
<a href="#">Rubber Boa</a>	<i>Charina bottae</i>	None	None	2011-06-28	

## Definitions

State Status	
SGCN	Species of greatest conservation need listed in the <a href="#">Utah Wildlife Action Plan (UWAP)</a> and also included in the <a href="#">Utah Field Guide</a>
U.S. Endangered Species Act	
LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction

LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

## Species Distribution and Habitat Suitability Models

Species distribution and habitat suitability models (SDHMs) can inform wildlife management decisions such as habitat protection, enhancement, and restoration. They may also help assess environmental impacts by identifying species' habitats. When reevaluating SDHMs with new information, they can help identify or track changes or trends in habitat quality. SDHMs assess habitats' spatial arrangement and connectivity, identify crucial habitats, or describe the environmental conditions a species selects. SDHMs provide an understanding of the impacts of invasive species spread and identify suitable areas for species translocations/re-introductions.

SDHMs show a predicted suitable habitat for a species based on various biotic and abiotic environmental factors. These models may be useful for statewide evaluation but should not be considered verified species presence or absence. Field survey information should be utilized to verify the presence or absence of taxa when making species-specific decisions. Models produced by the Utah Division of Wildlife Resources (DWR) were conducted using a blend of Generalized Linear Models, Generalized Additive Models, Random Forest Models, Boosted Regression Tree Models, and Maximum Entropy Models.

## Mitigation Strategies

Typical recommendations to consider and help guide project activities to avoid, minimize or mitigate impacts on wildlife and their habitats from project disturbances are displayed below for some wildlife species found within/near your project area.

Common Name	Strategy
Western Toad	Boreal toad is a species of conservation importance in Utah's Wildlife Action Plan. Work with local management agency for ways to minimize impacts.
Golden Eagle	Avoid disturbance within 0.5 miles from nest Feb. 1 - Aug. 15
Elk	Avoid disturbance in crucial winter habitats Dec. 1 - Apr. 15. Avoid, minimize or mitigate impacts from large-scale development that occur within crucial elk habitats. Voluntary mitigation is recommended at a 4:1 ratio, meaning 4 acres of improved or conserved habitat for every 1 acre of disturbance.
moose	Avoid disturbance in crucial summer range May 15 - July 5. Consider voluntary mitigation if avoidance is not possible or there is permanent habitat loss.
mountain goat	Avoid disturbance in crucial winter habitats Dec. 1 - Apr. 15. Consider voluntary mitigation if avoidance is not possible or there is permanent habitat loss.

Common Name	Strategy
mule deer	Avoid, minimize or mitigate impacts from large-scale development that occur within crucial elk habitats. Voluntary mitigation is recommended at a 4:1 ratio, meaning 4 acres of improved or conserved habitat for every 1 acre of disturbance.
mule deer	Avoid disturbance in crucial winter habitats Dec. 1 - Apr. 15. Avoid, minimize or mitigate impacts from large-scale development that occur within crucial elk habitats. Voluntary mitigation is recommended at a 4:1 ratio, meaning 4 acres of improved or conserved habitat for every 1 acre of disturbance.

The DWR understands that mitigation strategies might conflict. Please reach out to DWR staff to develop strategies to minimize impacts on wildlife while still achieving project goals. Your project is located in the following UDWR region(s):

DWR Region Full Name	Regional Phone	Impact Analysis Biologist	Email	Phone
Central Region	801-491-5678	Josee Seamons	jseamons@utah.gov	385-421-1277

This project area contains multiple valuable wildlife habitats, where standard recommendations may conflict or be overburdensome. We strongly recommend reaching out to our team of experts for tailored/project-specific suggestions and solutions and DWR staff may contact you.

## Wildlife Action Plan

The [Utah Wildlife Action Plan](#) (UWAP) is Utah's guiding document for native species conservation. The DWR encourages parties to use the UWAP in their environmental planning, as it provides a conservation framework to prevent future listings under the ESA.

## Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The Utah DWR provides no warranty nor accepts any liability occurring from any incorrect, incomplete, or misleading data or from any incorrect, incomplete, or misleading use of these data.

The results include a query of species tracked by the Utah Natural Heritage Program and Utah Division of Wildlife Resources, which includes all species listed under the U.S. Endangered Species Act, species in the Utah Wildlife Action Plan, and other species. Other significant wildlife values might also be present on the designated site.

