

Appendix A

Biological Resources

January 21, 2015

Bryce Wilcox, P.E.
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466 North 900 West
Kaysville, UT 84037

RE: Biological Assessment for the Proposed DWCCC Piping Project, Davis and Weber Counties, Utah

Mr. Wilcox:

The following Biological Assessment (BA) has been prepared as required by Section 7(c) of the Endangered Species Act (ESA), for the proposed Davis and Weber Counties Canal Company (DWCCC) Piping Project, located in Davis and Weber Counties, Utah. A site visit was conducted on November 4th, 2014 by Vincent Barthels, Qualified Biologist with J-U-B ENGINEERS, INC. in order to review the existing conditions within the anticipated project action area. This letter will serve as the biological analysis of the proposed project with regard to species listed as endangered, threatened, proposed, and candidate, and designated and proposed critical habitat protected under the ESA. In addition, any state sensitive species that could potentially be affected by the proposed project actions were analyzed as part of this report.

Proposed Project Action

The proposed piping activities would occur along the existing alignment of the Davis and Weber Canal in the Cities of Riverdale, Roy, Sunset, Clearfield and Layton. More specifically, these improvements would be contained within Sections 6, 7, 8, 9 and 16, Township 4 North, Range 1 West; Section 1, Township 4 North, Range 2 West; Sections 13, 24, 25, 26, 35 and 36, Township 5 North, Range 2 West; and, Section 19, Township 5 North Range 1 West; Salt Lake Base and Meridian, Davis and Weber Counties, Utah (see the attached Aerial Overview Exhibit). For illustrations of typical conditions throughout the project area, please refer to the attached Photo Inventory. The elevation of the project area ranges from approximately 4,500 to 4,700 feet above sea level.

The proposed project consists of enclosing portions of an open, unlined earthen canal to help the DWCCC reduce seepage, conserve water, protect local residences from potential flooding and to better measure and manage water distribution. The attached Aerial Overview Exhibit (Attachment A) shows an illustration of the approximate sections of pipeline construction that have been proposed. Note, the limits of the illustrated pipeline construction sections are preliminary in nature and are intended for conceptual presentation only. For the purposes of this report, the entire section of pipeline illustrated in the Aerial Overview Exhibit (shown with blue, red and green lines) will be included for analysis as the proposed project action area. This area correlates

to approximately 9.2 miles of the Davis and Weber Canal. As part of the proposed project actions, five new metered turnouts would be installed. Also included in the proposed project actions is the addition of a hydrokinetic power generator; however, the site for the generator has already been developed with canal infrastructure and is not included in this reports project action area. Construction activities would take place in three separate phases over a three year time period (Year 1, Year 2 and Year 3), and would take place outside of the typical irrigation season, which is between April 15th and October 15th.

Construction Activities

The anticipated construction equipment includes: compactors, excavators, backhoes, graders, and dump trucks for hauling materials. The most prevalent construction noise source would come from equipment powered by internal combustion engines (usually diesel). Noise from equipment used on this project would likely peak at approximately 89 decibels (dBA) when measured from a distance of 15 meters (50 feet). To reduce the impact of construction noise, most construction activities would be confined to weekdays between 7:00 a.m. and 7:00 p.m. Mitigation of potential project construction noise impacts would incorporate low-cost, easy-to-implement measures into project plans and specifications (e.g. equipment muffler requirements and limiting work-hours).

The proposed project action area is situated adjacent or near several interstates (e.g. I-84 and I-15) and arterial roadways (e.g. Antelope Drive and 1900 West) that serve moderate to heavy traffic volumes. The ambient or background noise for the entire project action area is associated with the truck traffic on these existing roads, which correlates to a background sound of approximately 80 dBA (WSDOT 2013). To define the horizontal extent of the project related to temporary construction noise effects, Table 1 (an attenuation table) has been developed.

Table 1 - Noise Attenuation Table.

| Distance from Site (feet) | Construction Noise (-7.5 dBA)¹ | Background Sound - Traffic Noise (-4.5 dBA)¹ |
|----------------------------------|--|--|
| 50 | 89 | 80 |
| 100 | 81.5 | 75.5 |
| 200 | 74 | 71 |
| 400 | 66.5 | 66.5 |

Note: (1) The project action area is characterized as having “soft site” conditions.

Table 1 shows that the temporary construction noise levels should reach background or ambient sound levels (66.5 dBA) at a distance of 400 feet from the project limits of disturbance. Based on this information, the project action area has been defined as the project footprint plus a 400 foot radius. The project action area encompasses approximately 925 acres.

Best Management Practices

Best Management Practices (BMPs) would be in place to minimize direct, short-term construction impacts. Some of these measures include replanting barren locations (post-construction) with

native vegetation and limiting noise/human-induced disturbances. BMPs are mandatory and would become part of the project design. They would include, but are not limited to the following:

1. Temporary Erosion and Sediment Control (TESC) structures (e.g. silt fences) should be in place during construction to limit sediment delivery into any adjacent drainage channels.
2. Excavation activities, staging areas, stock piling areas and embankment placement would occur only within staked limits of the project action area.
3. Temporary construction equipment noise would be minimized by regular inspection and replacement of defective mufflers and parts that do not meet the manufacturer's specifications.
4. Fueling of excavation equipment (e.g. excavators, backhoes, etc.) would be completed within the project action area only after ground surface protection is implemented to facilitate spill mitigation. The fueling truck must utilize drip pans and absorbent cloths during fueling activities. Additionally, the Contractor must have emergency spill equipment onsite at all times and must have a Spill Prevention Plan approved and in place prior to any construction activities. Dump trucks, pickups and other general construction equipment would be fueled offsite at a commercial facility.
5. Noxious weed management, following Bureau of Reclamation's standard operating procedures for invasive weed control, shall be implemented in the project footprint.
6. Hydro-seeding will be implemented to provide stabilization and specific vegetative recruitment opportunities and provide erosion control protection to newly disturbed areas.
7. The project action area would be monitored on a regular basis by a designated Construction Site Erosion and Sediment Control Lead (CESCL). The monitoring would consist of observing the TESC structures so that sediment does not reach active drainage channels. If any structure fails, it must be replaced immediately. If sediment deposits are observed beyond the control structures following a failure, the sediment must be removed immediately.

Agency Consultation and Species of Concern

In order to identify species of concern associated with the proposed project actions, a species list was obtained from the United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) system (dated December 16th, 2014). According to the IPaC report (see attached), four species have potential to exist within the project action area that are listed as "Endangered," "Threatened," "Candidate," or "Proposed Threatened," Only three of these species warrant ESA consideration at this time because the greater sage-grouse is listed as having a "Candidate" status, which does not warrant protection under the ESA. In the event that the greater sage-grouse becomes a listed species (i.e. "Threatened" or "Endangered") prior to or during construction, a provisional assessment and effects determination has been provided below. The species list summarized in Table 2 was derived from habitat conditions and potential species occurrence within the defined action area.

Table 2 - Summary of ESA Listed Species detailed on the IPaC Listing (dated 12-16-2014).

| Common Name | Scientific Name | ESA Status |
|----------------------|---|------------|
| Canada lynx | <i>Lynx canadensis</i> | Threatened |
| Greater sage-grouse | <i>Centrocercus urophasianus</i> | Candidate |
| June sucker | <i>Chasmistes liorus</i> | Endangered |
| Yellow-billed cuckoo | <i>Coccyzus americanus occidentalis</i> | Threatened |

On December 5th, 2014, the Utah Division of Wildlife Resources (UDWR) provided a response letter regarding information on ESA species, and species of special concern in the vicinity of the proposed project action area (see attached correspondence). The UDWR has no recent or historical records of the above ESA listed species near the project area; however, within a 2-mile radius of the project action area, the UDWR did list documented recent occurrences of American white pelican, bald eagle, bluehead sucker, Bonneville cutthroat trout and short-eared owl. All of these species are listed on the Utah Sensitive Species List, and therefore will be addressed in this report. Table 3 provides a summary of the state listed species identified by the UDWR response letter.

Table 3 - Utah Sensitive Species listed in the UDWR Response Letter (dated 12-5-2014).

| Common Name | Scientific Name |
|----------------------------|----------------------------------|
| American white pelican | <i>Pelecanus erythrorhynchos</i> |
| Bald eagle | <i>Haliaeetus leucocephalus</i> |
| Bluehead sucker | <i>Catostomus discobolus</i> |
| Bonneville cutthroat trout | <i>Oncorhynchus clarkii utah</i> |
| Short-eared owl | <i>Asio flammeus</i> |

Species Habitat Descriptions and Effects Determinations

The following subsection briefly discusses the species mentioned above and their habitat descriptions; then proceeds to provide an effect determination for each individual species. Species are presented in alphabetical order.

American White Pelican:

American white pelicans are very large (54-70 inches), primarily white, with black wing tips and outer trailing wing edge, and have an oversized orange bill (Alsop 2001). The species habitat ranges from the Canadian prairies and northwest United States, to Nevada, Utah, Wyoming, North Dakota, and in marshes west of the Rocky Mountains; they winter along the Pacific Coast, from California to Mexico (Ransom 1981). Preferred nesting areas include islands associated with freshwater lakes. Foraging areas consist of shallow lakes, marshlands, and large rivers (UDWR 2014). The American white pelican feeds exclusively on fish. They work communally to catch fish by “herding” them into shallow waters; these large birds scoop prey up with pouches in their bill, which can hold up to 3 gallons of water (Alsop 2001).

In Utah, this species is listed on the Utah Sensitive Species List. The only known breeding colonies are located in the northern portions of the state, primarily in the Utah Lake/Great Salt Lake ecological complex (UDWR 2014). During spring migration (arriving in early March), the breeding season, and fall migration periods, they can be found at many reservoirs throughout Utah. The

departure (fall migration) from Utah appears to be associated with the opening of waterfowl hunting season, availability of fisheries, and ice up of large bodies of water (UDWR 2014).

The existing canal within the project action area does not contain suitable fish habitat, which the American white pelican is reliant on for food base. Based on information obtained from the UDWR, there are recent documented occurrences of the American white pelican within a 2-mile radius of the project action area (see attached UDWR letter). It is likely that these documentations were linked to nearby areas with sufficient fish habitat, such as the Weber River (located approximately 0.6 miles northeast of the project action area) or Kays Creek (located approximately 2,000 feet southeast of the project action area). Furthermore, the scheduled construction periods would occur mostly during times when the American white pelican would not be expected to be present in the area. Based on lack of food base and the anticipated timing of the construction activities, this project would have no effect on the American white pelican.

