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## IRISH ACRES SUBDIVISION SEC 10 T5N R45E TETON COUNTY, IDAHO

### WILDLIFE HABITAT ASSESSMENT

7/6/2023

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# CHAPTER 1 – PROPOSED ACTION/SUMMARY

## PURPOSE

The purpose of this report is to identify and analyze wildlife and habitats within the area of the proposed Irish Acres Subdivision in Teton County, Idaho. It was completed in compliance with Teton County Code 9-3-2 (C-2-c-WH). This assessment is required because the proposed Irish Acres Subdivision is located within the Priority Wetland Habitat Natural Resource Overlays identified by Teton County. In this report, wildlife and habitats within the project area are described, potential impacts to wildlife and habitats within the project are identified, and suggested mitigation actions are provided to minimize or eliminate the impacts that may occur.

## PROPOSED ACTION

The proposed Irish Acres Subdivision includes six – five acre lots and four – two and one-half acre lots, totaling ten lots overall. Each lot has a proposed building envelope 1 - 1.5 acres in size. There are two primary access points to the subdivision, one entrance from the north (W 4000 N) and one entrance from the west (N 2000 W). Main roads have a proposed constructed width of twenty-two feet and driveways have proposed constructed width of twelve feet. A fire pond (Figure 9) will be constructed in the southeastern most proposed lot with an estimated maximum disturbance of 0.4 acres. During construction, temporarily, main roads will be disturbed by fill material, ditches, and culverts to a width of sixty feet and driveways to a width of sixteen feet. The total proposed disturbance is 15.17 acres (38% of the parcel).

## FINDINGS

Based upon primary and secondary research, including a site visit to the Irish Acres Parcel, the project area includes habitat that migratory birds and raptors seasonally use. Songbird species likely use the upland and wetland areas of the parcel for foraging and nesting. Rodents likely use these areas of the parcel as well and lure the raptors who prey upon them. Two small areas of open water appear to be typically available on the parcel. These areas are not suitable to support fisheries; however, they likely support occasional waterfowl that pass through.

## CONCLUSION

This wildlife assessment concludes that the proposed Irish Acres Subdivision may negatively impact indicator species within the project area due to loss and fragmentation of habitat and human presence. This parcel provides wildlife habitat in the form of forage, cover, open space, and connectivity to other important habitats in the surrounding landscape. Construction of dwellings and increased human presence in this area will likely impact songbird and raptor species, and the vegetation, insects, and small mammals they rely on for food. However, through thoughtful design of the subdivision to minimize impacts to wetlands, maximize open space, and maintain habitat connectivity, mitigation actions could be utilized to further minimize or eliminate impacts.

# CHAPTER 2 – CURRENT CONDITIONS/AFFECTED ENVIRONMENT

## CURRENT CONDITIONS/AFFECTED ENVIRONMENT – AREA DESCRIPTION

In the summer of 2021, a wildlife specialist for Y2 Consultants, LLC (Y2) conducted a routine Natural Resource Analysis and Wildlife Habitat Assessment (WHA) on the 40.14-acre parcel known as Irish Acres, in Teton County, Idaho, at the request of Patrick Trucco (the "Client/Agent/Owner").

The purpose of the assessment was to identify, describe, and evaluate natural resources that occur within or adjacent to the Irish Acres Parcel. This process was conducted, and the supporting documentation was prepared following current Teton County Planning and Zoning Ordinances.

### LOCATION AND PHYSIOGRAPHY

The WHA consists of a 40.14-acre assessment area spanning one parcel, identified as the Irish Acres Parcel.

The assessment area is located approximately 3 miles south of the town of Teton in Teton County, Idaho (Figure 1). The property can be accessed from Teton by traveling south on Highway 33 then south on N 2000 W or from Driggs by traveling north on Highway 33 then west on W 4000 N. The parcel is bound on the north by W 4000 N and on the west by N 2000 W.

The Irish Acres Parcel is predominantly pastureland, and the average elevation across the parcel is 6,093 feet (6,085 – 6,101 feet).

### FLOODPLAINS, WETLANDS, AND RIPARIAN AREAS

#### *FLOODPLAINS*

The Teton County Floodplain Overlay indicates that the parcel is entirely outside the existing 100-year FEMA delineated floodplain and entirely outside the revised delineated floodplain.

#### *WETLANDS*

The Teton County Natural Resource Overlay indicates that approximately 10.47 acres (26%) of the Irish Acres Parcel are priority wetland areas (Figure 3). During the site visit, other areas exhibiting wetland characteristics, but not included in the priority wetland overlay, were identified in the central and northeast portions of the parcel. These areas exhibited soil characteristics consistent with relatively frequent inundation. Further, these areas exhibited vegetation communities that contained Obligate and Facultative Wetland vegetation species. These characteristics were consistent between the areas currently in the wetland overlay and the additional areas outside the overlay.

#### *RIPARIAN AREAS*

Riparian areas/ecosystems are found along water bodies such as streams, rivers, floodplains, lakes, and wetlands. They are integral to maintaining bank stability providing floodplain stability and protection, and they filter sediment and nutrients and provide habitat for fish and wildlife.

The Irish Acres Parcel is located approximately one and one-quarter mile south of South Leigh Creek. Two drainage areas cross the parcel and generally flow east to west. No flowing water was observed on the parcel, but standing water was observed at the bottom of the drainage area, near the western boundary. Evidence suggesting frequent inundation, such as obligate/facultative wetland vegetation species, was observed in the drainage areas.

## **GEOLOGY AND SEISMIC HAZARDS**

Teton County is within the Wyoming Overthrust Belt System located in eastern Idaho and western Wyoming. Only the main basin that runs the center length of the County is relatively level, with the surrounding mountainous landscape brought about by historic uplifts, faults, fault blocks, alluvial deposits, and stream cutting action that has created steep, narrow canyons. Approximately 50% of Teton County has slopes steeper than 40%. The Teton County All Hazard Mitigation Plan completed in 2016 identifies the Tetonia and Driggs areas as Moderately High earthquake risk. Exhibits within the report classify the Tetonia to Driggs area as Intermediate to High Liquefaction Susceptibility and in the National Earthquake Hazards Reduction Program (NEHRP) class C1. Moreover, numerous historical earthquakes have been recorded in the Teton Range east of Driggs ranging from Magnitude 1.9 – 2.4, and between Driggs and Tetonia ranging from Magnitude 1.5 – 4.0. According to USGS the nearest quaternary fault line is located on the east side of the Teton Range and poses no risk to the parcel. The USGS National Seismic Risk values are described in the attached Seismic Hazards reports. (American Society of Civil Engineers & Building Seismic Safety Council, n.d.; *Teton County, Idaho - Multi-Jurisdictional All Hazard Mitigation Plan*, 2016; USGS et al., n.d.)

## **WILDFIRE DANGER**

Teton County, Idaho, completed a risk assessment for pertinent risks, including wildfire, and presented their findings in their 2016 Community Wildfire Protection Plan (CWPP). The CWPP defines Wildland-Urban Interfaces (WUI), including private property and public lands. This plan estimates risk levels to the WUI and management suggestions to improve or mitigate risk levels. The overall hazard risk for Driggs was determined to be moderately low in the All Hazard Mitigation Plan. However, upon further review, the CWPP classifies the area between Tetonia to Driggs to have the high classification of fire intensity (500 - 1,000 Btu/ft/s) and high classification of flame length (8 - 10.9 ft), most likely due to the vegetation cover dominated by varying densities of grass and brush. A fire pond for primary and supplemental water for fire protection and prevention has been designed and will be incorporated into the proposed subdivision infrastructure per Teton County, Idaho regulations. (*Teton County, Idaho - Multi-Jurisdictional All Hazard Mitigation Plan*, 2016)

## **VEGETATION**

Teton County, Idaho is a high elevation basin. The lower elevation valley bottoms are comprised mainly of wetlands, sloughs, and riparian areas; grazed and cultivated farmland; and residential development. The National Wetlands Inventory has classified 26,760 acres (~9%) of Teton County, Idaho, as wetlands (Teton Regional Land Trust, 2006). Riparian areas connect throughout and are comprised of trees, shrubs, forbs, and grasses that prefer greater access to water in varying degrees. Mid-elevations above the valley generally consist of sagebrush or tall shrub communities, depending on the northern or southern exposure. Sagebrush communities are found on southern exposures and are typically drier. They are characterized by moderately dense sagebrush overstory with perennial forb or perennial grass understories. Tall shrub communities are also found at mid to upper elevations and have more available moisture due to northern exposure or greater elevation. Common species include quaking aspen (*Populus tremuloides*), serviceberry (*Amelanchier alnifolia*), mountain snowberry (*Symphoricarpos oreophilus*), mountain mahogany (*Cercocarpus montanus*), etc. Also, in the mid to upper elevations above the valley bottoms, Engelmann spruce (*Picea engelmannii*), Douglas fir (*Pseudotsuga menziesii*), lodgepole pine (*Pinus contorta*), subalpine fir (*Abies lasiocarpa*), and quaking aspen dominate the overstory with forbs, grasses, and shrubs in the understory in varying densities depending upon seral maturity.

