

**APPENDIX F**  
**EXISTING SITE PHOTOS**



Access Bridge



Ashely Creek



Dam Area - Wetlands



Inactive Bird Nest



Lower Turn Out



Road Crossing - Bridge and Turn-Out



Service Canal - Middle Reach (2)



Service Canal - Middle Reach



Service Canal - Upper Reach



Steinaker - Lower Section (2)



Steinaker - Lower Section



Steinaker - Middle Section



Steinaker Canal - Lower Section



Steinaker Reservoir



Upper Steinaker - Steinaker Dam Area

**APPENDIX G**  
**VISUAL SIMULATION**



Covered Canal with Vault



Existing Conditions

**APPENDIX H**  
**USFWS BIOLOGICAL OPINION**

ORIGINAL



United States Department of the Interior

FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE  
2369 WEST ORTON CIRCLE, SUITE 50  
WEST VALLEY CITY, UTAH 84119

July 11, 2014

FWS/R6  
ES/UT  
6-UT-14-F-013  
2014\_F\_0208

Mr. Wayne Pullan, Provo Area Office Manager  
U.S. Department of the Interior  
Bureau of Reclamation  
302 East 1860 South  
Provo, Utah 84606 -7317

RE: Final Biological Opinion for Bureau of Reclamation  
(BOR) Steinaker Service Canal Modification Project

Dear Mr. Pullan,

In accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Interagency Cooperative Regulations (50 CFR 402), this transmits the U.S. Fish and Wildlife Service's (USFWS or Service) final biological opinion (BO) for impacts to the Ute ladies'-tresses orchid (*Spiranthes diluvialis*) and designated critical habitat for the Steinaker Service Canal Modification Project (Project). We received your request for consultation and draft biological assessment (BA) for the Project on December 20, 2013, and revised Final BA on March 14, 2014.

**Consultation History**

This section summarizes significant steps in the consultation process:

On September 27, 2013, we met with BOR and Bowen Collins Consultants to discuss the Ute ladies'-tresses survey results within the Project Area.

On October 1, 2014, we provided BOR with mitigation recommendations for Ute ladies'-tresses to compensate for the impacts to the species from the Project.

On December 20, 2013, we received BOR's Draft BA.

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On January 24, 2014, we provided our written comments on the Draft BA.

On February 13, 2014, BOR submitted the Final BA to our office.

On March 14, 2014, we provided our written comments on the Final BA.

On March 14, 2014, BOR re-submitted the Final BA to our office with our recommended changes.

On May 1, 2014, we visited BOR properties for the salvage and transplant locations for Ute ladies'-tresses.

On July 3, 2014, we provided our written comments on the Final BA.

On July 11, 2014, BOR submitted the revised Final BA to our office with our recommended changes.

## **BIOLOGICAL OPINION**

### **1. Description of the Proposed Action**

#### **1.1 Action Area**

The action area for the Project is based on the total impact of the Project to Ute ladies'-tresses and its habitat. This includes the direct Project footprint of actions, the construction area, staging areas, ingress and egress areas, and spoils areas. The action area encompasses a 12-mile length of the Steinaker Service Canal below the Steinaker Dam Spillway. The width of the canal is 100 linear feet.

#### **1.2 Proposed Action**

A complete description of the proposed action is found within the BA and summarized in this section of our BO. The BOR proposes to enclose the existing open canal by installing a pipeline within the canal corridor to deliver water. This Project will improve the use and reliability of the canal and reduce water loss via seepage and evaporation. Enclosure of the entire canal segment will be completed in approximately five phases and over several years as funding is available. Construction activities will be limited to the existing BOR easement for the canal.

##### **1.2.1 Applicant Committed Conservation Measures**

###### **1.2.1.1 Ute ladies'-tresses**

BOR committed to compensate for the loss of Ute ladies'-tresses individuals from the Project by transplanting individual plants and participating in a seed collection and

propagation project. These conservation measures will help reduce impacts to Ute ladies'-tresses and address a research need for the species as identified in the draft recovery plan (USFWS, 1995).