Bald Eagle

Bald eagles are a large dark raptorial bird with a white head and a white tail when mature. They eat mostly fish but will eat some small mammals, such as rabbits (Stokes, 1996). The bald eagle constructs massive nests on cliff edges or in large trees. Eagles congregate in feeding areas in late winter and early spring. Bald eagles generally select habitat located near water. In a survey of 2,732 nests, 99% were within 200 meters (650 feet) of the water and averaged only 40 meters (130 feet) from the shoreline (Stalmaster 1987). Eagle perches are generally close to the water, especially those used for foraging. Nearly all birds will perch within 50 meters (165 ft) of a shoreline, because fish, waterfowl, seabirds, and other prey can be acquired there (Stalmaster 1987). Eagles select trees within that habitat for nesting and perching sites. The most important characteristic of the nesting tree is that it is the tallest in the forest stand. Selecting a tall tree ensures a structure that will adequately support a large nest, provide an open flight path to and from the nest, and have a panoramic view of the surrounding terrain (Stalmaster 1987). An eagle's nesting season is between the start of February, when they initiate construction of their nests and mid-August when the young fledge the nest. The incubation period ranges between 31 and 46 days (Alsop 2001). Hatchlings can remain in the nest for 70 to 98 days (Alsop 2001).

Based on information obtained from the UDWR, there are recent documented occurrences of the bald eagle within the vicinity of the defined project area (see attached UDWR letter). The proposed project action does not impact any riparian areas along natural streams or lakes, including potential nesting or perching locations for the bald eagle. It is likely that the nearby documented occurrences were linked to either the Weber River (located approximately 0.6 miles northeast of the project action area) or Kays Creek (located approximately 2,000 feet southeast of the project action area). The bald eagle's prey base and foraging opportunities will also not be affected by this project. Therefore, a no effect determination is warranted for the bald eagle.

Bluehead Sucker

The bluehead sucker is native to parts of Utah, Idaho, Arizona, New Mexico, and Wyoming. The bluehead sucker is a native bottom feeding fish that scrapes algae from the surface of rocks. Fast flowing and steep gradient mountainous stream reaches are identified to be critical habitat for this species. Their population size has been in a decline due to habitat loss, flow alterations and the introduction of non-native species (UDWR 2014).

Based on information obtained from the UDWR, there are recent documented occurrences of the bluehead sucker within a 2-mile radius of the project action area (see attached UDWR letter). It is likely that these occurrences were documented within either the Weber River (located approximately 0.6 miles northeast of the project action area) or Kays Creek (located approximately 2,000 feet southeast of the project action area). The existing canal within the project action area does not contain suitable fish habitat. Based on lack of suitable habitat, this project would have no effect on the bluehead sucker.

Bonneville Cutthroat Trout

The Bonneville cutthroat trout is a subspecies of cutthroat trout native to the Bonneville Basin of Utah, Wyoming, Idaho, and Nevada. The Bonneville cutthroat trout habitat includes mountain streams and lakes to grassland streams. Known populations of this species in Utah include Bear Lake and Strawberry Reservoir. Bonneville cutthroat trout are included on the Utah Sensitive Species List, as a result of habitat loss, predation and competition. The species feeds primarily on insects. Spawning occurs, in spring, over gravel substrate (UDWR 2014).

Based on information obtained from the UDWR, there are recent documented occurrences of the Bonneville cutthroat trout within a 2-mile radius of the project action area (see attached UDWR letter). It is likely that these occurrences were documented within either the Weber River (located approximately 0.6 miles northeast of the project action area) or Kays Creek (located approximately 2,000 feet southeast of the project action area). The existing canal within the project action area does not contain suitable fish habitat. Based on lack of suitable habitat, this project would have no effect on the Bonneville cutthroat trout.

Canada lynx

The Canada lynx is normally found in dense forested areas with an abundance of windfalls, swamps and brushy thickets (Maas 1997). Lynx require heavy cover for concealment when stalking prey. In addition, lynx are most likely to persist in areas that receive deep snow, for which the lynx is highly adapted (Maas 1997). In the western U.S., lynx occurrences generally are found only above 4,000 feet in elevation (McKelvey et al. 2000).

Based on information obtained from the UDWR, there are no recent documented occurrences of the Canada lynx near the defined project action area (see attached UDWR letter). The highly disturbed urban/residential environment and relatively small amount of heavy cover surrounding the defined project action area is unsuitable habitat for this species. Because of this, a no effect determination is warranted for the Canada lynx.

Greater sage-grouse

The greater sage-grouse is a federally listed candidate species. As the name implies, greater sage-grouse are found only in areas where sagebrush is abundant. The largest of all grouse, the greater sage-grouse is up to 30 inches long, 2 feet tall, and weighs from 2 to 7 pounds (USFWS 2014). Male greater sage-grouse have a white breast ruff, mottled gray-brown overall, a black belly, black throat and bib, and long stiff spike like tail feathers. Females are mottled gray-brown overall, have a black belly, a white throat, and lack the yellow eye comb seen in the males. Diet consists of evergreen leaves, plain sagebrush shoots, blossoms, leaves, pods, buds, and insects (Alsop 2001). Dependent on sagebrush for food and cover, required habitat consists of relatively open flats or rolling sagebrush hills at elevations ranging from 4,000 to 9,000 feet above sea level

(USFWS 2014). Land clearing and overgrazing by livestock are documented threats to this species' habitat.

Based on information obtained from the UDWR, there are no recent documented occurrences of greater sage-grouse near the defined project area (see attached UDWR letter). Habitat requirements for the greater sage-grouse are not present within the project action area. The project action area does not contain abundant sagebrush in which this species is dependent on for food and cover. A provisional no effect determination is warranted for the greater sage-grouse based on lack of suitable habitat.

June sucker

June suckers, federally listed as “endangered,” are members of the sucker family; however, they are not bottom feeders (NatureServe 2014). Primarily, they feed on zooplankton in the middle of the water column. June suckers inhabit shallow and protected areas of Utah Lake except when spawning (NatureServe 2014; Sigler and Sigler 1987). Spawning occurs in June in shallower riffles over coarse gravel and cobbles within lower portions of the Provo River (NatureServe 2014). Flow alterations, pollution, drought and introduction of nonnative fish have been identified as causes for decline (UDWR 2014).

Based on information obtained from the UDWR, there are there are no recent documented occurrences of the June sucker near the defined project area. The section of the Davis and Weber Canal contained within the project footprint (i.e. the only aquatic resource within the action area) is an irrigation canal that does not contain fish. The proposed piping would not impact aquatic habitat that is suitable for the June sucker; therefore, a no effect determination is warranted for this species.

Short-eared owl

The short-eared owl is a medium sized, mostly brown owl with a big head and a short neck (Alsop 2001). This nomadic owl prefers grasslands, marshes, and other open type habitats to feed on rodents, small birds, and large insects. They often use fence posts as perches. Similar to the grasshopper sparrow, this owl constructs a nest in April primarily on the ground in grasslands. In winter some owls migrate south as far as Mexico, whereas others remain in the breeding grounds as a permanent (year-round) resident (UDWR 2014). According to the Utah USFWS field office the recommended seasonal buffer for the short-eared owl is between March 1st and August 1st (USFWS 2002).

The project action area is centered on the existing Davis and Weber Canal. The project footprint exists along sections that have not yet been piped and are commonly flooded. The project footprint does not contain suitable nesting areas for the short-eared owl. Construction activities are planned to be limited to times of the year between October 15th and April 15th, which is mostly outside of the USFWS recommended seasonal buffer for the short-eared owl. Based on the lack of suitable habitat in the project footprint, coupled with the anticipated construction timing, a no effect determination is warranted for the short-eared owl.

Yellow-billed cuckoo

The yellow-billed cuckoo has an ESA status of “threatened.” As the name suggests, this avian species has a yellow lower mandible. It has rufous wings that contrast against the gray-brown wing

coverts and upperparts. The underparts are white and they have large white spots on a long black undertail (Alsop 2001). It is a neotropical migrant, which winters in South America. Breeding often coincides with the appearance of massive numbers of cicadas, caterpillars, or other large insects (Ehrlich et al. 1992). Its incubation/nestling period is the shortest of any known bird, because it is one of the last neotropical migrants to arrive in North America and chicks have very little rearing time before embarking on their transcontinental migration. Yellow-billed cuckoos arrive in Utah in late May or early June and breed in late June through July. Cuckoos typically start their southerly migration by late August or early September. Yellow-billed cuckoos are considered a riparian obligate and are usually found in large tracts of cottonwood/willow habitats with dense sub-canopies (below 33 feet).

Based on information obtained from the UDWR, there are no recent documented occurrences of yellow-billed cuckoo near the defined project action area (see attached UDWR letter). The project action area generally lacks dense sub-canopies of cottonwoods and willows, which would be considered to be suitable habitat. Construction activities are planned to occur during a time period when the yellow-billed cuckoo would not be expected to be present in Utah. Due to the schedule of construction activities, lack of suitable habitat, and lack of occurrence, a no effect determination is warranted for the yellow-billed cuckoo.

Conclusion


The anticipated construction activities correlated to the proposed DWCCC Piping Project would have no effect on the American white pelican, bald eagle, bluehead sucker, Bonneville cutthroat trout, Canada lynx, greater sage-grouse, short-eared owl, June sucker and yellow-billed cuckoo. These determinations are based on habitat conditions observed within the project action area coupled with the schedule and extent of the proposed project actions. Table 4 is a summary of the effect determinations presented in this BA. Lastly, it should be noted that the final authority rests with the appropriate regulatory authority.

Table 4 - Summary of Effect Determinations.

| Common Name | Scientific Name | ESA Status | Effect Determination |
|----------------------------|---|-----------------------|----------------------|
| American white pelican | <i>Pelecanus erythrorhynchos</i> | N/A - State Sensitive | No effect |
| Bald eagle | <i>Haliaeetus leucocephalus</i> | N/A - State Sensitive | No effect |
| Bluehead sucker | <i>Catostomus discobolus</i> | N/A - State Sensitive | No effect |
| Bonneville cutthroat trout | <i>Oncorhynchus clarkii utah</i> | N/A - State Sensitive | No effect |
| Canada lynx | <i>Lynx canadensis</i> | Threatened | No effect |
| Greater sage-grouse | <i>Centrocercus urophasianus</i> | Candidate | No effect |
| Short-eared owl | <i>Asio flammeus</i> | N/A - State Sensitive | No effect |
| June sucker | <i>Chasmistes liorus</i> | Endangered | No effect |
| Yellow-billed cuckoo | <i>Coccyzus americanus occidentalis</i> | Threatened | No effect |

Please contact me with any further questions or concerns. I can be reached at (509) 458-3727 or via email at vbarthels@jub.com.

Submitted by:



1-21-15

Vincent Barthels, Biologist
J-U-B ENGINEERS, Inc.