The vegetation communities observed on the Irish Acres Parcel are described in this document's Key Habitats section.

## RIDGES AND ROCK OUTCROPPINGS

Teton County, Idaho ranges in elevation from 9,016 feet (Garns Mountain Summit) to 5,080 feet (Teton River at Teton/Madison County line). The Irish Acres Parcel exhibits uniform elevation across the parcel with no ridges or rock outcroppings within the parcel.

## PERCENT SLOPE

The Irish Acres Parcel is relatively uniform. The Teton County slope percentage layer shows the entire parcel is under 10% slope. U.S. Geological Survey classifies the Irish Acres Parcel as 0.6% average slope, ranging from 0.0 – 1.1% slope (*The National Map | U.S. Geological Survey, n.d.*).

## SOILS

Table 1 shows the six soil types mapped by the soil survey on the Irish Acres Parcel (*Custom Soil Resource Report for Teton Area, Idaho and Wyoming: GIS21094\_220203\_Truccho\_PropertyBoundary, n.d.*). The Redfish-Foxcreek complex Map Unit is listed as hydric, thus indicating wetland likelihood. The history of production agriculture on the parcel before 1985 is not known. Farming implements may have been used to prepare the soil for production agriculture and subsequently modified the soil structure during tilling and planting. Soil map units 13430 and 13431 may be altered from the model. Figure 4 depicts the soil map units for the Irish Acres Parcel.

Table 1: Soils within the Irish Acres Parcel.

Map Unit Symbol	Map Unit Name	ESD	ESD Name	Acreage within Parcel	Percent of Parcel
13101	Redfish-Foxcreek complex, 0 to 2 percent slopes	R013XY050ID	RIPARIAN WET MEADOW SALIX/CAREX	29.9	74.5%
13431	Feltonia-Arimo complex, 0 to 2 percent slopes	R013XY001ID	LOAMY 12-16	9.0	22.5%
13430	Alpine-St. Anthony complex, 0 to 2 percent slopes	R013XY004ID	SHALLOW GRAVELLY 12-16 ARTRV/PSSPS	1.2	3.0%

## AREAS WITHIN 1-MILE OF STATE HIGHWAY OR SKI HILL ROAD

The Irish Acres Parcel is not within one mile of Idaho State Highway 33 ( Figure 1) and not within one mile of Ski Hill Road.

## CLIMATE

The 'growing season' for Driggs, Idaho (utilizing the most proximate WETs Station, ID16081) according to the United States Department of Agriculture (USDA) WETs table is between 81-92 days (based off years of record from 1971-2019) (NRCS, 2019). The average temperature annually is 40.6°F, and the average precipitation is 16.37 inches.

## LAND USE

The dominant use of the Irish Acres Parcel is production agriculture in the form of cattle grazing. Established roads bound the parcel across the northern and eastern borders. There are no structures currently on the parcel.

## OVERVIEW

In general, shown in Figure 6, approximately 39.24 acres (~98%) of the 40.14-acre parcel remain intact with elements of native vegetation communities. Riparian and wetland areas are present on the parcel. However, most of the wetlands appear influenced by supplemental irrigation entering the parcel from irrigation ditches for short periods of the growing season. The parcel has been undeveloped, and approximately 0.89 acres (~2%) have been disturbed as existing roads. The parcel is utilized by wildlife in wetland habitats, mostly migratory songbirds and waterfowl. No evidence of ungulates or other indicator species was observed. Overall, the areas within the parcel with wetland characteristics exhibit the most significant habitat value due to the amount of food and shelter they provide to wildlife. These areas likely offer nesting opportunities for various bird species, support insect populations that birds forage on, and provide food and cover for rodents that raptors pursue for food. Portions of the Irish Acres Parcel are located within the Teton County, Idaho Priority Wetland Habitat overlay, and the areas described above represent that overlay to a high degree.

## INDICATOR SPECIES AND HABITATS

Portions of the Irish Acres Parcel are located within the Priority Wetland Overlay (Figure 3). Teton County has identified five indicator species and habitats. The following table outlines these species and habitats as they occur within the project area. The table provides summary information about each indicator species. For species and habitats present on the subject property, a more detailed discussion is provided below the table.

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Table 2: Teton County, Idaho indicator species and habitats.

Indicator Species	Habitat	Does this occur within the project area?	Acres within the Project Area	Overall Description
Big Game Elk, Mule Deer, and Moose.	Mountain Shrublands	No	N/A	The parcel is not located within the Big Game Migration Corridors and Seasonal Habitat Overlay. Mountain shrubland vegetation communities are not present in the project area. No further analysis is necessary.
Trout	None Identified.	No	N/A	Stream habitat is not present in the project area. No further analysis is necessary.
Water Birds Sandhill Crane, Trumpeter Swan	Palustrine emergent wetlands	Yes	12.59 acres	10.47 acres (~26%) of the parcel is located within the Priority Wetland Overlay. Areas with palustrine emergent wetland soil and vegetation characteristics comprise approximately 31% of the project area.
Songbirds and Raptors	Forested riparian habitat and mountain shrublands	No	N/A	The parcel is not located within the Songbirds and Raptors overlay. The project area does not contain forested riparian habitat or mountain shrubland vegetation communities. No further analysis is necessary.
Columbian Sharp- tailed Grouse	Sagebrush- steppe and mountain shrublands	No	N/A	The parcel is not located within the Columbian Sharp-tailed Grouse overlay. Sagebrush-steppe and mountain shrubland vegetation communities are not present in the project area. No further analysis is necessary.

## KEY HABITATS IN THE PROJECT AREA

The summary table above identified key habitats for big game, trout, and songbirds and raptors within the project area. The following sections provide habitat descriptions for each of these habitats.

Table 3: Identified habitat/cover types on the Irish Acres Parcel.

Habitat Type	Acreage
Upland Pasture Habitat	26.61
Emergent Wetland Habitat	12.59
Roads/Trails	0.89

## UPLAND PASTURE HABITAT

This habitat comprises the majority of the parcel. Satellite imagery shows that cattle have regularly grazed it over the past 25 years. Harvest for grass hay was not apparent through a review of satellite imagery. Fencing surrounds the parcel, and cattle appear to be rotationally grazed depending upon the year. Smooth brome (*Bromus inermis*), western wheatgrass (*Pascopyrum smithii*), intermediate wheatgrass (*Thinopyrum intermedium*), Kentucky bluegrass (*Poa pratensis*), orchardgrass (*Dactylis glomerata*), crested wheatgrass (*Agropyron cristatum*), and other pasture grasses dominate these areas.

This habitat exhibited no big game use, nor any evidence of priority waterbirds. Although providing open space, a valuable habitat element, these areas lack adequate forage and thermal cover for big game. Idaho Fish and Game had no record of observations around the Irish Acres Parcel, and most big game use in the area is concentrated along South Leigh Creek, approximately 1.5 miles to the north. The Idaho Fish and Wildlife Observation System showed three wildlife observations within one-half mile of the parcel including rough-legged hawk, great gray owl, and horned lark. (Idaho Department of Fish and Game, n.d.; Josh Rydalch, personal communication, January 10, 2022)

## EMERGENT WETLAND HABITAT

This habitat is subdominant in the Irish Acres Parcel and primarily located in the lowest elevational areas along the western boundary and two drainage-type areas that cross the parcel from east to west. These areas exhibit wetland characteristics due to water's frequent inundation, leading to diagnostic hydric soil characteristics such as gleying and root nodules. These areas also have unique vegetation communities and are dominated by obligate or facultative wetland species such as rushes, sedges, grasses, forbs, and shrubs. On the Irish Acres Parcel, these communities are dominated by tufted hairgrass (*Deschampsia cespitosa*), foxtail (*Alopecurus* spp.), creeping bentgrass (*Agrostis stolonifera*), Kentucky bluegrass, Nebraska sedge (*Carex nebrascensis*), Baltic rush (*Juncus arcticus*), and other obligate and facultative wetland species. An aquatic resource inventory which included a wetland delineation was completed on the Irish Acres parcel.

This habitat exhibited no big game use and no evidence of priority waterbirds.

## WILDLIFE INVENTORY

Table 3 describes the habitats for big game, trout, and songbirds/raptors that are present within the project area. The previous section describes those habitats and details the various flora within each habitat. This section describes the presence of indicator species as determined through primary and secondary research efforts. Field surveys and research methodologies are described under each group of species.