For additional information about species listed under the Endangered Species Act and their Critical Habitats that may be affected by activities in this area or for information about Section 7 consultation under the Endangered Species Act, please visit <https://ecos.fws.gov/ipac/> or contact the U.S. Fish and Wildlife Service Utah Ecological Services Field Office at (801) 975-3330 or [utahfieldoffice\\_esa@fws.gov](mailto:utahfieldoffice_esa@fws.gov).

# Supplemental Data

## Unmapped Corridors

Unmodeled Corridors:

Present

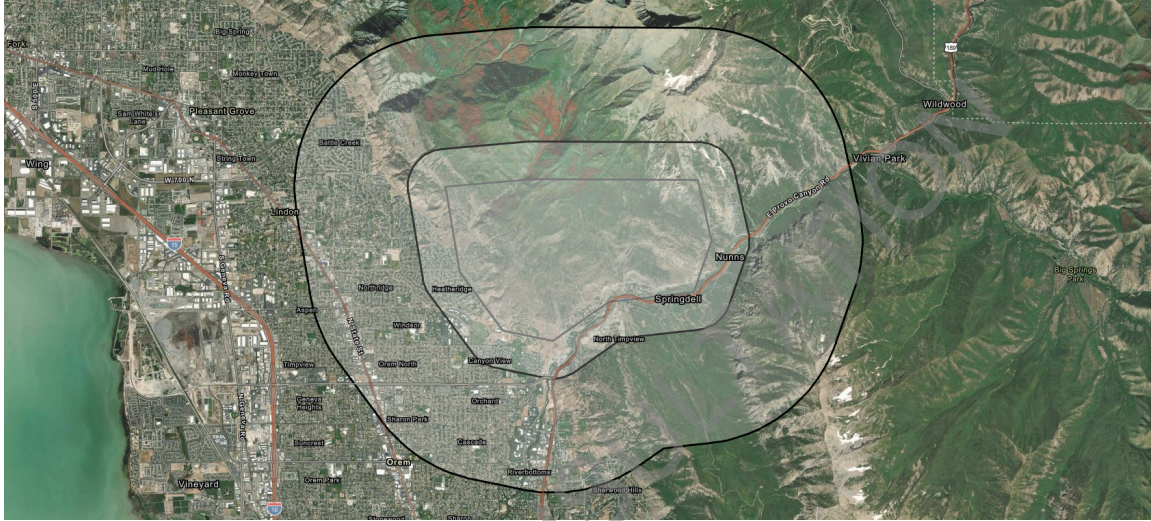
## Wildlife Habitat Information

Species	Season	Value	Comments
Band-Tailed Pigeon	spring-fall	crucial	
Band-Tailed Pigeon	spring-fall	substantial	
Black Bear	year-long	crucial	
California Quail	year-long	crucial	
Chukar	year-long	substantial	
Dusky Grouse	year-long	crucial	
Elk	spring/fall	substantial	
Elk	winter	crucial	
Moose	summer	crucial	Calving habitat.
Moose	winter	substantial	
Mountain Goat	winter/spring	crucial	
Mountain Goat	year-long	substantial	
Mule Deer	spring/fall	crucial	
Mule Deer	winter	crucial	
Mule Deer	winter/spring	crucial	
Ring-Necked Pheasant	year-long	substantial	
Wasatch - Provo	summer/fall	RMBS	Detected
Wasatch - Timpanogos	summer/fall	RMBS	Detected
Ruffed Grouse	year-long	substantial	