List of Attachments:

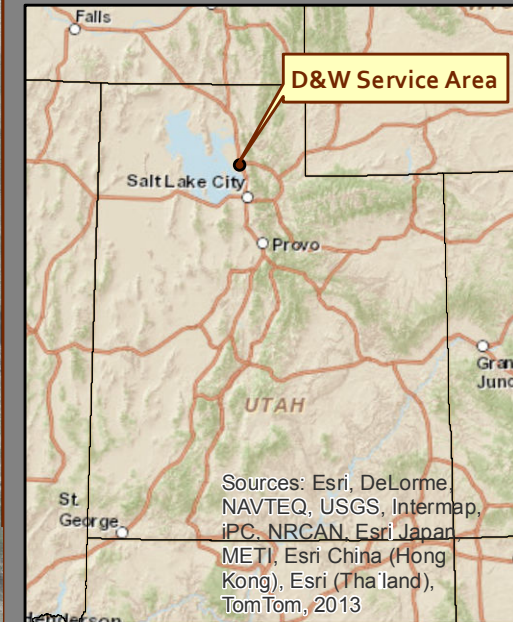
1. Aerial Overview Exhibit (Attachment A)
2. Photo Inventory
3. USFWS IPaC Listing (dated: December 16, 2014)
4. UDWR Response Letter (dated: December 5, 2014)

References Cited

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Davis and Weber Canal Company

Geographic Location &
Project By Year
Attachment A



Legend

Project year

- Year 1
- Year 2
- Year 3
- Existing Pipe
- City Boundaries

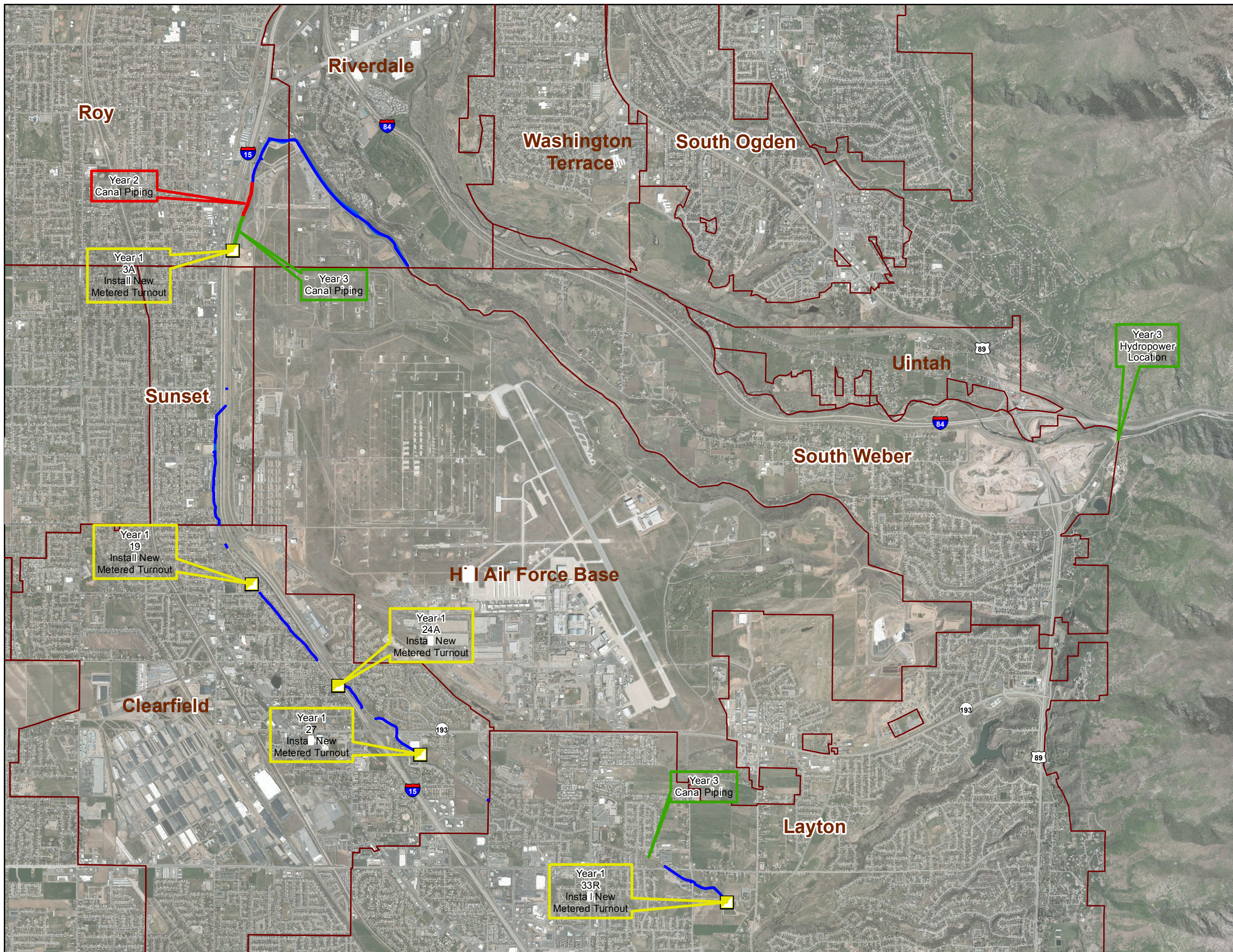
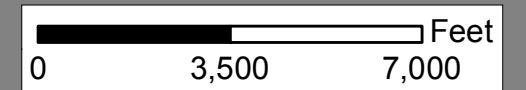


Photo Inventory

The following four photos were taken on November 4th, 2014. The photos are organized with a northern progression beginning at the southern project terminus.



Photo 1: Looking easterly at the southernmost section of the Davis and Weber Canal that is contained within the project action area. This section of the canal is currently unlined.



Photo 2: Looking easterly at a portion of the canal that is lined, but has deteriorated significantly. This photo was taken near the intersection of 2450 North and 1100 West.



Photo 3: Looking southerly at a section of the canal that exists toward the middle of the project action area. In this area the canal runs adjacent to I-15. This photo was taken near the intersection of Main Street and 800 North.



Photo 4: Looking southerly at the canal near the northernmost end of the project action area (immediately south of the location at which the canal turns toward the southeast). This photo was taken near the intersection of Freeway Park Drive and 5600 South.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

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Consultation Code: 06E23000-2015-SLI-0064

December 16, 2014

Event Code: 06E23000-2015-E-00162

Project Name: DWCCC Piping Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: DWCCC Piping Project

Official Species List

Provided by:

Utah Ecological Services Field Office
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UT 84119
(801) 975-3330
<http://www.fws.gov>
<http://www.fws.gov/utahfieldoffice/>

Consultation Code: 06E23000-2015-SLI-0064

Event Code: 06E23000-2015-E-00162

Project Type: ** Other **

Project Name: DWCCC Piping Project

Project Description: DWCCC Piping Project

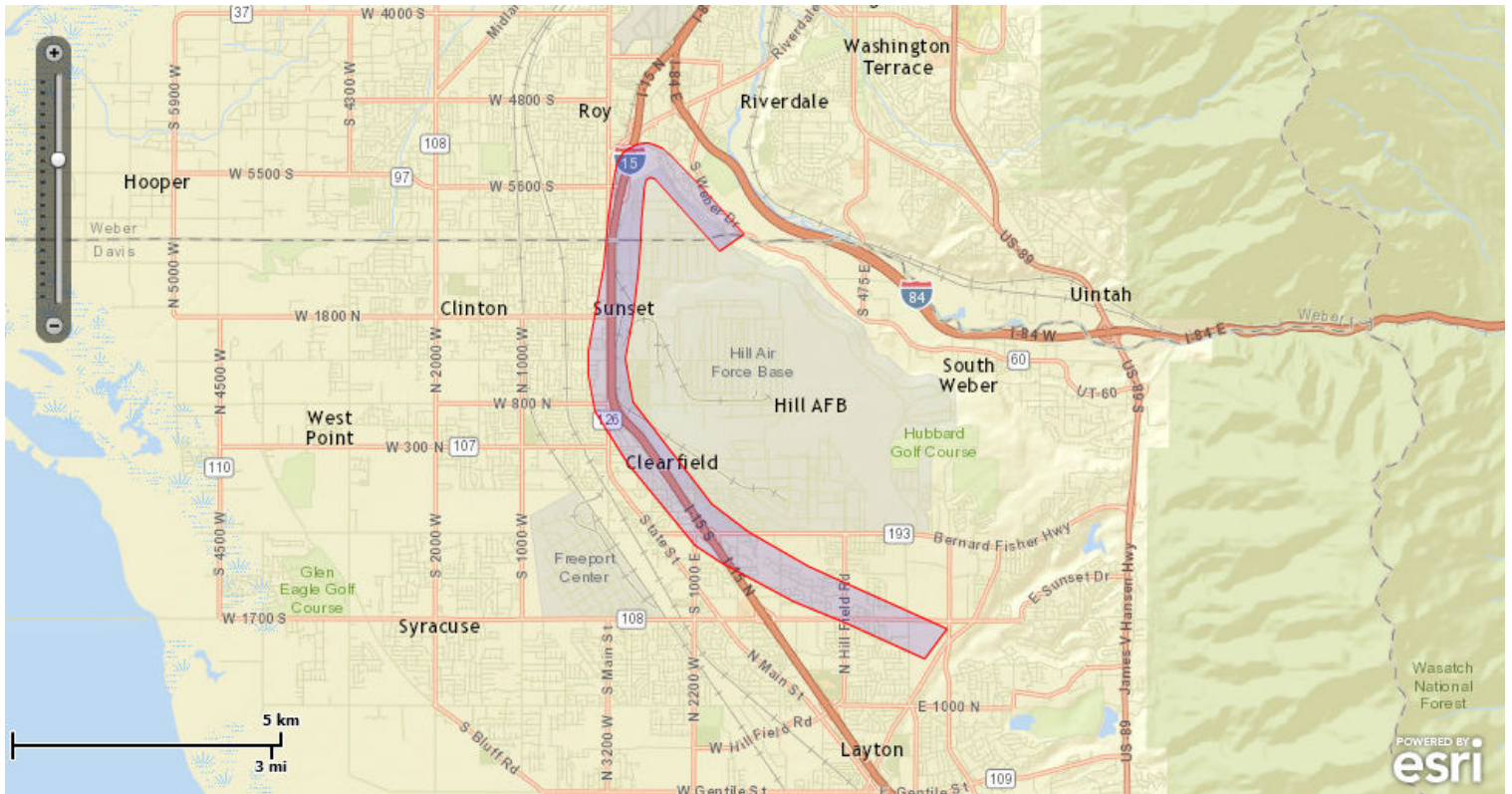
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: DWCCC Piping Project