## WATERBIRDS

Waterbirds include waterfowl (ducks, geese, and swans), shorebirds, marshbirds, and colonial nesting species such as gulls and terns. Priority waterbirds in Teton County, Idaho include trumpeter swan, waterfowl, greater sandhill crane, long-billed curlew, and colonial nesting species. The Idaho Fish and Wildlife Information System has no records of water birds, Trumpeter Swan, or Sandhill Crane observations within the parcel. The nearest waterbird observations are recorded approximately one-mile west and one and one-quarter miles east of the parcel. (Idaho Department of Fish and Game, n.d.)

## TRUMPETER SWAN

Trumpeter swans are designated as Species of Greatest Conservation Need by the Idaho Comprehensive Wildlife Strategy and designated species of conservation priority by the North American Waterbird Conservation Plan and the Intermountain West Waterbird Conservation Plan. In the winter, Teton County, Idaho provides important habitat for this species, but swans are seldom observed otherwise. During the winter, swans congregate in open water sections of the Teton River and other

spring-fed tributaries. Adjacent terrestrial habitats, including meadows and pastures, provide important roosting/loafing areas. (G.L. Ivey & C.P. Herziger, 2006; Idaho Department of Fish and Game, 2005; Teton Regional Land Trust, 2006)

No trumpeter swans were observed during the site visit to the Irish Acres Parcel. Any observations of swans on the parcel are likely coincidental. The parcel likely provides limited habitat significance to the species due to lack of open water and distance from known winter habitat.

### **GREATER SANDHILL CRANES**

Greater sandhill cranes are designated as Species of Greatest Conservation Need by the Idaho Comprehensive Wildlife Strategy and designated species of conservation priority by the North American Waterbird Conservation Plan and the Intermountain West Waterbird Conservation Plan. Teton County, Idaho is an important nesting area for sandhill cranes, especially seasonally or perennially flooded habitat. These birds initiate nesting in April-May, raise 1-2 young through the summer, and gather in staging areas in September before migrating to central New Mexico and Mexico. The Teton Basin is a notable staging area for sandhill cranes in the Rocky Mountains. (G.L. Ivey & C.P. Herziger, 2006; Idaho Department of Fish and Game, 2005; Teton Regional Land Trust, 2006)

No sandhill cranes were observed during the site visit to the Irish Acres Parcel. The parcel's wetland habitat likely provides habitat to cranes preying upon invertebrates and rodents. However, most of the parcel is upland pasture and lacks vegetation density to support large amounts of food sources.

### **LONG-BILLED CURLEW**

Long-billed curlew are designated as Species of Greatest Conservation Need by the Idaho Comprehensive Wildlife Strategy and Globally Imperiled in the U.S. National Shorebird Plan. The species is one of Teton County, Idaho's rarest vertebrate species. Curlews initiate nesting in early May, and eggs hatch in early June. They prefer large expanses of grassland habitat where grasses are short during nesting and move to dense cover for brood rearing. Diversely grazed habitat and proximity to water are essential habitat characteristics for long-billed curlews. (G.L. Ivey & C.P. Herziger, 2006; Idaho Department of Fish and Game, 2005; Teton Regional Land Trust, 2006)

No long-billed curlews were observed during the site visit to the Irish Acres Parcel. This parcel is predictably important for the species, especially due to the diversity of grass heights observed between the Upland Pasture Habitat and Emergent Wetland Habitat. This desirable habitat characteristic is primarily due to the cattle grazing on the parcel for at least the past two decades.

### **FENCING**

A four-strand fence surrounds most of the parcel. The fence appeared to be maintained, and there were no areas of concern for wildlife entanglement.

### **NOXIOUS SPECIES**

The Irish Acres Parcel did not exhibit a diversity of noxious and weed species, and occurrences were mostly observed in the Upland Pasture Habitat and along the roads. Musk thistle (*Carduus nutans*) was the primary noxious species observed on the parcel. It varied in density across the parcel but increased notably in the northeast portion of the parcel.

### **SPECIAL STATUS SPECIES**

No known or suspected plant or animal species were identified on the Irish Acres Parcel that are listed, or currently proposed for listing, by the federal Endangered Species Act (ESA). Other species may be listed relevant to Teton County,

Idaho, but not listed below, such as the Canada lynx (*Lynx canadensis*). These species are protected wherever they occur, however, only species identified by the U.S. Fish and Wildlife Service Environmental Consultation Online Service (ECOS) for the Irish Acres Parcel are listed in Table 4.

Table 4: Special Status Species identified by the U.S. Fish and Wildlife Service Environmental Consultation Online Service (ECOS) for the Irish Acres Parcel.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Mammals	Grizzly bear ( <i>Ursus arctos horribilis</i> )	U.S.A., conterminous (lower 48) States, except where listed as an experimental population	Threatened	Montana Ecological Services Field Office	Revised Grizzly Bear Recovery Plan	Implementation Progress	Final Revision 1
Insect	Monarch Butterfly ( <i>Danaus plexippus</i> )	Wherever found	Candidate	Montana Ecological Services Field Office			

(U.S. Fish and Wildlife Service, n.d.)

## **CHAPTER 3 – IMPACT ANALYSIS**

The proposed Irish Acres Subdivision includes six – five acre lots and four – two and one-half acre lots, totaling ten lots overall. Each lot has a proposed building envelope 1 - 1.5 acres in size. There are two primary access points to the subdivision, one entrance from the north (W 4000 N) and one entrance from the west (N 2000 W). Main roads have a proposed constructed width of twenty-two feet and driveways have proposed constructed width of twelve feet. A fire pond (Figure 9) will be constructed in the southeastern most proposed lot with an estimated maximum disturbance of 0.4 acres. During construction, temporarily, main roads will be disturbed by fill material, ditches, and culverts to a width of sixty feet and driveways to a width of sixteen feet. The total proposed disturbance is 15.17 acres (38% of the parcel).

### ***FRESHWATER EMERGENT WETLAND***

Y2 Consultants was contracted in the summer of 2022 to complete an Aquatic Resource Inventory in the subject property. This inventory identified 12.59 acres of Emergent Wetlands compared to the 10.47 acres estimated by the National Wetlands Inventory.

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytic plants, excluding mosses and lichens (Cowardin et al., 1979). According to the standard definition, wetland vegetation must be present for most of the growing season in most years and is usually dominated by perennial plants. Palustrine emergent wetlands may exist in a variety of geomorphic settings and water regimes, both of which strongly influence plant species composition.

The proposed development is estimated to impact approximately 2.7 acres of Emergent Wetland Habitat once constructed. This impact is expected to be nearly permanent and leave little opportunity for reclamation due to the process of filling wetlands and disturbing the soil moisture profile during road construction, utilities and septic installation, and building construction. The status of jurisdictional waters by the Army Corps of Engineers has not been pursued by the client.

### ***WATER BIRDS, SANDHILL CRANE, TRUMPETER SWAN***

The proposed development will likely impact water birds, Sandhill Cranes, and Trumpeter Swans in two ways. The development will reduce available habitat in the parcel and the development's relatively high density of disturbance will likely deter these species from using the habitat in the future. The proposed subdivision's density will create sustained human presence, especially impacting species with limited tolerance of humans, pets, etc. The layout of the proposed development breaks up existing continuity of the current habitat and may influence some species' ability to move across the landscape freely, specifically prey species for Sandhill Cranes like amphibians. If fencing is installed to delineate the parcels, regardless of its big game friendliness, it will serve as an obstruction that poses a collision risk to bird species that fly close to the ground. The increase in structures associated with the proposed subdivision will increase perching opportunities for aerial predators thus increasing competition for prey species and increasing opportunities for risk of predation upon Water Birds, Sandhill Cranes, and Trumpeter Swans as ground nesting birds.

# CHAPTER 4 – MITIGATION PLAN

## ***UPLAND PASTURE***

There will be short and long-term disturbance with the development of the proposed Irish Acres Subdivision. All temporarily disturbed upland areas will be replanted with native species with a seeding mix prescribed by soil type and moisture expectations.

A living snow fence will be planted along the northern edge of the parcel to provide screening, block wind, and capture snow. The living snow fence will be designed to provide functionality early in its establishment and when it's fully established decades into the future. The snow fence will utilize native shrub and tree species like those found in vegetation communities along Leigh Creek, north of the parcel. It is expected to include conifer species such as spruce, deciduous trees such as aspen, and shorter stature flowering shrubs such as chokecherry. To further support pollinator species, lilacs and dogwood are considered as well. This upland mitigation improvement will provide an overall enhancement to wildlife habitat on the parcel including songbirds and pollinators.