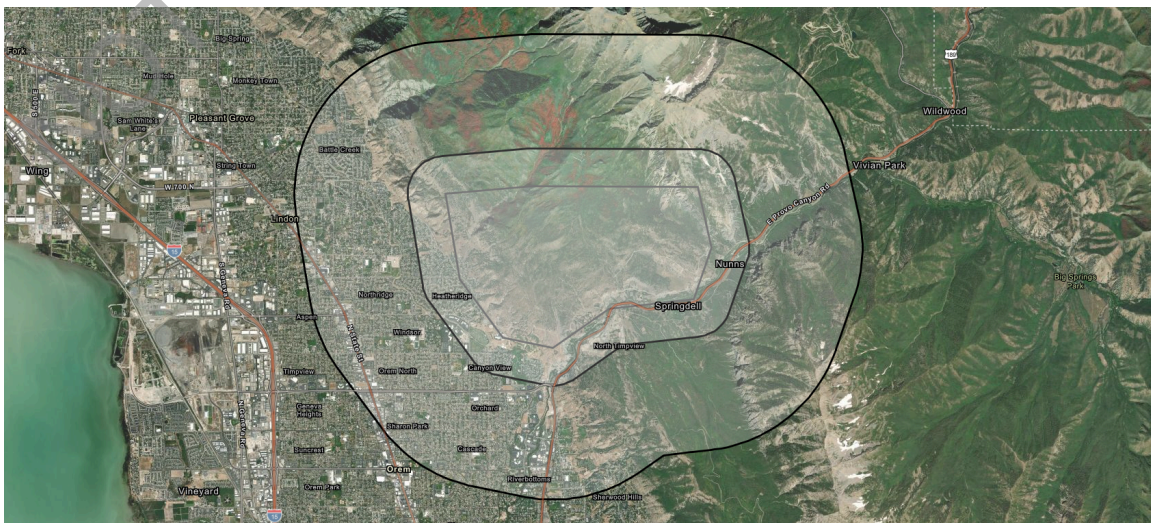
Species	Season	Value	Comments
Turkey	year-long	NA	

## Fish and Wildlife Service



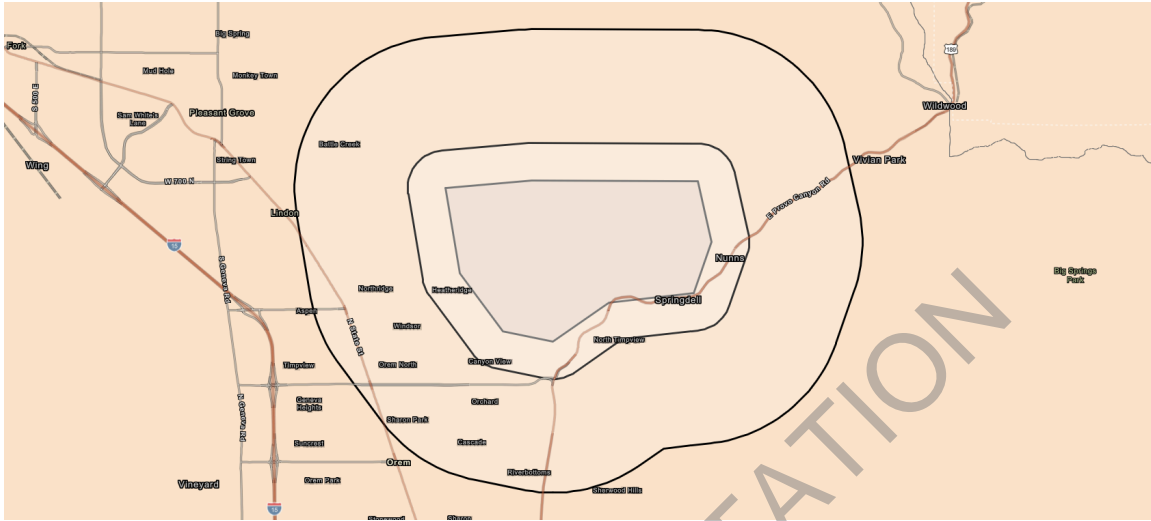
Region	Region Name
6	Mountain Prairie Region