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-111.9553763 41.0822772, -111.9731923 41.0883532, -111.9846936 41.0919111, -112.0007922 41.098477, -112.0065343 41.1013232, -112.0216534 41.1151692, -112.0288715 41.1237998, -112.0304122 41.1301859, -112.03038 41.133554, -112.0269213 41.1481007, -112.0258673 41.1565065, -112.0245534 41.1630161, -112.0239272 41.1655727, -112.0225217 41.1671961, -112.0207064 41.1681201, -112.0191941 41.1686297, -112.0180117 41.1687411, -112.0168938 41.1687112, -112.0156578 41.1684754, -112.0136721 41.1678628, -112.0120735 41.1667466, -112.0049706 41.1612922, -111.995675 41.1534598, -112.001063 41.1506227, -112.0154517 41.1627204, -112.0164849 41.1629893, -112.0174602 41.1625927, -112.0177729 41.1615759, -112.0184619 41.1557241, -112.0187464 41.1513754, -112.0192013 41.1474201, -112.0202089 41.1405456, -112.0221196 41.1325986, -112.020337 41.1253862, -112.0027631 41.108211, -111.9946092 41.1035868, -111.9813441 41.0978321, -111.950411 41.0873169, -111.9553763 41.0822772)))



United States Department of Interior
Fish and Wildlife Service

Project name: DWCCC Piping Project

Project Counties: Davis, UT | Weber, UT



United States Department of Interior
Fish and Wildlife Service

Project name: DWCCC Piping Project

Endangered Species Act Species List

There are a total of 4 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

| Birds | Status | Has Critical Habitat | Condition(s) |
|---|------------|----------------------|--------------|
| Greater sage-grouse (<i>Centrocercus urophasianus</i>) Population: entire | Candidate | | |
| Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>) Population: Western U.S. DPS | Threatened | Proposed | |
| Fishes | | | |
| June sucker (<i>Chasmistes liorus</i>) Population: Entire | Endangered | Final designated | |
| Mammals | | | |
| Canada Lynx (<i>Lynx canadensis</i>) Population: (Contiguous U.S. DPS) | Threatened | | |



United States Department of Interior
Fish and Wildlife Service

Project name: DWCCC Piping Project

Critical habitats that lie within your project area

There are no critical habitats within your project area.



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

GREGORY SHEEHAN
Division Director

December 5, 2014

Spencer Stephens
J-U-B Engineers
422 W. Riverside, Suite 304
Spokane, WA 99201

Subject: Species of Concern Near the Davis and Weber Canal Piping Project

Dear Spencer Stephens:

I am writing in response to your email dated November 24, 2014 regarding information on species of special concern proximal to the proposed Davis and Weber Canal Piping Project located in Sections 6, 7, 8, 9 and 16 of Township 4 North, Range 1 West, Section 1 of Township 4 North, Range 2 West, Sections 13, 24, 25, 26, 35 and 36 of Township 5 North, Range 2 West, and Section 19 of Township 5 North, Range 1 West, SLB&M in Davis County and Weber County, Utah.

Within the sections noted above, the Utah Division of Wildlife Resources (UDWR) has recent records of occurrence for American white pelican and bald eagle. In addition, within a two-mile radius there are recent records of occurrence for bluehead sucker, Bonneville cutthroat trout and short-eared owl. All of the aforementioned species are included on the *Utah Sensitive Species List*.

The information provided in this letter 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, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the northern region, Scott Walker, at (801) 476-2776 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

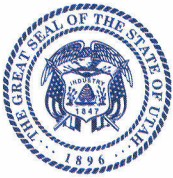
Sarah Lindsey
Information Manager
Utah Natural Heritage Program

cc: Scott Walker



Appendix B

Cultural Resources



ORIGINAL

PRO Official File Copy
Received

JUL 31 '15



Utah Division of
State History

GARY R. HERBERT
Governor

Brad Westwood
Director

400 772
605 775
107
700
770

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Action
Project *Ca*
Classification *ENV-3.00*
Control *JL 07311501*
Folder

July 23, 2015

Notice if you attach enclosure
insert here:

Wayne G. Pullan
Area Manager
Bureau of Reclamation
Provo Area Office
302 East 1860 South
Provo, Utah 84606-7317

RE: Davis and Weber Counties Canal Company Water Project, U-15-HY-0063, PRO-EA-15-004

For future correspondence, please reference Case No. 15-0971

Dear Mr. Pullan:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on July 21, 2015. UTSHPO concurs with the BOR's determination of adverse effect with the filling in of the canal after piping. If there is a chance to bury the pipe and leave the canal otherwise unmodified, that would be a means of minimizing the effect.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

IN REPLY REFER TO:

PRO-775
ENV-3.00

JUL 20 2015

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
and Historic Preservation Coordinator
Utah State Historic Preservation Office
300 Rio Grande Avenue
Salt Lake City, UT 84101

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties (U-15-HY-0063p), Utah (PRO-EA-15-004)

Dear Dr. Merritt:

The Bureau of Reclamation is initiating consultation under Title 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act, and its implementing regulations found at 36 CFR Part 800, for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah (U-15-HY-0063p) (Enclosure 1).

As stated in the enclosed cultural resources survey report titled: A Cultural Resources Assessment for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah by Sheri Murray Ellis with Certus Environmental Solutions, LLC:

“The Davis & Weber Counties Canal Company proposes to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah. The proposed piping would eliminate water loss through seepage and accommodate upgrading of the irrigation system to a pressurized network. Pipe would be placed in the canal channel and buried. The project would be accomplished in part with funding from the Bureau of Reclamation WaterSMART program.” The Area of Potential Effects (APE) for cultural resources was defined as the width of the canal right-of-way, a corridor measuring 15 meters (50 feet) wide, (see Ellis’ report Figures 2-4). In total, the APE encompasses approximately 29 acres. See the enclosed report by Ellis for all maps and photographs.

As identified in the enclosed cultural resources survey report, Certus Environmental Solutions conducted a search of previous site and project files via the Utah Division of State History online Preservation Pro system. Their findings are identified on page 8 of the attached report. Reclamation determined that the *Federal action* is an undertaking as defined in 36 CFR § 800.16(y) and a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a). We are entering into consultation with you on this undertaking and request concurrence on our finding of adverse effect to historic properties.

Identified findings from the intensive-level archeological survey include the following. No historic buildings or structures were located in the APE but the previously undocumented portion of the historic Davis-Weber Canal (sites 42DV120/42WB487). See report for details (updated IMACS Site Forms for sites 42DV120 and 42WB487 are attached). The Davis-Weber Canal as a whole was previously determined eligible for the National Register of Historic Places (NRHP). Ellis recommends, and Reclamation agrees, that the segment of the canal in the APE is contributing to that eligibility: "The proposed piping of the canal segment would convert the few remaining segments of open channel to a closed one. While this would not affect the integrity of the segments' location or alter the setting or feeling imposed on the site by its surroundings, it would substantially diminish the segments' integrity of design, workmanship, materials, and association. Piping of the last open segments in this area would effectively eliminate any readily discernible visual manifestation of the historical canal site. This would adversely affect those characteristics of the site that render the canal eligible for the NRHP under Criterion A—the criterion under which the canal site as a whole has been determined eligible."

This constitutes our reasonable and good faith effort to carry out appropriate identification efforts as prescribed in 36 CFR 800.4, and have gathered sufficient information to evaluate the NRHP eligibility of identified properties and to support the determination of effect.

Thank you for your consideration of this proposed undertaking. We understand no comment from your office within 30 days will constitute concurrence with our determination of Adverse Effect to historic properties.

If you have any questions, please contact Dr. Zachary Nelson at 801-379-1164 or by email at znelson@usbr.gov.

Sincerely,

PAUL CHRISTENSEN

Wayne G. Pullan
Area Manager

Enclosures

bc: UC-725
PRO-775 ✓
(w/ encls to each)

WBR: ZNelson:tspencer:07/13/2015:801-379-1153:t:\sec\NelsonZ_775\PRO-EA-15-004 DWCCC SHPO letter.doc



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

IN REPLY REFER TO:

PRO-775
ENV-3.00

AUG 07 2015

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Betsy Chapoose
Director, Cultural Resources
Ute Tribe of the Uintah and Ouray Reservation
P.O. Box 190
Fort Duchesne, UT 84026

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah (U-15-HY-0063p)

Dear Director Chapoose:

The Bureau of Reclamation is proposing to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah (Figures 1-3). The *action* on Reclamation lands requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. The Ute Tribe of the Uintah and Ouray Reservation (Tribe) has been identified as potentially having knowledge of cultural resources in the vicinity of the project area. Reclamation is contacting you in an effort to solicit information about potential effects to sites of religious and cultural significance and to invite you and your tribe to participate in the Section 106 process.

This project is in concert with the Davis and Weber Counties Canal Company with funds from Reclamation's WaterSMART program. Piping portions of the canal would result in water conservation that otherwise would be loss to seepage and would provide a safer environment for the public. The pipe would be placed in the existing canal channel. The channel would then be filled in and the ground cover revegetated.

The area of potential effect (APE) is located in T. 4 N., R. 1 W., secs. 6-9 and 16; T. 4 N., R. 2 W., sec. 1; T. 5 N., R. 1 W., sec. 19; and T. 5 N., R. 2 W., secs. 13, 24-26, 35, and 36 of the Salt Lake Base and Meridian. The APE and is found on the USGS 7.5' topographic quadrangles (from north to south) Roy, Clearfield, and Kaysville, Utah. Disturbance from the piping project would be limited to the existing canal prism, which varies slightly in width along the project corridor. Above-ground structures would be limited and near to ground level. Therefore, the APE for cultural resources was defined as the width of the canal right-of-way or a corridor measuring

50 feet (15 meters) wide, whichever is smaller. In total, the APE encompasses approximately 55.8 acres.

Certus Environmental Solutions, LLC surveyed the affected area for cultural resources on December 2, 2014. In their report entitled *A Cultural Resources Assessment for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah* (Utah Antiquities Project No. U-15-HY-0063p), Sheri Murray Ellis noted that the only cultural resource found in the APE was the historical Davis-Weber Canal, which they documented.

Reclamation welcomes your tribe's participation in the Section 106 process and requests information under Section 106 of the NHPA regarding the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking. Comments or concerns regarding sacred sites on Federal land or access to sacred sites on Federal land under Executive Order 13007 are also requested. If the location and nature of these resources is sensitive or confidential, this information may be withheld from public disclosure as outlined in the regulations at 36 CFR § 800.11(c).

If you would like to discuss potential effects to resources of concern, participate in the Section 106 process, or have further questions or concerns, please contact Dr. Zachary Nelson at 801-379-1164 or by email at znelson@usbr.gov by September 10, 2015 so that we can discuss this project in more detail.

Please note that a copy of this letter was also sent to Chairman Howell.