#### Plant Salvage and Relocation

1. The contractor or responsible representative will perform two consecutive years of surveys along the entire canal corridor and those adjacent wetland areas entirely supported by the canal during the blooming season. All flowering Ute ladies'-tresses individuals will be flagged and subsequently salvaged and relocated to one of several mitigation areas proposed by Reclamation and approved by USFWS. Salvage and relocation efforts must be supervised by someone identified on the FWS 10(a)1(a) scientific permit. An additional survey will be performed for each segment of canal prior to construction, and all flowering individuals will be flagged, salvaged, and relocated to suitable habitat. The exception is the first canal segment where only two years of surveys will be performed prior to construction.
2. Prior to the relocation of the salvaged plants, BOR will select an acceptable transplanting site and improve the existing habitat of the relocation area through removal of competing plants to provide suitable habitat for Ute ladies'-tresses, as discussed in coordination with USFWS. The transplant site is currently owned by Reclamation, and is not anticipated to be sold. Plants will be located outside of areas where regular maintenance activities are performed.
3. The contractor or responsible representative will coordinate the salvage and transplant efforts to minimize the amount of time the plants are maintained out of the ground.
4. The contractor or responsible representative will develop and finalize a monitoring plan for the salvaged and transplanted Ute ladies'-tresses. The plan will be reviewed and approved by USFWS. A minimum of three consecutive years of monitoring will be performed. All monitoring reports will be submitted to USFWS.

#### Ute ladies'-tresses Propagation Experiment

1. Ute ladies'-tresses will be propagated from seed by Atlanta Botanical Gardens for a sufficient period to establish hardy propagules that can be shipped and planted in suitable habitat for the species. The propagation period may range from 1-4 years.
2. BOR will provide viable seeds to Atlanta Botanical Garden and fund the propagation effort. Ute ladies'-tresses seeds were successfully collected in 2013 and are currently stored at Red Butte Garden. If the 2013 seeds are not viable, additional seeds will be collected and shipped to Atlanta Botanical Garden.
3. The propagation target number of 900 plants is based upon a 3:1 ratio of salvaged plants from the canal. BOR will not be held responsible for meeting this target number if Atlanta Botanical Garden propagates a lower number of plants due to any factor related to the difficulty of propagation or unsuitable greenhouse conditions. BOR and USFWS consider the propagation of Ute ladies'-tresses an

- experiment and subject to failure because the species was challenging to propagate historically.
4. The contractor or responsible representative will coordinate the shipment and planting of the propagules to minimize the amount of time the plants are maintained out of the ground after delivery by Atlanta Botanical Garden. Planting efforts for the propagules must be supervised by someone identified on FWS 10(a)1(a) scientific permit.
  5. The contractor or responsible representative will develop and finalize a monitoring plan for the planted propagules of Ute ladies'-tresses. The plan will be reviewed and approved by USFWS. A minimum of three consecutive years of monitoring will be performed. All monitoring reports will be submitted to USFWS.

## **2. Status of the Species**

### **2.1 Regulatory Status**

We listed Ute ladies'-tresses as threatened in its entire range under the Act on January 17, 1992 (USFWS 1992a). No critical habitat is designated for the species. A draft recovery plan was prepared, but not finalized (USFWS 1995). The descriptions that follow are derived from this draft recovery plan, a range-wide status review (Fertig *et al.* 2005) and additional sources as cited below.

### **2.2 Species Description and Taxonomy**

Ute ladies'-tresses was first described as a species in 1984 by Dr. Charles J. Sheviak from a population discovered near Golden, Colorado (Sheviak 1984). The species is a perennial orchid (member of the plant family Orchidaceae) that first emerges above ground as a rosette of thickened leaves that is very difficult to distinguish from other vegetation, especially given the dense herbaceous vegetation in which the species often grows. Its leaves are up to 1.5 cm (0.6 in.) wide and 28 cm (11 in.) long; the longest leaves are near the base. The usually solitary flowering stem is 20 to 50 cm (8 to 20 in.) tall, terminating in a spike of 3 to 15 white or ivory flowers. Flowering is generally from mid-July through August. However, in some locations it may bloom in early July or may still be in flower as late as early October.

Ute ladies'-tresses looks most similar to hooded ladies'-tresses (*Spiranthes romanzoffina*), but differs in the detailed characteristics of the individual flowers. In hooded ladies'-tresses (which is more common), each individual flower has petals and sepals that are fused to form a covering, or "hood". In Ute ladies'-tresses, these floral parts are not fused, appearing instead to be widely spread, or "gaping" open.

### **2.3 Distribution and Status**

When it was listed under the Act in 1992, Ute ladies'-tresses was known from 10 extant populations within portions of only two states (Colorado and Utah, USFWS 1992a). At

that time, these 10 populations were estimated to encompass approximately 170 acres of occupied habitat. At listing, the species was presumed extirpated in Nevada.