## Waterfowl Flyways



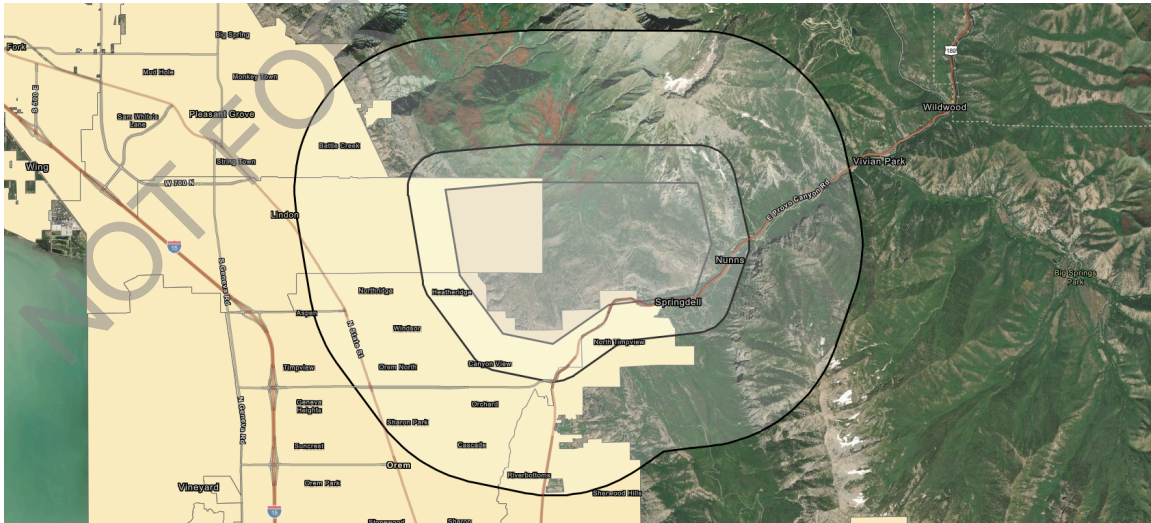
Name
Pacific Flyway

# Counties



Name
UTAH

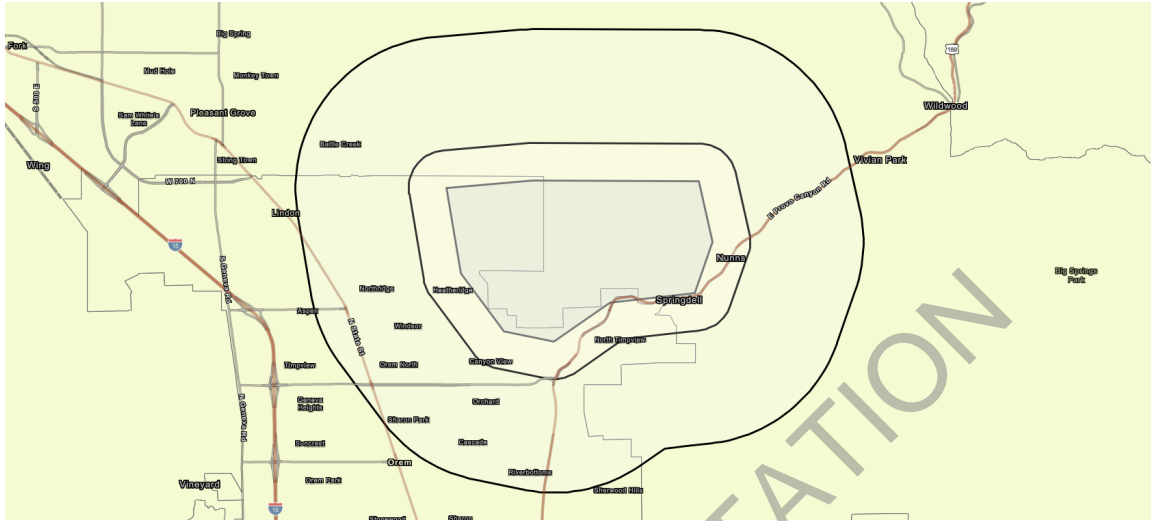
# Municipalities



Name
Orem
Lindon
Provo

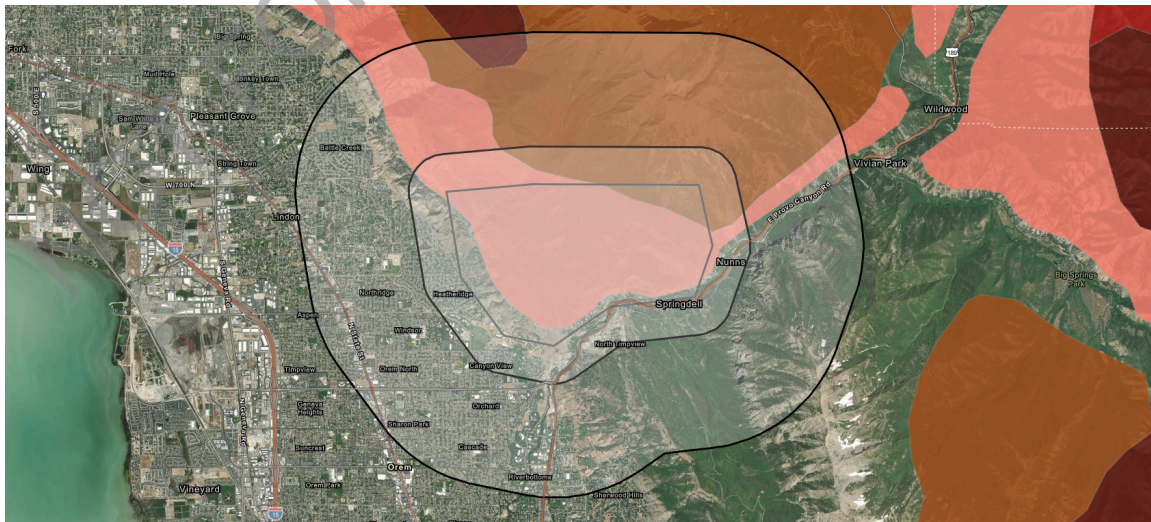