Sincerely,

for

KENT KOFFORD

Wayne G. Pullan
Area Manager

Enclosures

bc: UC-725
PRO-775 ✓

WBR: ZNelson:sjensen:08/05/2015:801-379-1164: t:\sec\NelsonZ_775\PRO-EA-15-004
DWCCC Chapoose letter v2.docx



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

IN REPLY REFER TO:

PRO-775
ENV-3.00

AUG 07 2015

CERTIFIED – RETURN RECEIPT REQUESTED

Honorable Gordon Howell
Chairman, Ute Tribe of the Uintah
and Ouray Reservation
P.O. Box 190
Fort Duchesne, UT 84026

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah (U-15-HY-0063p)

Dear Chairman Howell:

The Bureau of Reclamation is proposing to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah (Figures 1-3). The *action* on Reclamation lands requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. The Ute Tribe of the Uintah and Ouray Reservation (Tribe) has been identified as potentially having knowledge of cultural resources in the vicinity of the project area. Reclamation is contacting you in an effort to solicit information about potential effects to sites of religious and cultural significance and to invite you and your tribe to participate in the Section 106 process.

This project is in concert with the Davis and Weber Counties Canal Company with funds from Reclamation's WaterSMART program. Piping portions of the canal would result in water conservation that otherwise would be loss to seepage and would provide a safer environment for the public. The pipe would be placed in the existing canal channel. The channel would then be filled in and the ground cover revegetated.

The area of potential effect (APE) is located in T. 4 N., R. 1 W., secs. 6-9 and 16; T. 4 N., R. 2 W., sec. 1; T. 5 N., R. 1 W., sec. 19; and T. 5 N., R. 2 W., secs. 13, 24-26, 35, and 36 of the Salt Lake Base and Meridian. The APE and is found on the USGS 7.5' topographic quadrangles (from north to south) Roy, Clearfield, and Kaysville, Utah. Disturbance from the piping project would be limited to the existing canal prism, which varies slightly in width along the project corridor. Above-ground structures would be limited and near to ground level. Therefore, the APE for cultural resources was defined as the width of the canal right-of-way or a corridor

measuring 15 meters (50 feet) wide, whichever is smaller. In total, the APE encompasses approximately 55.8 acres.

Certus Environmental Solutions, LLC surveyed the affected area for cultural resources on December 2, 2014. In their report entitled *A Cultural Resources Assessment for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah* (Utah Antiquities Project No. U-15-HY-0063p), Sheri Murray Ellis noted that the only cultural resource found in the APE was the historical Davis-Weber Canal, which they documented.

Reclamation welcomes your tribe's participation in the Section 106 process and requests information under Section 106 of the NHPA regarding the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking. Comments or concerns regarding sacred sites on Federal land or access to sacred sites on Federal land under Executive Order 13007 are also requested. If the location and nature of these resources is sensitive or confidential, this information may be withheld from public disclosure as outlined in the regulations at 36 CFR § 800.11(c).

If you would like to discuss potential effects to resources of concern, participate in the Section 106 process, or have further questions or concerns, please contact Dr. Zachary Nelson at 801-379-1164 or by email at znelson@usbr.gov by September 10, 2015 so that we can discuss this project in more detail.

for

Sincerely,

KENT KOFFORD

Wayne G. Pullan
Area Manager

Enclosures

bc: UC-725
PRO-775 ✓

WBR: ZNelson:sjensen:08/05/2015:801-379-1164: t:\sec\NelsonZ_775\PRO-EA-15-004
DWCCC Howell letter v2.docx



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

IN REPLY REFER TO:

PRO-775
ENV-3.00

AUG 07 2015

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Patty Timbimboo-Madsen
Director, Cultural and Natural Resources
Northwest Band Shoshone Tribe
707 North Main Street
Brigham City, UT 84302

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah (U-15-HY-0063p)

Dear Director Timbimboo-Madsen:

The Bureau of Reclamation is proposing to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah (Figures 1-3). The *action* on Reclamation lands requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. The Northwest Band Shoshone Tribe (Tribe) has been identified as potentially having knowledge of cultural resources in the vicinity of the project area. Reclamation is contacting you in an effort to solicit information about potential effects to sites of religious and cultural significance and to invite you and your tribe to participate in the Section 106 process.

This project is in concert with the Davis and Weber Counties Canal Company with funds from Reclamation's WaterSMART program. Piping portions of the canal would result in water conservation that otherwise would be loss to seepage and would provide a safer environment for the public. The pipe would be placed in the existing canal channel. The channel would then be filled in and the ground cover revegetated.

The area of potential effect (APE) is located in T. 4 N., R. 1 W., secs. 6-9 and 16; T. 4 N., R. 2 W., sec. 1; T. 5 N., R. 1 W., sec. 19; and T. 5 N., R. 2 W., secs. 13, 24-26, 35, and 36 of the Salt Lake Base and Meridian. The APE and is found on the USGS 7.5' topographic quadrangles (from north to south) Roy, Clearfield, and Kaysville, Utah. Disturbance from the piping project would be limited to the existing canal prism, which varies slightly in width along the project corridor. Above-ground structures would be limited and near to ground level. Therefore, the APE for cultural resources was defined as the width of the canal right-of-way or a corridor measuring

15 meters (50 feet) wide, whichever is smaller. In total, the APE encompasses approximately 55.8 acres.

Certus Environmental Solutions, LLC surveyed the affected area for cultural resources on December 2, 2014. In their report entitled *A Cultural Resources Assessment for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah* (Utah Antiquities Project No. U-15-HY-0063p), Sheri Murray Ellis noted that the only cultural resource found in the APE was the historical Davis-Weber Canal, which they documented.

Reclamation welcomes your tribe's participation in the Section 106 process and requests information under Section 106 of the NHPA regarding the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking. Comments or concerns regarding sacred sites on Federal land or access to sacred sites on Federal land under Executive Order 13007 are also requested. If the location and nature of these resources is sensitive or confidential, this information may be withheld from public disclosure as outlined in the regulations at 36 CFR § 800.11(c).

If you would like to discuss potential effects to resources of concern, participate in the Section 106 process, or have further questions or concerns, please contact Dr. Zachary Nelson at 801-379-1164 or by email at znelson@usbr.gov by September 10, 2015 so that we can discuss this project in more detail.

Please note that a copy of this letter was also sent to Chairman Warner.

Sincerely,

for
KENT KOFFORD

Wayne G. Pullan
Area Manager

Enclosures

bc: UC-725
PRO-775 ✓

WBR: ZNelson:sjensen:08/05/2015:801-379-1164: t:\sec\NelsonZ_775\PRO-EA-15-004
DWCCC Timbimboo-Madsen letter v2.docx



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

IN REPLY REFER TO:

PRO-775
ENV-3.00

AUG 07 2015

CERTIFIED – RETURN RECEIPT REQUESTED

Honorable Shane Warner
Chairman, Northwest Band Shoshone Tribe
505 Pershing Ave Suite 200
Pocatello, ID 83201

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah (U-15-HY-0063p)

Dear Chairman Warner:

The Bureau of Reclamation is proposing to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah (Figures 1-3). The *action* on Reclamation lands requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. The Northwest Band Shoshone Tribe (Tribe) has been identified as potentially having knowledge of cultural resources in the vicinity of the project area. Reclamation is contacting you in an effort to solicit information about potential effects to sites of religious and cultural significance and to invite you and your tribe to participate in the Section 106 process.

This project is in concert with the Davis and Weber Counties Canal Company with funds from Reclamation's WaterSMART program. Piping portions of the canal would result in water conservation that otherwise would be loss to seepage and would provide a safer environment for the public. The pipe would be placed in the existing canal channel. The channel would then be filled in and the ground cover revegetated.

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Certus Environmental Solutions, LLC surveyed the affected area for cultural resources on December 2, 2014. In their report entitled *A Cultural Resources Assessment for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah* (Utah Antiquities Project No. U-15-HY-0063p), Sheri Murray Ellis noted that the only cultural resource found in the APE was the historical Davis-Weber Canal, which they documented.

Reclamation welcomes your tribe's participation in the Section 106 process and requests information under Section 106 of the NHPA regarding the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking. Comments or concerns regarding sacred sites on Federal land or access to sacred sites on Federal land under Executive Order 13007 are also requested. If the location and nature of these resources is sensitive or confidential, this information may be withheld from public disclosure as outlined in the regulations at 36 CFR § 800.11(c).

If you would like to discuss potential effects to resources of concern, participate in the Section 106 process, or have further questions or concerns, please contact Dr. Zachary Nelson at 801-379-1164 or by email at znelson@usbr.gov by September 10, 2015 so that we can discuss this project in more detail.

Sincerely,
for **KENT KOFFORD**

Wayne G. Pullan
Area Manager

Enclosures

bc: UC-725
PRO-775✓

WBR: ZNelson:sjensen:08/05/2015:801-379-1164: t:\sec\NelsonZ_775\PRO-EA-15-004
DWCCC Warner letter v2.docx

**Advisory Council on Historic Preservation
Electronic Section 106 Documentation Submittal System (e106) Form
MS Word format**

Send to: e106@achp.gov

Date: September 2, 2015

I. Basic information

- 1. Name of federal agency.** (If multiple agencies, state them all and indicate whether one is the lead agency):

Bureau of Reclamation

- 2. Name of undertaking/project.** (Include project/permit/application number if applicable):

Davis and Weber Counties Canal Company Water Project (DWCCC)
Utah SHPO Project No. U-15-HY-0063p/Case No. 15-0971
Reclamation Project No. PRO-EA-15-004 – Weber Basin

- 3. Location of undertaking.** (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands):

Davis and Weber Counties, Utah; Federal Land; No tribal land involvement.

- 4. Name and title of federal agency official and contact person for this undertaking,** including email address and phone number:

Zachary Nelson, Ph.D.
Archaeologist
Bureau of Reclamation, Provo Area Office
znelson@usbr.gov
302 East 1860 South
Provo, Utah 84606
Cell: 801-372-2027

- 5. Purpose of notification.** Indicate whether this documentation is to:

- notify the ACHP of a finding that an undertaking may adversely affect historic properties, and
- invite the ACHP to participate in a section 106 consultation

II. Information on the undertaking*

- 6. Describe the undertaking and nature of federal involvement** (if multiple federal agencies are involved, specify involvement of each):

The Bureau of Reclamation is initiating consultation under Title 54 U.S.C. § 306108, commonly

known as Section 106 of the National Historic Preservation Act, and its implementing regulations found at 36 CFR Part 800, for the Davis and Weber Counties Canal Company Water Project, Davis and Weber Counties, Utah.

The Davis & Weber Counties Canal Company proposes to pipe a roughly 9.2 mile-long section of the Davis–Weber Canal in southern Weber County and northern Davis County, Utah. The proposed piping would eliminate water loss through seepage and accommodate upgrading of the irrigation system to a pressurized network. It will also improve public safety. Pipe would be placed in the canal channel and buried. The project would be accomplished in part with funding from the Bureau of Reclamation’s WaterSMART program.