## ***FRESHWATER EMERGENT WETLAND***

The proposed fire pond provides a great opportunity to enhance the wetland habitat on the parcel. The pond design will incorporate a depth that will support aquatic life such as invertebrates, amphibians, or cool water fish species in both summer and winter. The pond will function with the existing landscape characteristics to support sediment capture during runoff events. The design will incorporate adequate burial of the liner to support the development of riparian and wetland vegetation communities around the pond's banks which will support a greater diversity of wildlife and protect against wave action that may trigger erosion. Water for the pond will be supplied by natural precipitation runoff, off-parcel irrigation overflow, and well water supplied by an adjacent building envelope. To limit unregulated input by the well water, the system will be controlled by a float that will respond to the actual level in the pond. This wetland mitigation improvement will greatly enhance the habitat for water birds, sandhill cranes, and trumpeter swans.

The status of jurisdictional waters by the Army Corps of Engineers has not been pursued by the client. If determined to be jurisdictional waters, all disturbance within Emergent Wetlands will be required to be mitigated at least one to one. Most often, when roadways are developed or buildings are constructed, suggested mitigation methods primarily focus on the conversion of uplands to wetlands through the development of ponds, installation of irrigation systems, etc.

## ***WATER BIRDS, SANDHILL CRANE, TRUMPETER SWAN***

Water birds, sandhill cranes, and trumpeter swans will benefit from the proposed fire pond. This pond will provide access to water for these species throughout much of the year. Open water is mostly lacking around the proposed subdivision and this pond would entice many bird species, especially those during migration. If a device is incorporated to limit freezing, such as an aerator, the pond could provide access to species that overwinter in the Teton Valley, such as trumpeter swans. Further, this pond is likely to be an oasis for invertebrates, amphibians and other prey species sought sandhill cranes and other water birds.

## ***FENCING***

There are no current plans to fence the parcel for boundary delineation or livestock containment. Livestock grazing will continue on the property with single strand electric fencing used to control cattle grazing patterns.

# CHAPTER 5 – LAND MANAGEMENT PLAN

## ***LIGHTING***

Outdoor lighting will be designed to be downcast. Bright lights will detrimentally affect wildlife movement and hinder avian species navigation abilities. Motion detector lights are encouraged, but they shall meet the requirements for floodlights and when not needed (e.g. the residence is unoccupied), lights will remain off for the benefit of wildlife.

## ***PET CONTROL***

Household pets (primarily dogs and cats) living on the Property will be contained in a designated, enclosed area and taught to not chase wildlife. The proximity of this parcel to surrounding intact wetland habitat suggests that even after development, the edge of the parcels development will remain important to wildlife. Uncontrolled pets (particularly dogs) that chase and harass wildlife have a detrimental effect on wildlife's survivability and use of an area.

## ***WILDLIFE FRIENDLY FENCING***

All fences on the property will be designed to minimize impacts on indicator species' current use of the Property and habitat and built to sustain safe wildlife movement. Fencing shall be designed by a qualified person and consider adjacent land use. Guidelines will be followed as outlined in Teton County Idaho Zoning Ordinance, Title 9 Division 9-3-2 (C-2-c-WH-vi-b) (Teton County, 2013b). Fences for livestock containment shall be clustered near development and not create wildlife movement barriers (i.e. bisect the Property). Further, fences for livestock management will utilize a single electric strand whenever possible.

## ***OPEN SPACE MANAGEMENT***

The undeveloped areas on the property constitute open space and will be maintained for the benefit of Teton County indicator wildlife species that currently utilize the Property. Maintenance includes control of state listed noxious weed species according to state laws and eradicated from the Property. No unnecessary removal or destruction of the wetland cover types shall take place.

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# APPENDIX A – FIGURES

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Figure 9: Proposed Fire Pond Map, Irish Acres Subdivision, Teton County, Idaho. .... 27

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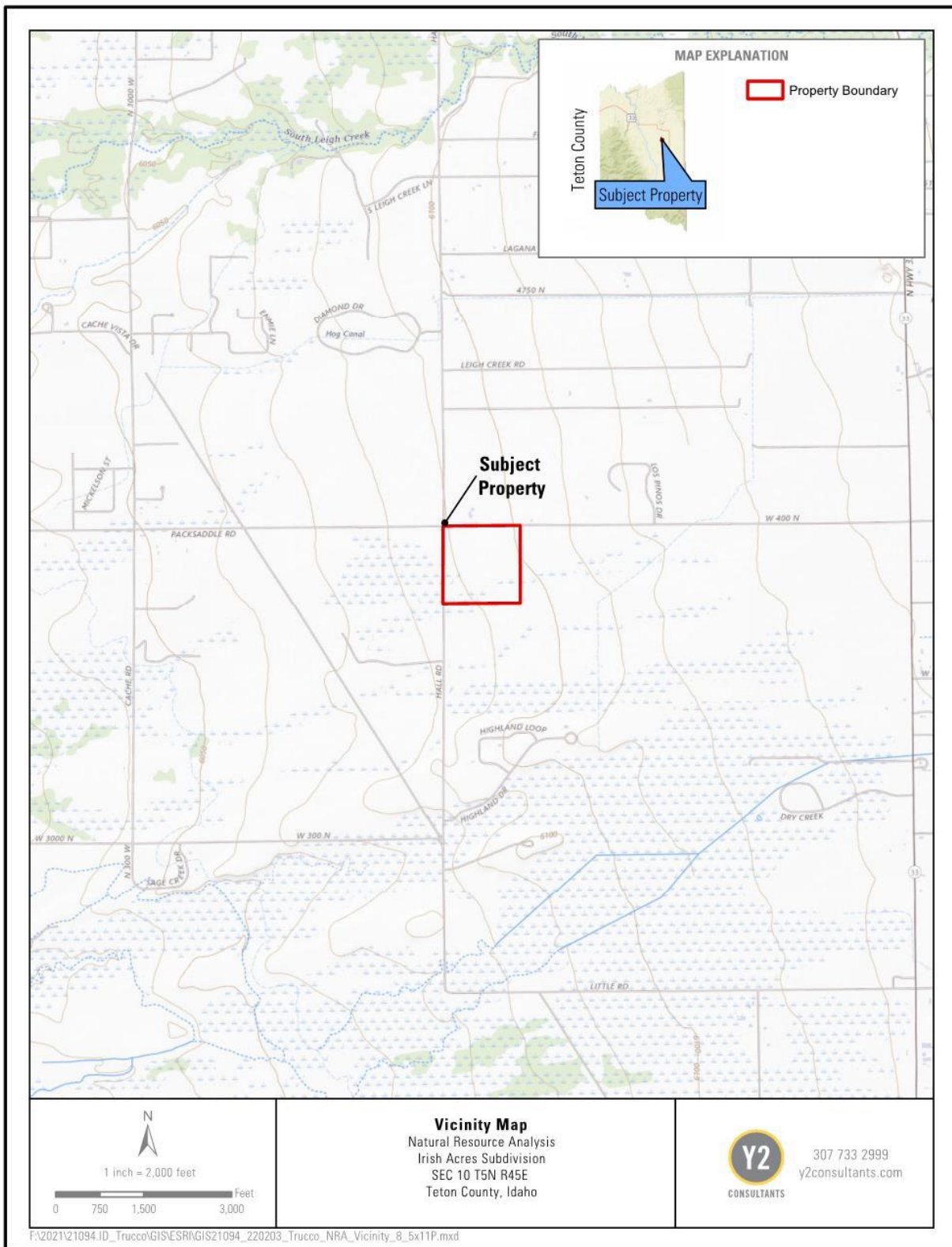


Figure 1: Site Vicinity Map, Irish Acres Subdivision, Teton County, Idaho.