## Dispatch Boundaries



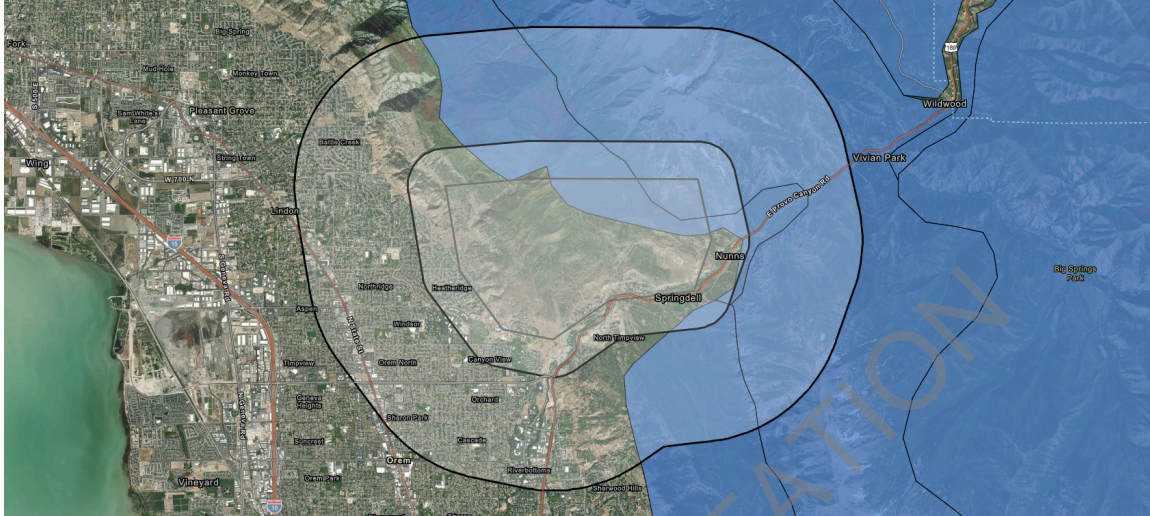
<b>Name</b>
Central Utah 911
Metro Emergency Communications

## Elk Habitat



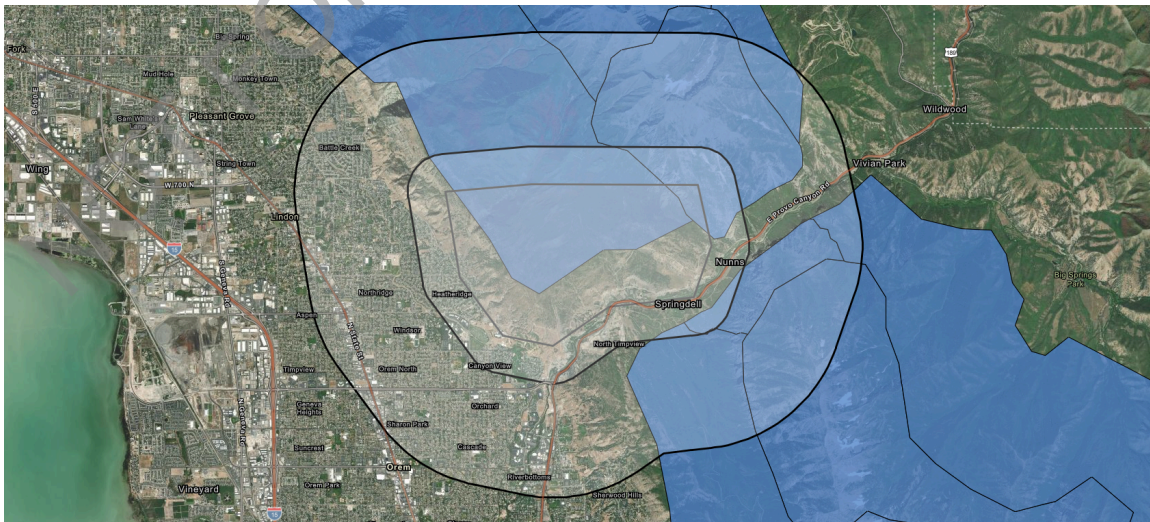
Season	Species	Value	Comments
spring/fall	Elk	substantial	
winter	Elk	crucial	