Since listing, Ute ladies'-tresses was rediscovered in Nevada, and new populations were discovered in southern Idaho, southwestern Montana, western Nebraska, central and northern Washington, and southeastern Wyoming (Fertig *et al.* 2005, Figure 1 of this Biological Opinion), and south central British Columbia (Bjork 2007). In 2005, 53 populations (encompassing 674-784 acres of habitat) were considered extant across the range of the species (Fertig *et al.* 2005); the British Columbia locations were discovered the following year (Bjork 2007). Utah had the most populations (23), the largest amount of occupied habitat (234-308) acres, and the highest number of reported plants (47,859 individuals) of any state (Fertig *et al.* 2005). The Spanish Fork watershed in Utah was assessed as having the highest recorded population estimate (28,825 plants), whereas the Upper Green-Flaming Gorge Reservoir population (which spans the Colorado-Utah border) spanned the most extensive area (117-126 acres). The majority of known populations (66 percent) occupied between 0.1 and 10 acres, whereas relatively few (4.9 percent) occupied more than 50 acres.



Figure 1. Ute ladies'-tresses in the Western United States. Source: Figure 5 (p.11) of Fertig *et al.* 2005.

## 2.4 Life History and Population Dynamics

Ute ladies'-tresses is a long-lived perennial herb that is thought to reproduce exclusively by seed (Fertig *et al.* 2005). Bees are the primary pollinators; however because Ute ladies'-tresses provides only nectar as a food reward, other pollen-providing plant species must be present to attract and maintain pollinators (Sipes and Tepedino 1995, Sipes *et al.* 1995, Pierson and Tepedino 2000).

The life cycle of Ute ladies'-tresses consists of four main stages—seedling, dormant, vegetative, and reproductive (flowering or fruiting) (Fertig *et al.* 2005). Ute ladies'-tresses seedlings may develop slowly into larger, dormant mycorrhizal roots or grow directly into above-ground vegetative shoots (Wells 1981), but neither has been confirmed in the wild. The Cincinnati Zoo and Botanical Garden has grown plants from seed under laboratory and greenhouse conditions; germination took 6-8 months and development from a protocorm into a plant was slow (Pence 2009). Long-term demographic monitoring studies indicate that vegetative or reproductive Ute ladies'-tresses plants can revert to a below-ground existence for as many as four consecutive

growing seasons before reemerging above ground (Arft 1995, Allison 2001, Heidel 2001).

Flowering individuals are necessary to reliably distinguish Ute ladies'-tresses from other similar-looking plant species (esp. other *Spiranthes* species), and surveys during flowering season also maximize the likelihood of detecting Ute ladies'-tresses among dense stands of other herbaceous plant species. However, surveys in which only flowering stems are tallied are of limited value for assessing population trends, given that individual Ute ladies'-tresses plants do not flower consistently from one year to the next, and the relative proportion of individual Ute ladies'-tresses plants in each of the four life stages (seedling, dormant, vegetative, reproductive) can vary widely within and among years and between different colonies (Arft 1995, Pierson and Tepedino 2000, Allison 2001, Heidel 2001, Fertig *et al.* 2005). Population trends are less variable when inferred from datasets in which all life stages are counted (Arft 1995, Heidel 2001). However, because non-reproductive individuals are inherently difficult and laborious to detect, most surveys tend to focus on the detection (and counting) of flowering individuals (Fertig *et al.* 2005). As a result, knowledge of Ute ladies'-tresses population trends is severely hindered; this also suggests that available estimates (derived solely from flowering stem counts) are likely to represent conservative estimates of total population size.

With these and other caveats (discussed further in Fertig *et al.* 2005) in mind, the following statements can be made regarding rangewide abundance and trends in Ute ladies'-tresses: when the species was listed under the Act in 1992, the rangewide population was estimated to contain fewer than 6,000 individuals (USFWS 1992). In 1995, the draft recovery plan increased this estimate to 20,500 individuals, primarily the result of 21 new populations discovered over the previous 3 years (USFWS 1995). As of 2005, 53 populations were estimated to collectively contain more than 80,000 (83,316) individuals (Fertig *et al.* 2005). For these populations, available population estimates ranged in size from 1 to more than 28,000 plants. More than 80 percent of these populations contained fewer than 1,000 individuals; 38 percent contained fewer than 100 individuals.

## **2.5 Habitat**

Ute ladies'-tresses occurs in a variety of human-modified and natural habitats, including, seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, and lakeshores (Jennings 1989, USFWS 1992a, Fertig *et al.* 2005). Numerous populations also occur along irrigation canals, behind berms, within abandoned roadside borrow pits, along reservoir edges, and other human created or modified wetlands. Streamside populations of Ute ladies'-tresses typically occur on shallow alluvial soils overlying permeable cobbles, gravels, and sediments. Across the range of the species, populations occur at elevations ranging from 220 to 558 m (720 to 1,830 ft) in Washington and British Columbia to 2,134 m (7,000 ft) in northern Utah.