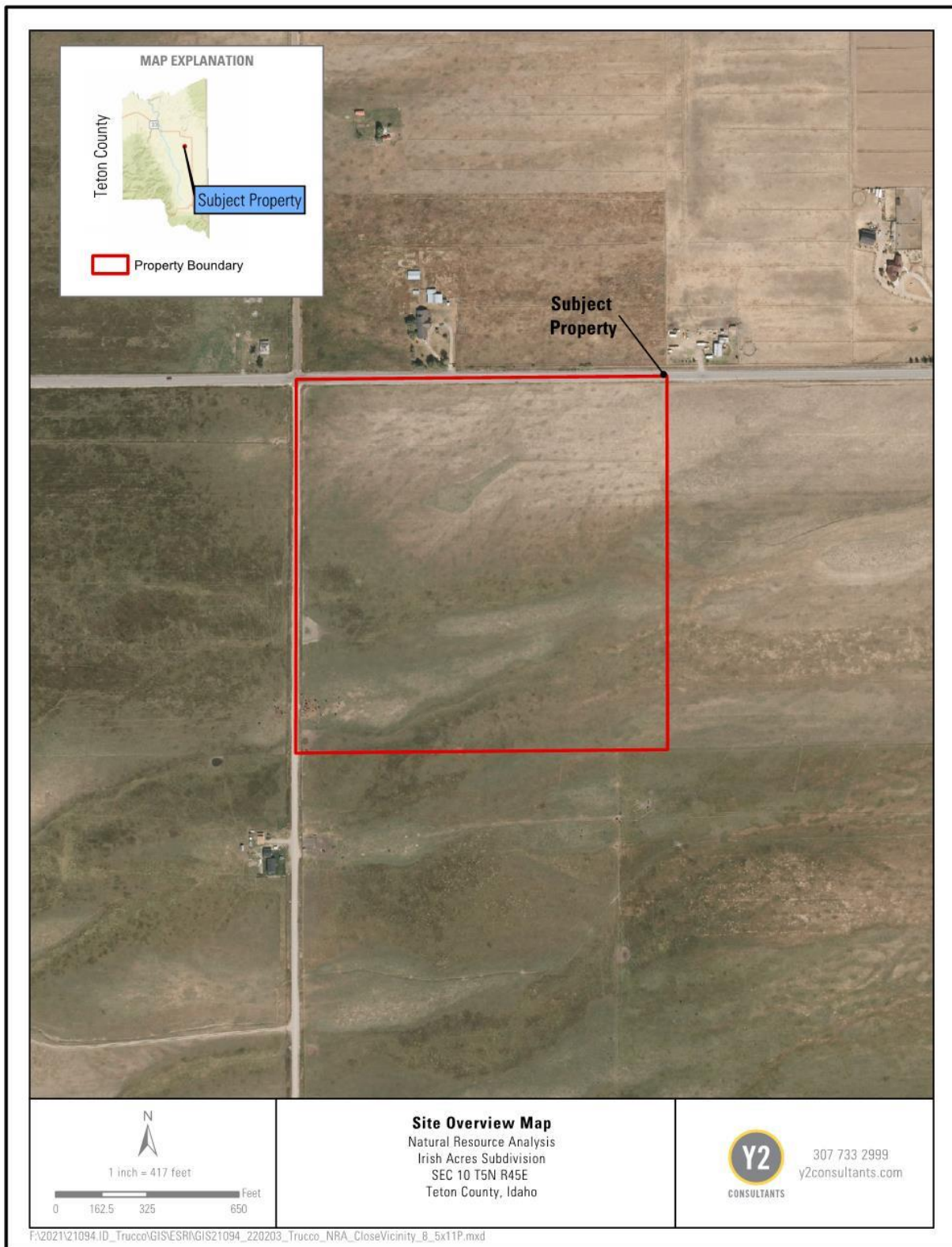


Figure 2: Site Overview Map, Irish Acres Subdivision, Teton County, Idaho.

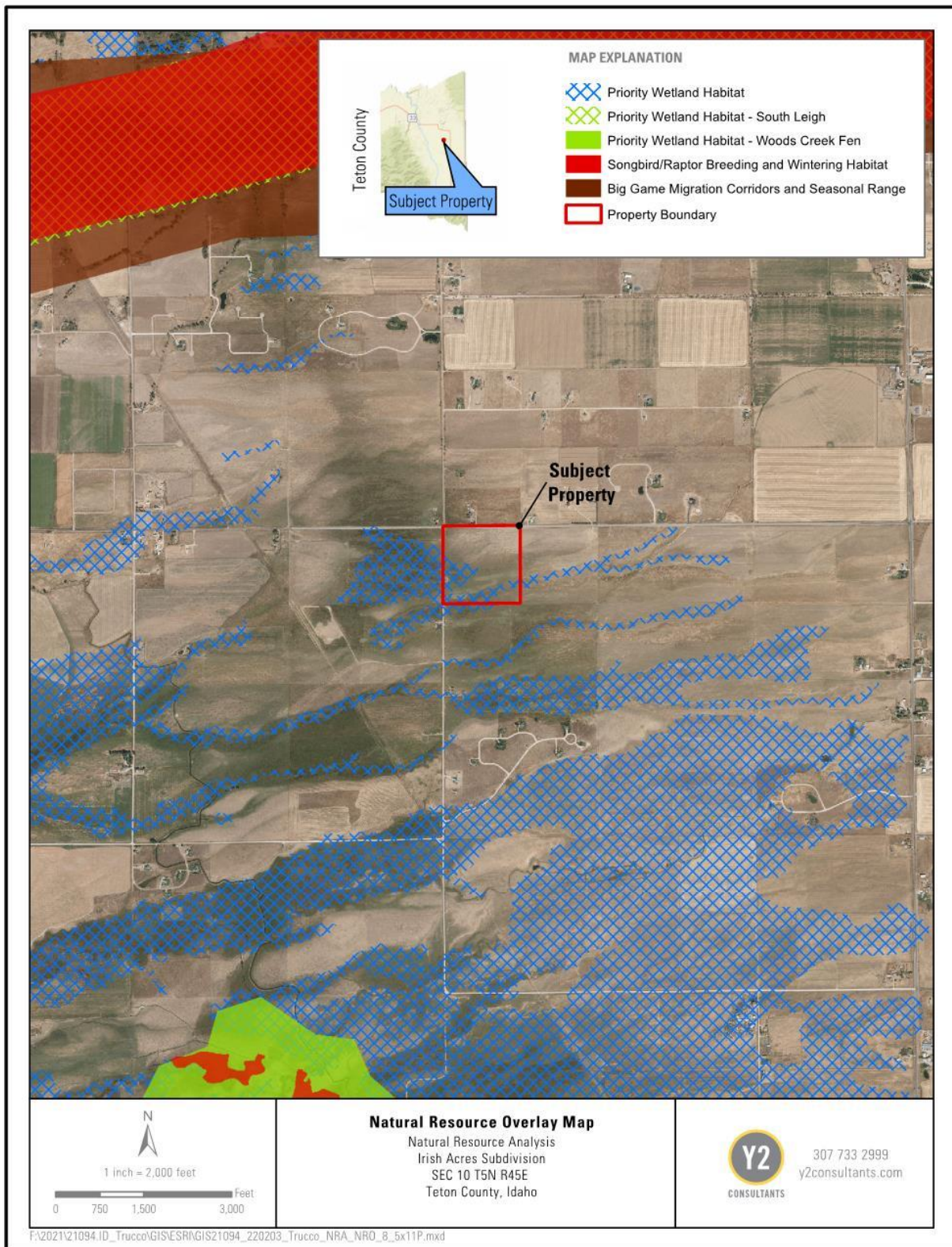


Figure 3: Natural Resource Overlay Map, Irish Acres Subdivision, Teton County, Idaho.