## Moose Habitat



Species	Season	Comments	Value
Moose	summer	Calving habitat.	crucial
Moose	winter		substantial

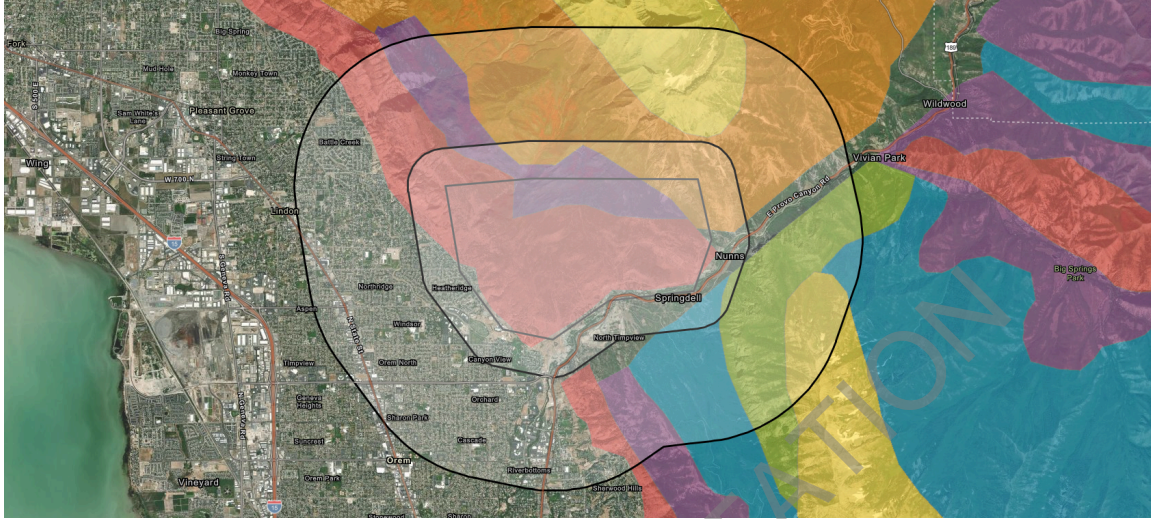
## Mountain Goat Habitat



Season	Comments	Species	Value
year-long		Mountain Goat	substantial
winter/spring		Mountain Goat	crucial