The installation of the piping would include the demolition of all existing canal structures, excavation, backfilling, and surface restoration. Also included in the proposed undertaking is the installation of all standpipes, air valve assemblies, drains, valves and other incidental items associated with piping the existing canal. The proposed undertaking will also include backfilling the existing canal with native material. After re-grading the canal to match adjacent grades, disturbed or barren soils will be seeded with native vegetation.

7. Describe the area of potential effects:

The Area of Potential Effect (APE) for cultural resources was defined as the width of the canal right-of-way, a corridor measuring 15 meters (50 feet) wide. In total, the APE encompasses approximately 29 acres. The APE is located in Township 4 North, Range 1 West, Sections 6-9 and 16; Township 4 North, Range 2 West Section 1; Township 5 North, Range 1 West Section 19; and Township 5 North, Range 2 West, Sections 13, 24-26, 35, and 36 of the Salt Lake Base and Meridian.

8. Describe steps taken to identify historic properties:

Certus Environmental Solutions, LLC (Certus), conducted a search of previous site and project files via the Utah Division of State History (UDSH) online Preservation Pro system on November 24, 2014. The file search encompassed an area extending 1/2 mile in all directions from the centerline of the APE. As a result of the previous surveys, a large portion of the Davis–Weber Canal in the APE was documented. The canal site was assigned site number 42DV120 in Davis County and 42WB487 in Weber County. The canal site as a whole was determined eligible for the National Register of Historic Places (NRHP) as a result of the prior documentation. No other archaeological sites have been documented in the APE, though numerous sites (mostly railroad and canals) and dozens of historical buildings have been documented in the larger file search area. In addition to UDSH site and project records, Certus examined General Land Office (GLO) maps to gather information about past land uses and potential historical resources in the survey area. Historical GLO maps are available for the area and none show man-made features in the APE other than the canal itself.

A Class III cultural resource inventory was performed across the APE on December 2, 2014 by Certus personnel. No historic buildings or structures were located in the survey area but previously undocumented portions of the historical Davis–Weber Canal site were documented.

9. Describe the historic property (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information):

The Davis–Weber Canal was constructed between 1869 and 1884 to carry irrigation water to rural communities along the eastern shores of the Great Salt Lake (i.e., west of Ogden). The canal was originally constructed as an earthen ditch. Concrete lining was reportedly added to sections of the canal beginning in 1912 and continuing into the modern era. The canal had a substantial impact on the development of the rural communities by expanding lands available for agricultural development and increasing productivity over dry farming, which had been the predominate method of farming prior to the availability of flood irrigation.

10. Describe the undertaking's effects on historic properties:

The proposed piping of the canal segment would convert the few remaining segments of open channel to a closed one. While this would not affect the integrity of the segments' location or alter the setting or feeling imposed on the site by its surroundings, it would substantially diminish the segments' integrity of design, workmanship, materials, and association.

11. Explain how this undertaking would adversely affect historic properties (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects):

Piping of the last open segments in this area would effectively eliminate any readily discernible visual manifestation of the historical canal site. This would adversely affect those characteristics of the site that render the canal eligible for the NRHP under Criterion A—the criterion under which the canal site as a whole has been determined eligible.

12. Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public, including any correspondence from the SHPO and/or THPO.

Utah SHPO concurred with Reclamation on July 23, 2015 that the proposed project would have an adverse effect on historic properties. They provided a case number for this project: Case No. 15-0971.

* see *Instructions for Completing the ACHP e106 Form*

III. Optional Information

13. Please indicate the status of any consultation that has occurred to date. Are there any consulting parties involved other than the SHPO/THPO? Are there any outstanding or unresolved concerns or issues that the ACHP should know about in deciding whether to participate in consultation? In accordance with 36 CFR 800.6(a), Reclamation is continuing its consultation with the Utah State Historic Preservation Officers, the Davis and Weber Counties Canal Company, and tribes which may

attach religious or cultural significance to the canal.

There are no known issues associated with this project. No comments were received from the general public or even other agencies during the environmental assessment scoping meetings.

14. Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links:

No, there was no project website set up since this project was anticipated to have very low interest/concerns from the public (i.e. the project will take place entirely within the existing canal easement which is previously disturbed and there were no adverse effects – beyond the cultural effect – identified in the EA for the project). There have been numerous projects along the canal over the previous decade with very little (to no interest) shown by the public.

15. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard or other federal interagency project tracking system? If so, please provide the link or reference number:

No.

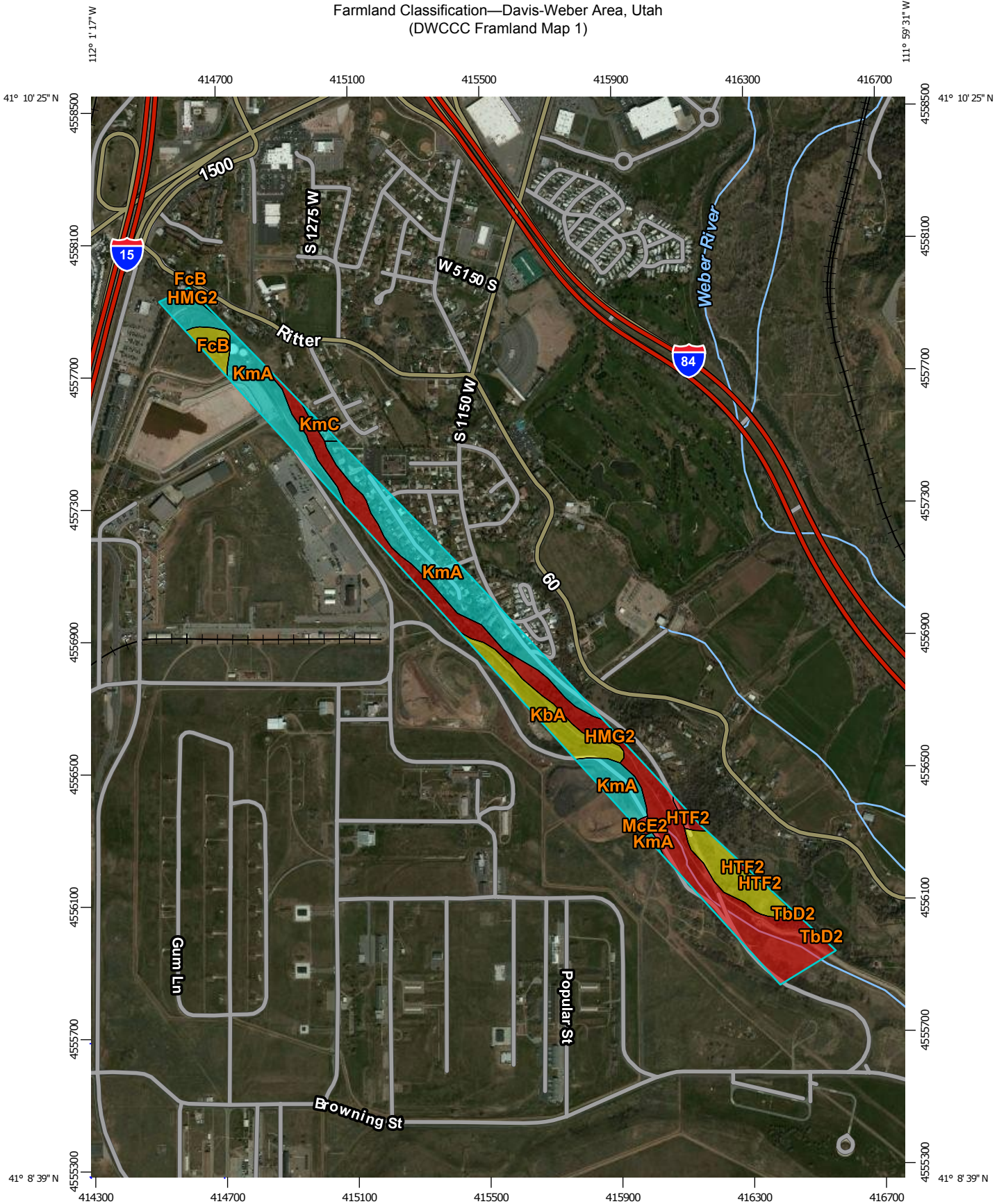
The following are attached to this form (check all that apply):

- Section 106 consultation correspondence
- Maps, photographs, drawings, and/or plans
- Additional historic property information
- Other:

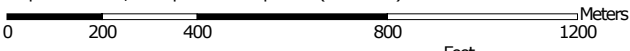
Appendix C

Soil Survey

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland Map 1)



Map Scale: 1:15,900 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland Map 1)









MAP LEGEND








Area of Interest (AOI)

 Area of Interest (AOI)




Soils








Soil Rating Polygons






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







Soil Rating Lines










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Soil Rating Points


-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Water Features

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland Map 1)

MAP INFORMATION

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Davis-Weber Area, Utah
Survey Area Data: Version 8, Aug 5, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 2, 2011—Apr 16, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

| Farmland Classification— Summary by Map Unit — Davis-Weber Area, Utah (UT607) | | | | |
|---|--|----------------------------------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| FcB | Francis loamy fine sand, 0 to 3 percent slopes | Prime farmland if irrigated | 2.6 | 2.7% |
| HMG2 | Hillfield-Marriott complex, 30 to 60 percent slopes, eroded | Not prime farmland | 36.0 | 38.0% |
| HTF2 | Hillfield-Timpanogos-Parleys complex, 20 to 30 percent slopes, eroded | Not prime farmland | 1.1 | 1.1% |
| KbA | Kilburn sandy loam, 0 to 1 percent slopes | Prime farmland if irrigated | 8.1 | 8.5% |
| KmA | Kilburn gravelly sandy loam, deep over clean sands, 0 to 3 percent slopes | Farmland of statewide importance | 38.5 | 40.7% |
| KmC | Kilburn gravelly sandy loam, deep over clean sands, 3 to 10 percent slopes | Farmland of statewide importance | 0.6 | 0.7% |
| McE2 | Marriott cobbly sandy loam, 10 to 30 percent slopes, eroded | Not prime farmland | 0.5 | 0.5% |
| TbB | Timpanogos loam, 1 to 3 percent slopes | Prime farmland if irrigated | 7.3 | 7.7% |
| TbD2 | Timpanogos loam, 6 to 10 percent slopes, eroded | Prime farmland if irrigated | 0.1 | 0.1% |
| Totals for Area of Interest | | | 94.8 | 100.0% |