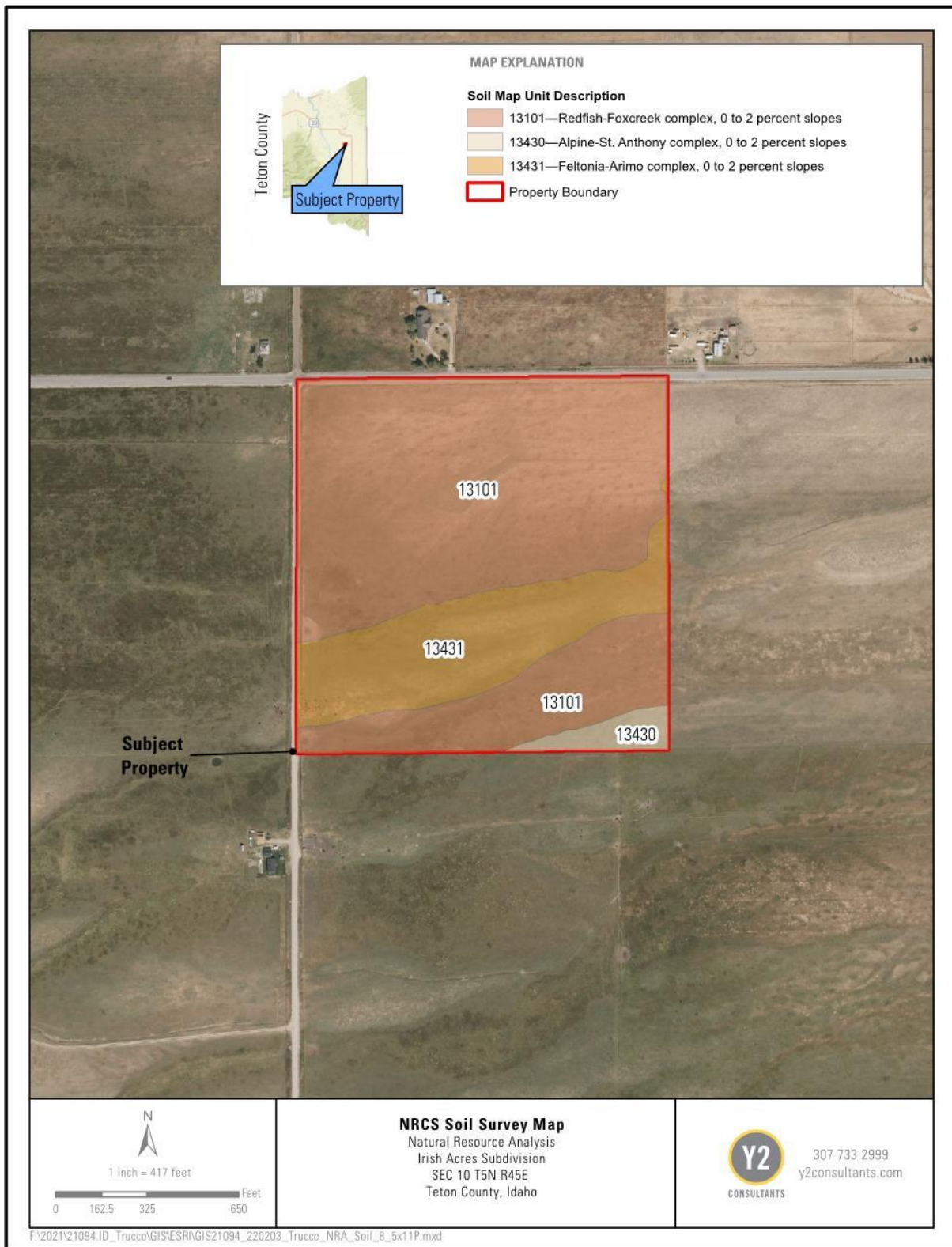


Figure 4: NRCS Soil Survey Map, Irish Acres Subdivision, Teton County, Idaho.

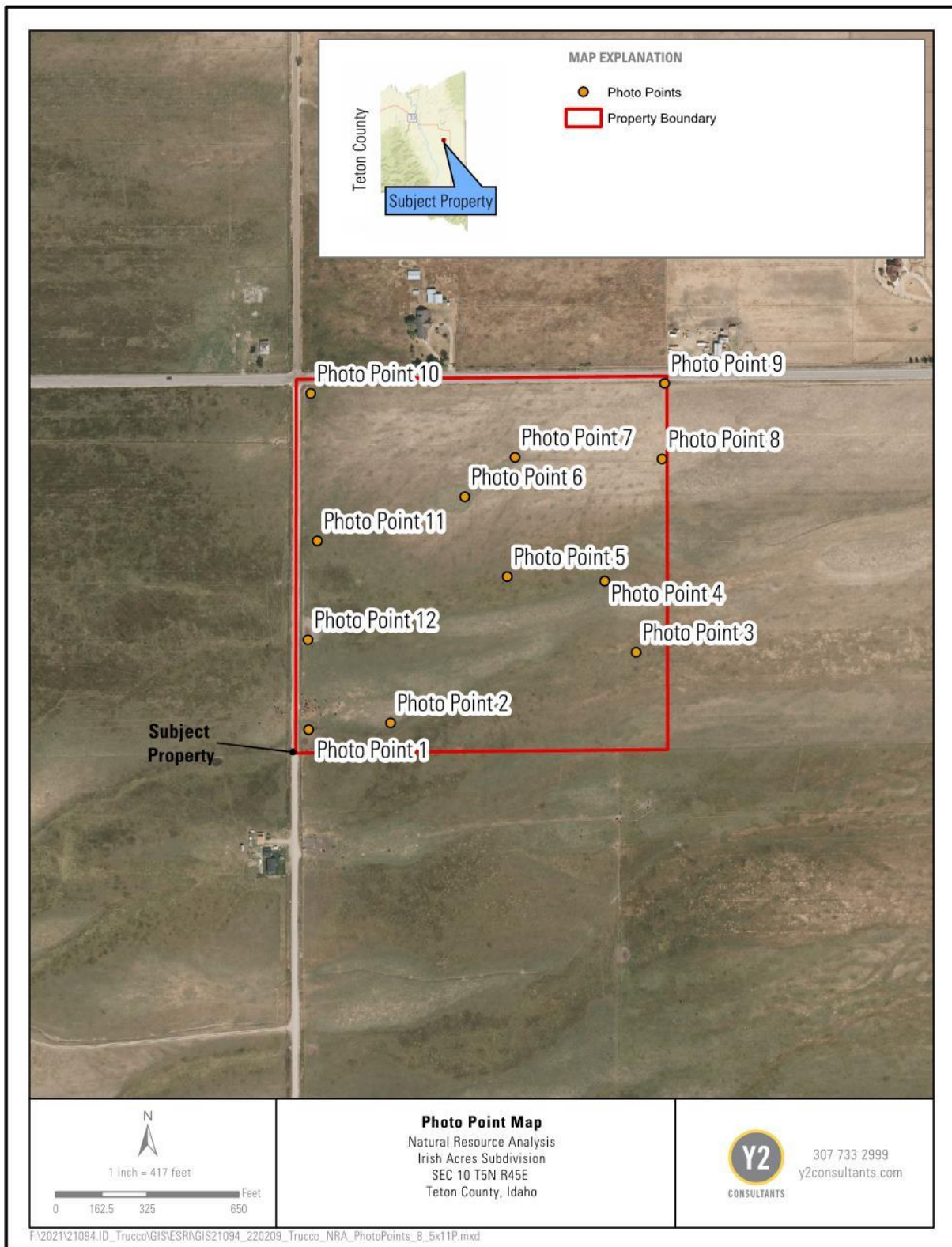


Figure 5: Photo Point Map, Irish Acres Subdivision, Teton County, Idaho.

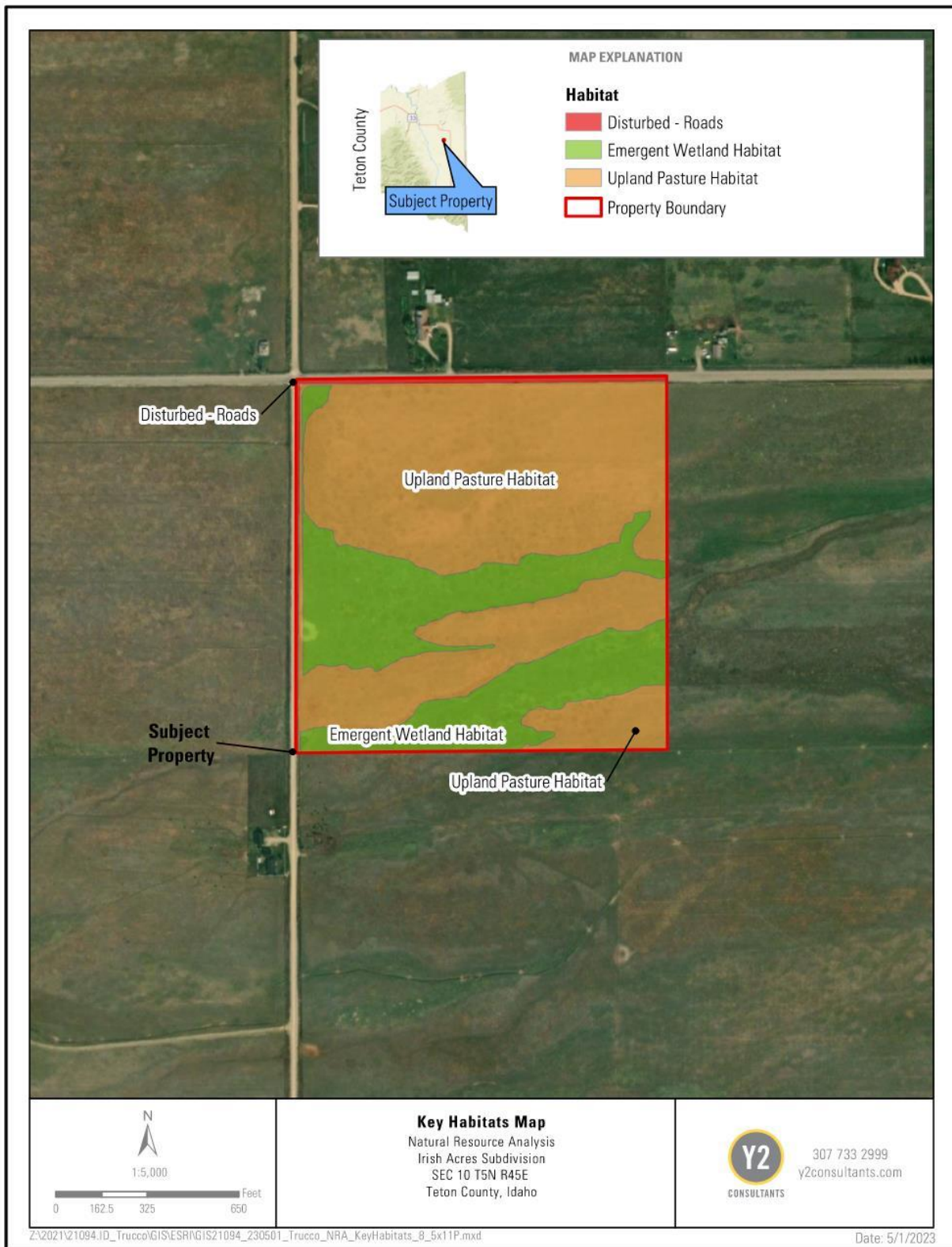


Figure 6: Key Habitats Map, Irish Acres Subdivision, Teton County, Idaho.