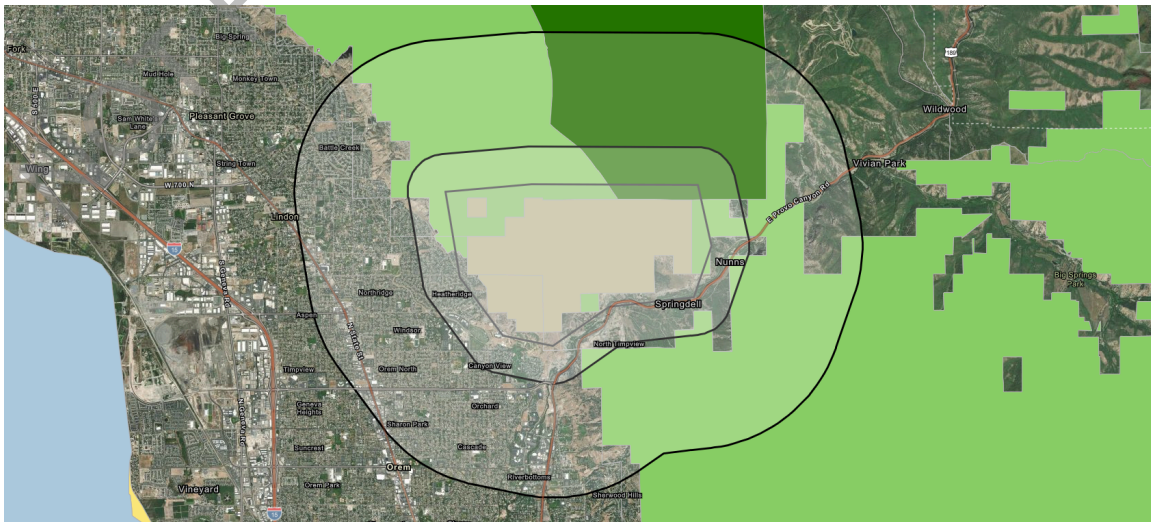


# Mule Deer Habitat



Comments	Season	Species	Value
	winter/spring	Mule Deer	crucial
	winter	Mule Deer	crucial
	spring/fall	Mule Deer	crucial

# Land Ownership

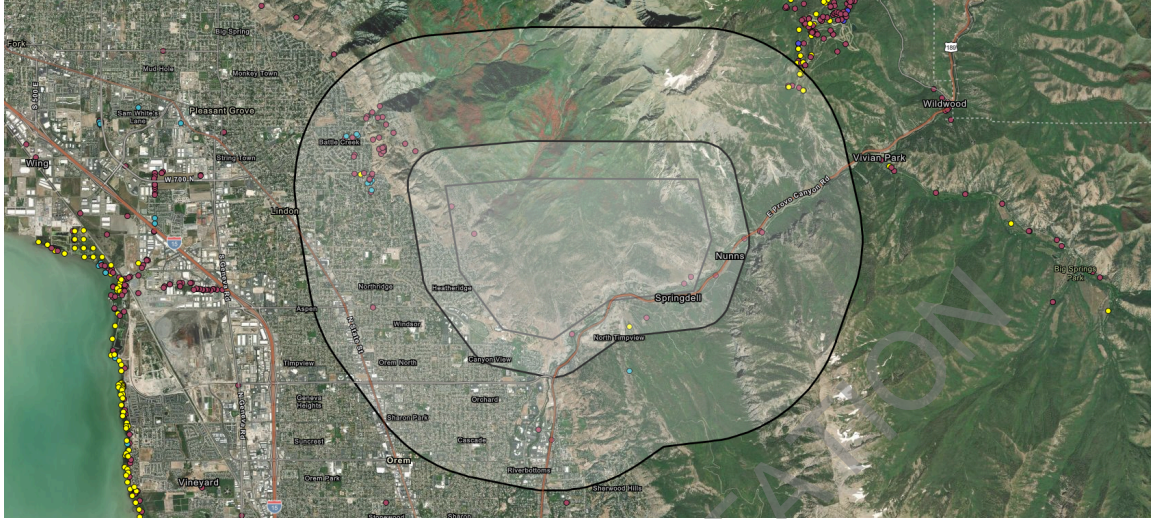


Tribe	Owner	Owner Agency	Designation	State Of Utah Legend
None	Federal	USFS	National Forest	National Forest