Description

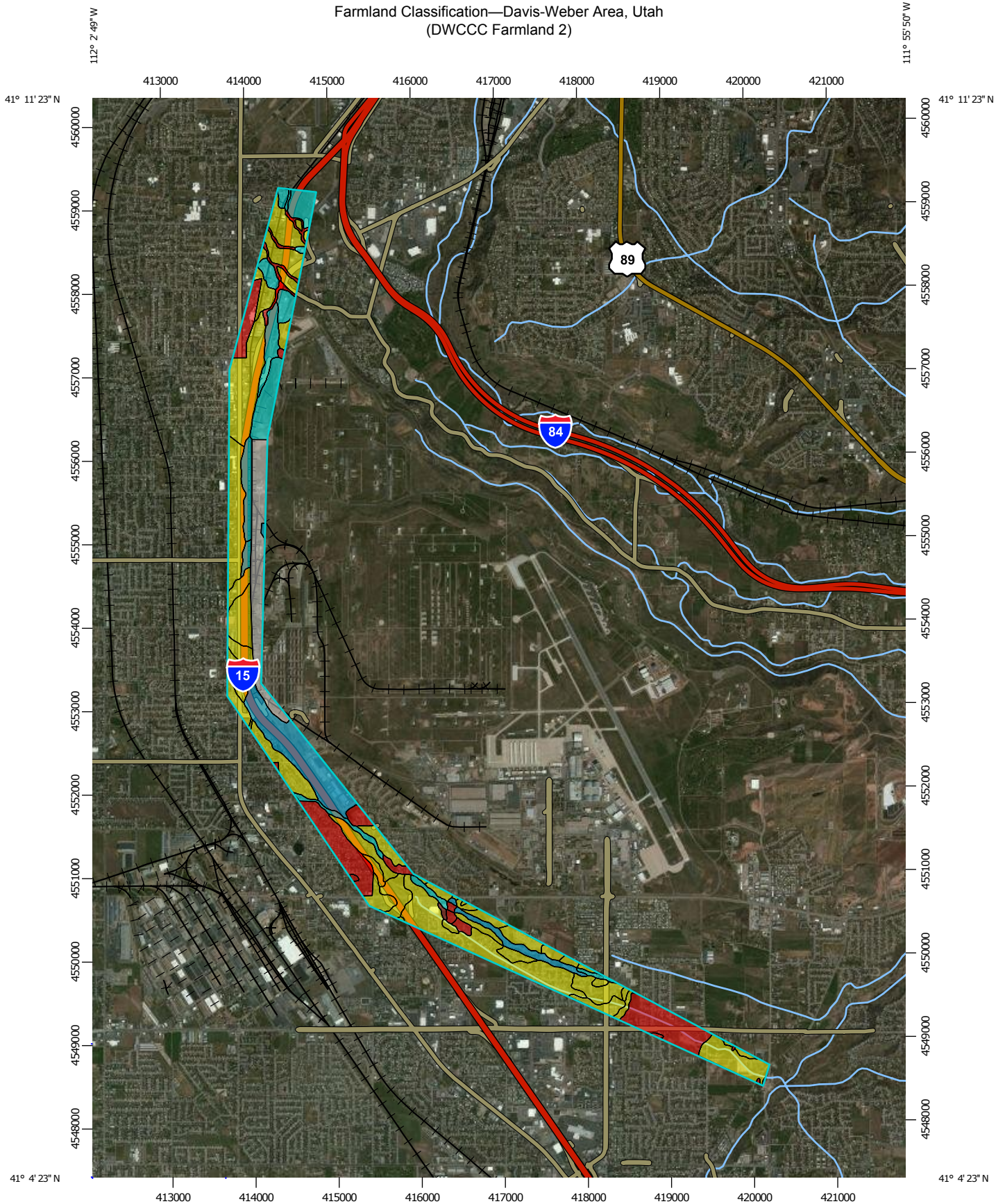
Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

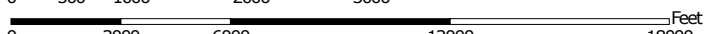
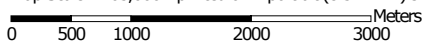
Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland 2)



Map Scale: 1:63,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

3/1/2015
Page 1 of 6

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland 2)









MAP LEGEND








Area of Interest (AOI)

 Area of Interest (AOI)




Soils








Soil Rating Polygons






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







Soil Rating Lines










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Soil Rating Points


-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available


Water Features

Farmland Classification—Davis-Weber Area, Utah
(DWCCC Farmland 2)

MAP INFORMATION

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Davis-Weber Area, Utah
Survey Area Data: Version 8, Aug 5, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Apr 28, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

| Farmland Classification— Summary by Map Unit — Davis-Weber Area, Utah (UT607) | | | | |
|---|---|---|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| AbB | Ackmen loam, 1 to 3 percent slopes | Prime farmland if irrigated | 3.5 | 0.2% |
| Ac | Airport silt loam, 0 to 2 percent slopes | Not prime farmland | 6.6 | 0.4% |
| DaA | Draper loam, 0 to 1 percent slopes | Prime farmland if irrigated and drained | 0.0 | 0.0% |
| FcB | Francis loamy fine sand, 0 to 3 percent slopes | Prime farmland if irrigated | 165.7 | 10.1% |
| GP | Gravel pits | Not prime farmland | 2.0 | 0.1% |
| HMG2 | Hillfield-Marriott complex, 30 to 60 percent slopes, eroded | Not prime farmland | 6.9 | 0.4% |
| HnE2 | Hillfield soils, 10 to 20 percent slopes, eroded | Farmland of unique importance | 29.9 | 1.8% |
| HTF2 | Hillfield-Timpanogos-Parleys complex, 20 to 30 percent slopes, eroded | Not prime farmland | 0.3 | 0.0% |
| KaA | Kidman fine sandy loam, 0 to 1 percent slopes | Prime farmland if irrigated | 8.1 | 0.5% |
| KaB | Kidman fine sandy loam, 1 to 3 percent slopes | Prime farmland if irrigated | 162.7 | 9.9% |
| KaC | Kidman fine sandy loam, 3 to 6 percent slopes | Prime farmland if irrigated | 43.0 | 2.6% |
| KaD | Kidman fine sandy loam, 6 to 10 percent slopes | Prime farmland if irrigated | 10.3 | 0.6% |
| KaE2 | Kidman fine sandy loam, 10 to 20 percent slopes, eroded | Farmland of statewide importance | 28.6 | 1.7% |
| KbA | Kilburn sandy loam, 0 to 1 percent slopes | Prime farmland if irrigated | 85.1 | 5.2% |
| KbC | Kilburn sandy loam, 3 to 6 percent slopes | Not prime farmland | 3.3 | 0.2% |
| KgB | Kilburn gravelly sandy loam, 1 to 3 percent slopes | Prime farmland if irrigated | 1.0 | 0.1% |
| KmA | Kilburn gravelly sandy loam, deep over clean sands, 0 to 3 percent slopes | Farmland of statewide importance | 107.0 | 6.5% |

| Farmland Classification— Summary by Map Unit — Davis-Weber Area, Utah (UT607) | | | | |
|---|--|---|----------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| KmC | Kilburn gravelly sandy loam, deep over clean sands, 3 to 10 percent slopes | Farmland of statewide importance | 76.6 | 4.7% |
| LcB | Layton loamy fine sand, 0 to 3 percent slopes | Prime farmland if irrigated | 53.2 | 3.2% |
| LcC | Layton loamy fine sand, 3 to 6 percent slopes | Prime farmland if irrigated | 74.0 | 4.5% |
| McE2 | Marriott cobbly sandy loam, 10 to 30 percent slopes, eroded | Not prime farmland | 11.4 | 0.7% |
| NOTCOM | No Digital Data Available | | 121.9 | 7.4% |
| PaB | Parleys loam, 1 to 3 percent slopes | Prime farmland if irrigated | 272.4 | 16.5% |
| PaD | Parleys loam, 6 to 10 percent slopes | Not prime farmland | 0.4 | 0.0% |
| PaE2 | Parleys loam, 10 to 20 percent slopes, eroded | Not prime farmland | 0.5 | 0.0% |
| PxB | Preston fine sand, 1 to 10 percent slopes | Farmland of unique importance | 140.1 | 8.5% |
| PxE | Preston fine sand, 10 to 20 percent slopes | Not prime farmland | 10.7 | 0.6% |
| TbB | Timpanogos loam, 1 to 3 percent slopes | Prime farmland if irrigated | 2.4 | 0.1% |
| TbC | Timpanogos loam, 3 to 6 percent slopes | Prime farmland if irrigated | 4.7 | 0.3% |
| TrB2 | Trenton silt loam, 1 to 3 percent slopes, eroded | Not prime farmland | 86.7 | 5.3% |
| TrC3 | Trenton silt loam, 3 to 10 percent slopes, severely eroded | Not prime farmland | 1.5 | 0.1% |
| UL | Urban land | Not prime farmland | 119.6 | 7.3% |
| W | Water | Not prime farmland | 1.7 | 0.1% |
| WaB | Warm Springs fine sandy loam, 1 to 3 percent slopes | Prime farmland if irrigated and drained | 2.5 | 0.2% |
| WIA | Warm Springs fine sandy loam, shallow water table, 0 to 1 percent slopes | Not prime farmland | 3.7 | 0.2% |
| Totals for Area of Interest | | | 1,648.1 | 100.0% |

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

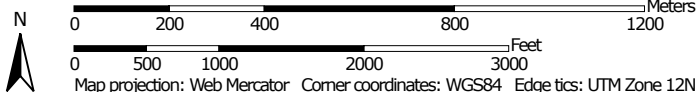
Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Soil Map—Davis-Weber Area, Utah
(DWCCC Soil Map 1)




Map Scale: 1:15,900 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Davis-Weber Area, Utah

Survey Area Data: Version 8, Aug 5, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