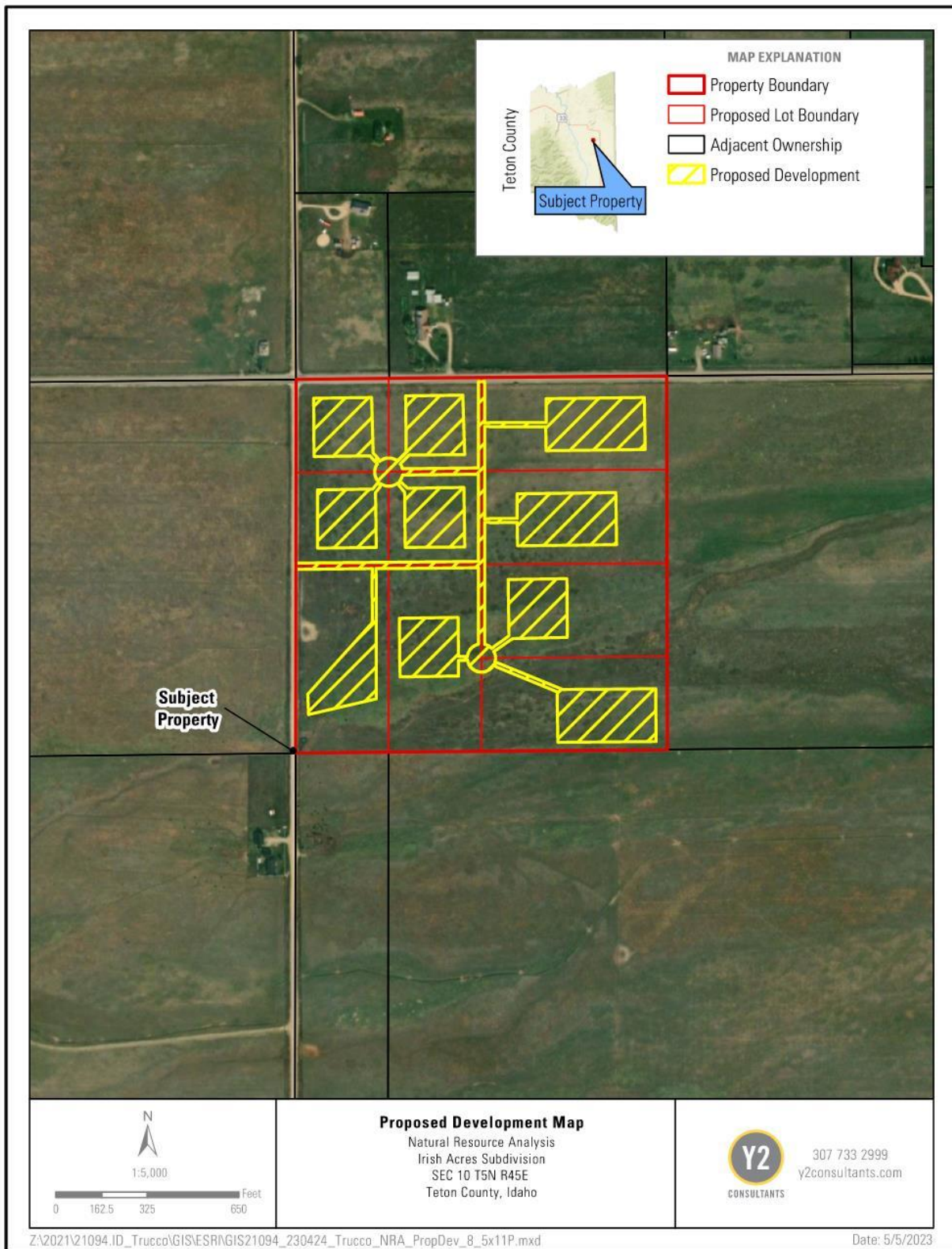


Figure 7: Proposed Development Map, Irish Acres Subdivision, Teton County, Idaho.

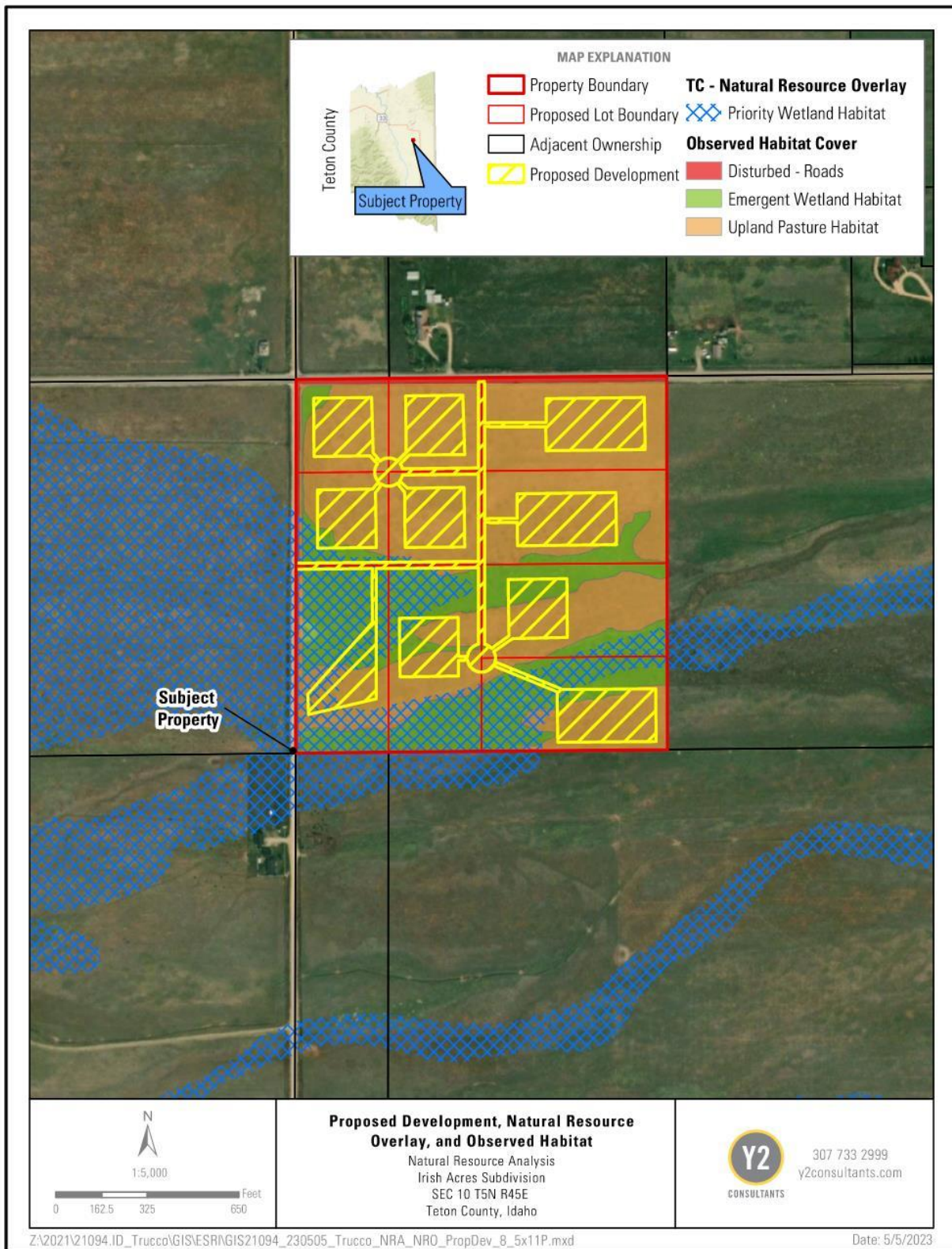


Figure 8: Proposed Development, NRO, and Observed Habitat Map, Irish Acres Subdivision, Teton County, Idaho