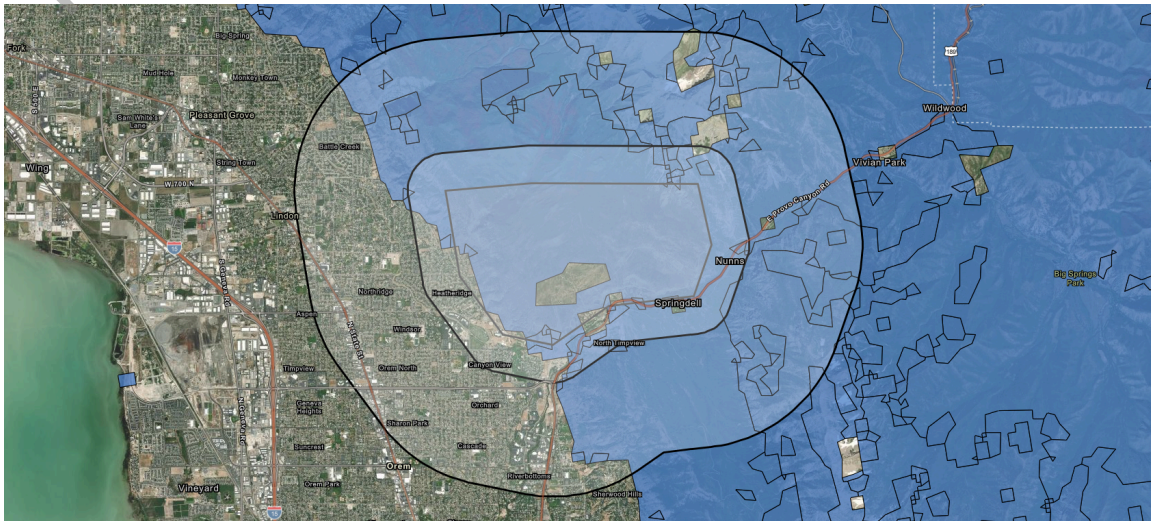
# UDAF Utah Weed Points



**Description:** Data Source: Utah Department of Agriculture (UDAF)

Infested Acres	Scientific Name	Common Name	Weed Rank	Status
None	<i>Cynoglossum officinale</i>	houndstongue	3	1
None	<i>Linaria dalmatica</i>	Dalmatian toadflax	2	1
None	<i>Convolvulus arvensis</i>	field bindweed	3	1
None	<i>Linaria dalmatica</i>	Dalmatian toadflax	2	1

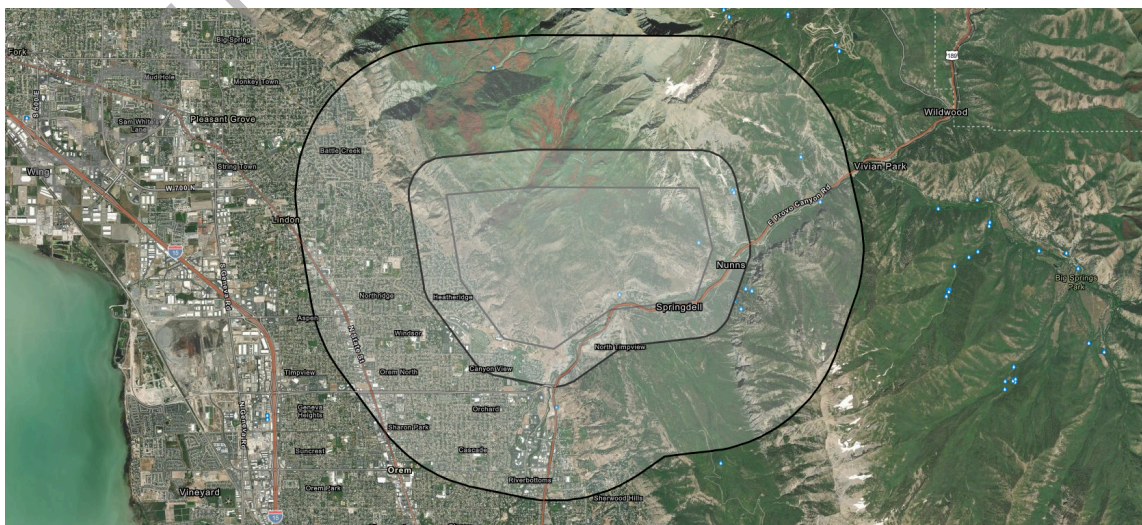
## Terrestrial Key Habitat



**Description:** These polygons representing 13 terrestrial key habitats have been generalized for web mapping applications, and often under-represent the presence of key habitats, particularly small areas of discontinuous habitat.

Habitat Name
Mountain Shrub
Lowland Sagebrush
Montane and Subalpine Conifer
Riparian
Riparian
Mountain Shrub
Riparian
Riparian
Lower Montane Mixed Conifer
Desert Shrub
Desert Shrub

## Springs



Site Description	Site Name	Site Classification	Ssi Global Id
Imported in 2013 from NHD Database	82735689 NHD_ID	None	ecc62456-f125-42e1-8255-f5e6e2799245

Site Description	Site Name	Site Classification	Ssi Global Id
Imported in 2013 from NHD Database	82735931 NHD_ID	None	ae7eb606-d1d8-448b-aa32-7e4eb8a3b383

## Report Generated For

**Name:** Mark Farmer

**Organization:** DWR

**Email:** markfarmer@utah.gov

**Phone:** (801)-361-3744

### **End of Report**

*Thank you for using the Utah Wildlife Habitat Analysis tool. Feel free to reach out to the department for additional information or assistance.*

NOT FOR CONSULTATION