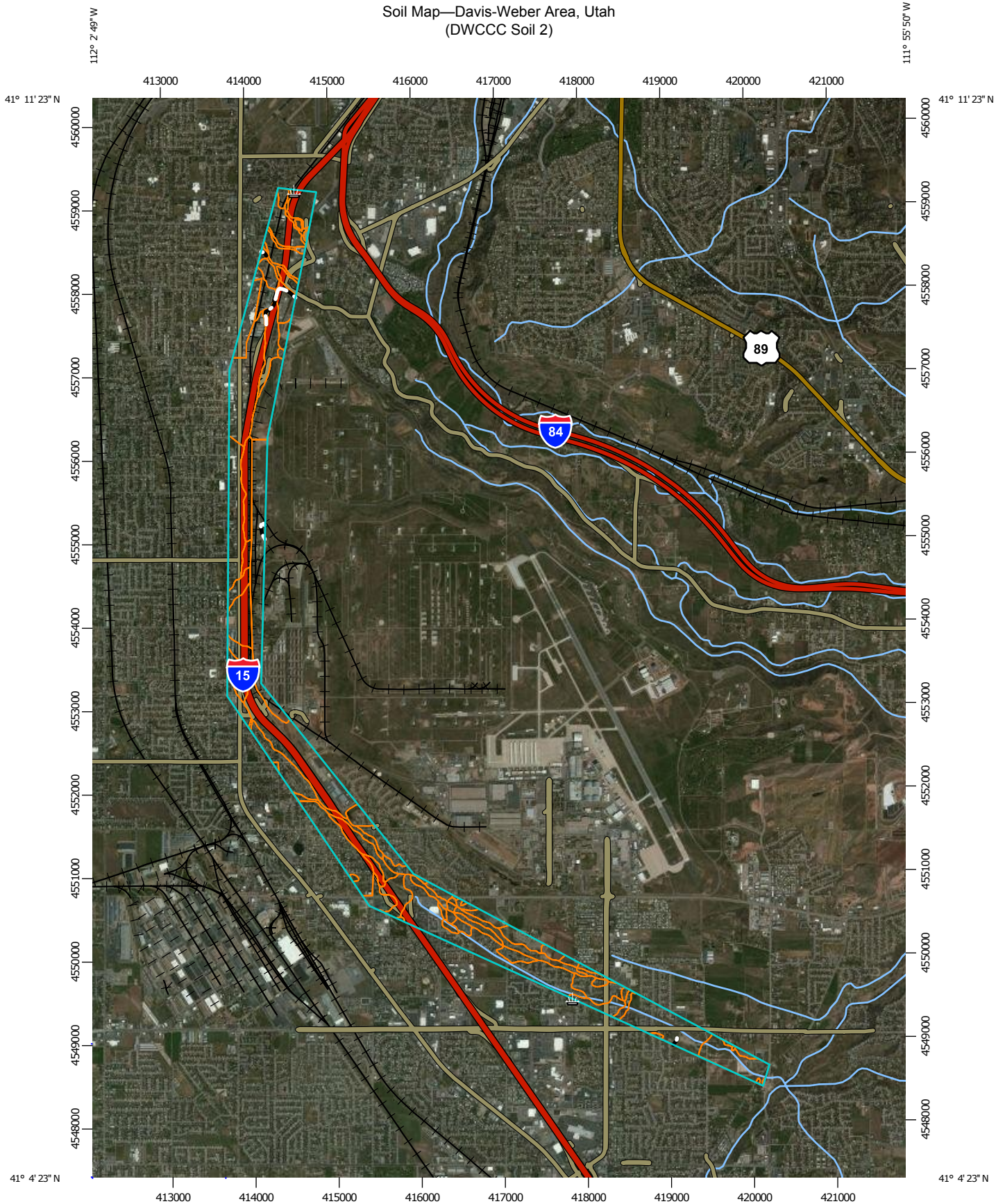
Date(s) aerial images were photographed: May 2, 2011—Apr 16, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

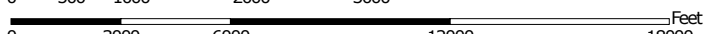
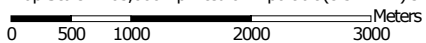
Map Unit Legend

| Davis-Weber Area, Utah (UT607) | | | |
|------------------------------------|--|--------------|----------------|
| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
| FcB | Francis loamy fine sand, 0 to 3 percent slopes | 2.6 | 2.7% |
| HMG2 | Hillfield-Marriott complex, 30 to 60 percent slopes, eroded | 36.0 | 38.0% |
| HTF2 | Hillfield-Timpanogos-Parleys complex, 20 to 30 percent slopes, eroded | 1.1 | 1.1% |
| KbA | Kilburn sandy loam, 0 to 1 percent slopes | 8.1 | 8.5% |
| KmA | Kilburn gravelly sandy loam, deep over clean sands, 0 to 3 percent slopes | 38.5 | 40.7% |
| KmC | Kilburn gravelly sandy loam, deep over clean sands, 3 to 10 percent slopes | 0.6 | 0.7% |
| McE2 | Marriott cobbly sandy loam, 10 to 30 percent slopes, eroded | 0.5 | 0.5% |
| TbB | Timpanogos loam, 1 to 3 percent slopes | 7.3 | 7.7% |
| TbD2 | Timpanogos loam, 6 to 10 percent slopes, eroded | 0.1 | 0.1% |
| Totals for Area of Interest | | 94.8 | 100.0% |

Soil Map—Davis-Weber Area, Utah
(DWCCC Soil 2)



Map Scale: 1:63,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

3/1/2015
Page 1 of 4


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Davis-Weber Area, Utah

Survey Area Data: Version 8, Aug 5, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Apr 28, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

| Davis-Weber Area, Utah (UT607) | | | |
|--------------------------------|--|--------------|----------------|
| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
| AbB | Ackmen loam, 1 to 3 percent slopes | 3.5 | 0.2% |
| Ac | Airport silt loam, 0 to 2 percent slopes | 6.6 | 0.4% |
| DaA | Draper loam, 0 to 1 percent slopes | 0.0 | 0.0% |
| FcB | Francis loamy fine sand, 0 to 3 percent slopes | 165.7 | 10.1% |
| GP | Gravel pits | 2.0 | 0.1% |
| HMG2 | Hillfield-Marriott complex, 30 to 60 percent slopes, eroded | 6.9 | 0.4% |
| HnE2 | Hillfield soils, 10 to 20 percent slopes, eroded | 29.9 | 1.8% |
| HTF2 | Hillfield-Timpanogos-Parleys complex, 20 to 30 percent slopes, eroded | 0.3 | 0.0% |
| KaA | Kidman fine sandy loam, 0 to 1 percent slopes | 8.1 | 0.5% |
| KaB | Kidman fine sandy loam, 1 to 3 percent slopes | 162.7 | 9.9% |
| KaC | Kidman fine sandy loam, 3 to 6 percent slopes | 43.0 | 2.6% |
| KaD | Kidman fine sandy loam, 6 to 10 percent slopes | 10.3 | 0.6% |
| KaE2 | Kidman fine sandy loam, 10 to 20 percent slopes, eroded | 28.6 | 1.7% |
| KbA | Kilburn sandy loam, 0 to 1 percent slopes | 85.1 | 5.2% |
| KbC | Kilburn sandy loam, 3 to 6 percent slopes | 3.3 | 0.2% |
| KgB | Kilburn gravelly sandy loam, 1 to 3 percent slopes | 1.0 | 0.1% |
| KmA | Kilburn gravelly sandy loam, deep over clean sands, 0 to 3 percent slopes | 107.0 | 6.5% |
| KmC | Kilburn gravelly sandy loam, deep over clean sands, 3 to 10 percent slopes | 76.6 | 4.7% |
| LcB | Layton loamy fine sand, 0 to 3 percent slopes | 53.2 | 3.2% |
| LcC | Layton loamy fine sand, 3 to 6 percent slopes | 74.0 | 4.5% |
| McE2 | Marriott cobbly sandy loam, 10 to 30 percent slopes, eroded | 11.4 | 0.7% |

| Davis-Weber Area, Utah (UT607) | | | |
|------------------------------------|--|----------------|----------------|
| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
| NOTCOM | No Digital Data Available | 121.9 | 7.4% |
| PaB | Parleys loam, 1 to 3 percent slopes | 272.4 | 16.5% |
| PaD | Parleys loam, 6 to 10 percent slopes | 0.4 | 0.0% |
| PaE2 | Parleys loam, 10 to 20 percent slopes, eroded | 0.5 | 0.0% |
| PxB | Preston fine sand, 1 to 10 percent slopes | 140.1 | 8.5% |
| PxE | Preston fine sand, 10 to 20 percent slopes | 10.7 | 0.6% |
| TbB | Timpanogos loam, 1 to 3 percent slopes | 2.4 | 0.1% |
| TbC | Timpanogos loam, 3 to 6 percent slopes | 4.7 | 0.3% |
| TrB2 | Trenton silt loam, 1 to 3 percent slopes, eroded | 86.7 | 5.3% |
| TrC3 | Trenton silt loam, 3 to 10 percent slopes, severely eroded | 1.5 | 0.1% |
| UL | Urban land | 119.6 | 7.3% |
| W | Water | 1.7 | 0.1% |
| WaB | Warm Springs fine sandy loam, 1 to 3 percent slopes | 2.5 | 0.2% |
| WIA | Warm Springs fine sandy loam, shallow water table, 0 to 1 percent slopes | 3.7 | 0.2% |
| Totals for Area of Interest | | 1,648.1 | 100.0% |

Appendix D

USACE Correspondence



US Army Corps of Engineers

Irrigation Exemption Summary

**Sacramento District
1325 J Street
Sacramento, CA 95814-2922**

FARM OR STOCK POND OR IRRIGATION DITCH CONSTRUCTION OR MAINTENANCE

Pursuant to Section 404 of the Clean Water Act (33 USC 1344) and Federal Regulations (33 CFR 323.4(a)(3)), certain discharges for the construction or maintenance of farm or stock ponds or irrigation ditches have been exempted from requiring a Section 404 permit. Included in the exemption are the construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not the construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption.

A Section 404 permit is required if either of the following occurs:

- (1) Any discharge of dredged or fill material resulting from the above activities which contains any toxic pollutant listed under Section 307 of the Clean Water Act shall be subject to any applicable toxic effluent standard or prohibition, and shall require a permit.
- (2) Any discharge of dredged or fill material into waters of the United States incidental to the above activities must have a permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration. For example, a permit will be required for the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches, or other works or structures used to effect such conversion. A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States.

If the proposed discharge satisfies all of the above restrictions, it is automatically exempted and no further permit action from the Corps of Engineers is required. If any of the restrictions of this exemption will not be complied with, a permit is required and should be requested using ENG Form 4345 (Application for a Department of the Army permit). A nationwide permit authorized by the Clean Water Act may be available for the proposed work. State or local approval of the work may also be required.

For general information on the Corps' Regulatory Program please check our web site at www.spk.army.mil/regulatory. For additional information or for a written determination regarding a specific project, please contact the Corps at the following addresses:

| | |
|--|----------------|
| Sacramento Main Office-1325 J Street, Room 1480, Sacramento, CA 95814 | (916) 557-5250 |
| Redding Field Office-152 Hartnell, Redding, CA 96002 | (530) 223-9534 |
| Reno Office-300 Booth Street, Room 2103, Reno, NV 89509 | (775) 784-5304 |
| Intermountain Region Main Office-533 West 2600 South, Suite 150, Bountiful, UT 84010 | (801) 295-8380 |
| Colorado/Gunnison Basin Office-402 Rood Ave., Room 142, Grand Junction, CO 81501 | (970) 243-1199 |
| Durango Office-273 Sawyer Dr., Unit #1, Durango, CO 81301 | (970) 375-9506 |
| Frisco Office-301 W Main, Suite 202, P.O. Box 607, Frisco, CO 80443 | (970) 668-9676 |
| St. George Office-321 North Mall Drive, Suite L-101, St. George, UT 84790 | (435) 986-3879 |