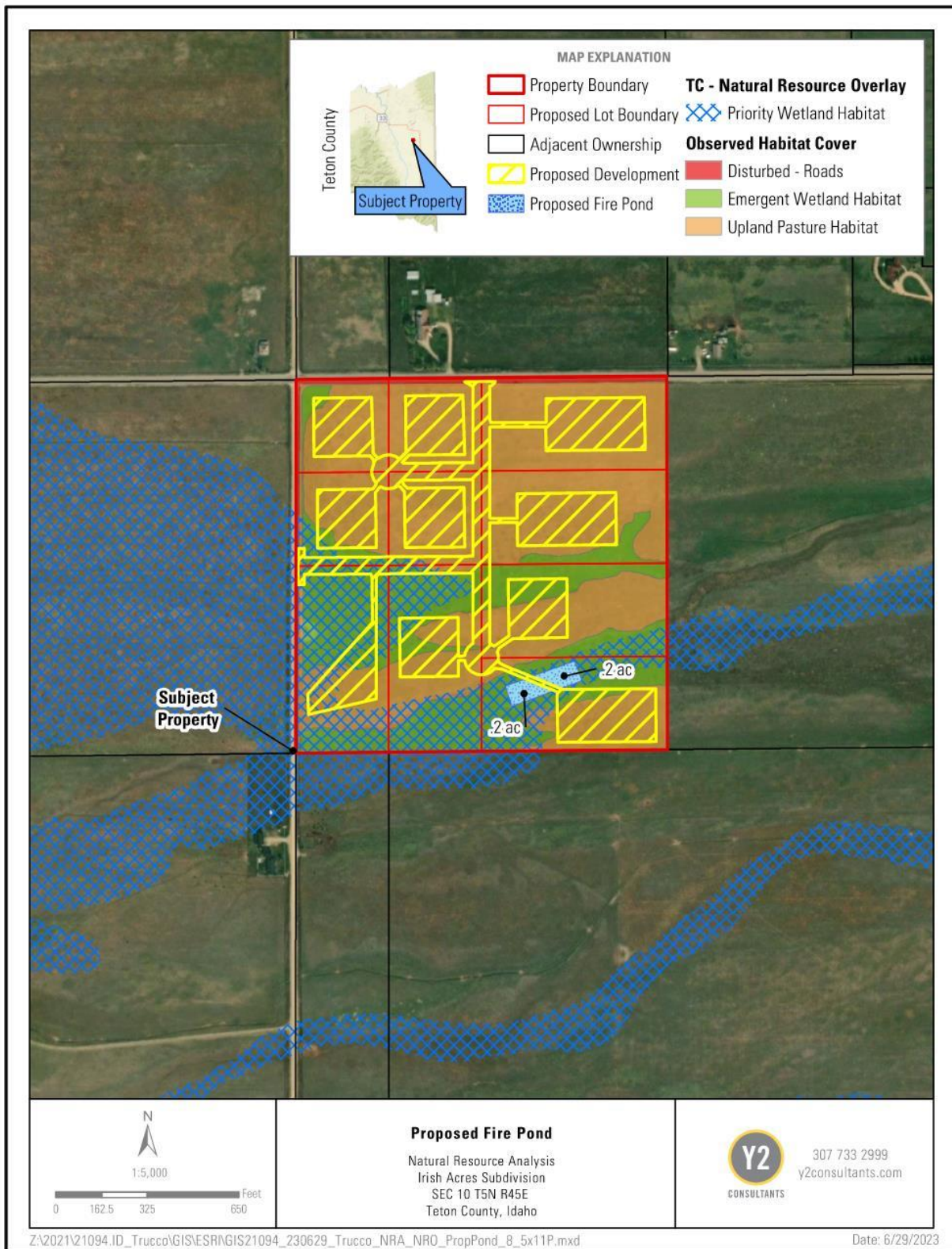


Figure 9: Proposed Fire Pond Map, Irish Acres Subdivision, Teton County, Idaho

# APPENDIX B – STUDY SITE PHOTOS



Photo 1: Photo Point 1 looking south at depression in wetland with standing water. (8/19/2021)



Photo 2: Photo point #2 facing east across southern wetland area. (8/19/2021)



Photo 3: Photo point #3 facing north. (8/19/2021)



Photo 4: Photo point #4 facing east across the slightly higher bench between the wetland fingers. (8/19/2021)



Photo 5: Photo point #5 facing north looking from the northern wetland finger towards the uplands. (8/19/2021)



Photo 6: Photo point #6 facing east from the historical ditch. (8/19/2021)



Photo 7: Photo point #7 facing east looking down the historical ditch. (8/19/2021)



Photo 8: Photo point #8 facing north looking along the historic ditch towards W 4000 N. (8/19/2021)



Photo 9: Photo point #9 facing west looking along the northern boundary that is bordered by a barbed wire fence and W 4000 N. (8/19/2021)



Photo 10: Photo point #10 facing east looking from the wetlands in the northwest corner along the northern boundary that is bordered by a barbed-wire fence and W 4000 N. (8/19/2021)



Photo 11: Photo point #11 facing north along the eastern boundary that is bordered by a barbed-wire fence and N 2000 W. (8/19/2021)

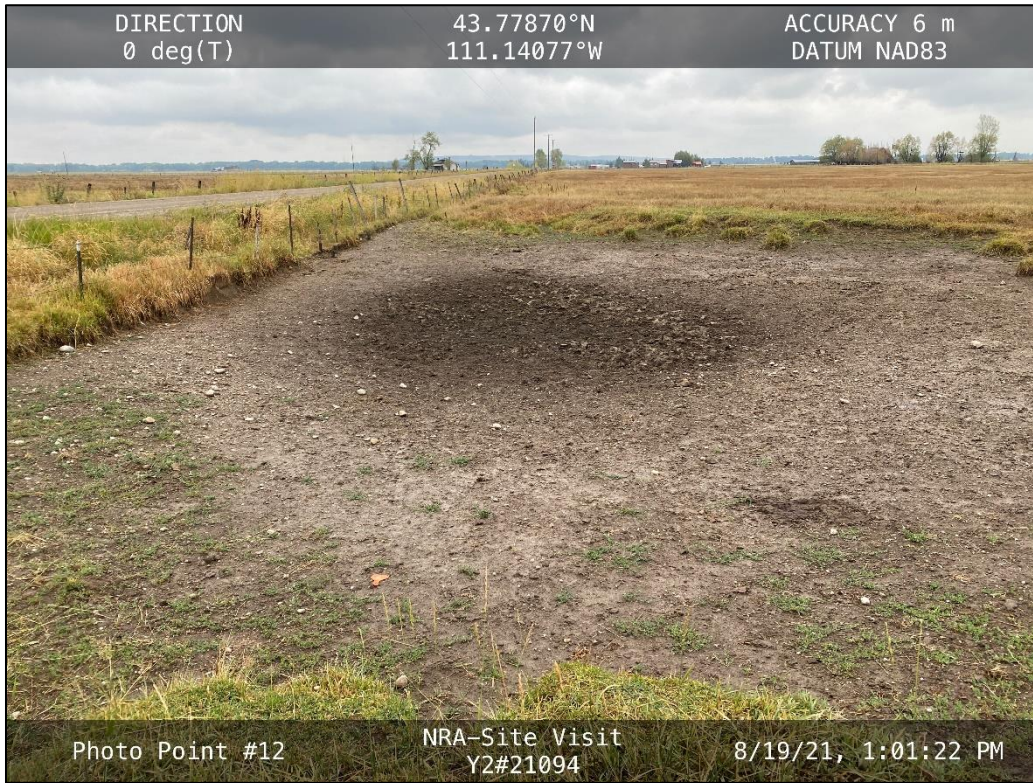


Photo 12: Photo point #12 facing north along the eastern boundary that is bordered by a barbed-wire fence and N 2000 W. Pictured is a low wetland area that appears to be inundated frequently and often provides standing water. (8/19/2021)

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# APPENDIX C – ADDITIONAL STUDY PHOTOS



Photo 11: Small soil pit at Photo Point 3 exhibiting wetland soil characteristics and vegetation community. (8/19/2021)



Photo 12: Small soil pit at Photo Point 5 exhibiting wetland soil characteristics and vegetation community. (8/19/2021)

## **APPENDIX D – ADDITIONAL ATTACHMENTS**

- ASCE 7 Hazards Report
- US Seismic Design Report

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