Most Ute ladies'-tresses sites have mid-successional vegetation (well-established grasses and forbs) communities that are maintained by human disturbances such as livestock

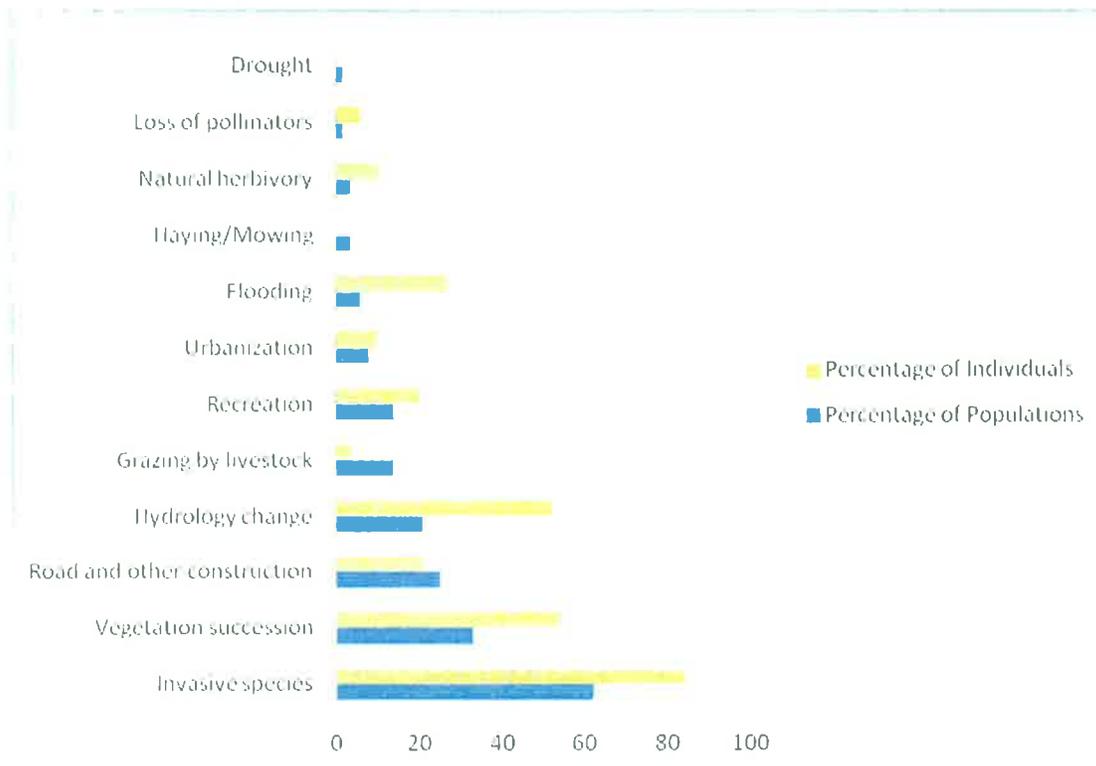
grazing, mowing, ditch and irrigation maintenance, prescribed fire (Allison 2001, Fertig *et al.* 2005). Ute ladies'-tresses may persist for some time in the grassy understory of woody riparian shrublands, but does not appear to thrive under these conditions (Ward and Naumann 1998).

Nearly all streambank, floodplain, and abandoned ox-bow sites occupied by Ute ladies'-tresses have a high water table (usually within 12.5 to 45 centimeters (5 to 18 inches) of the surface) augmented by seasonal flooding, snowmelt, runoff, and often irrigation (Jennings 1989, Arft 1995, Black *et al.* 1999, Riedel 2002). Soils must be sufficiently stable and moist in the summer flowering season to support the species (Ward and Naumann 1998). Sites located in springs or sub-irrigated meadows appear to be fed by groundwater rather than surface flows; less is known about the average depths to groundwater in these locations, but it is reasonable to assume that (as with locations where groundwater depths have been quantified) groundwater must remain relatively close to the surface in order to sustain the moist soils consistently associated with Ute ladies'-tresses.

## **2.6 Threats to the Species**

At the time of listing, we identified habitat loss and modification as the primary threat to the species, but also noted that small population sizes and low reproductive rates rendered Ute ladies'-tresses vulnerable to other threats (USFWS 1992a). Our listing rule identified several specific forms of habitat loss and modification as threats to Ute ladies'-tresses, including: urbanization, water development and conversion of lands to agriculture, excessive livestock grazing, excessive or inappropriate use of herbicides or other chemicals, and the proliferation of invasive exotic plant species. In addition, we concluded that the species may be subject to over-collection, given its status as an orchid and inquiries from orchid enthusiasts and wildflower collectors. We characterized existing regulatory mechanisms as inadequate to ensure the long-term persistence of Ute ladies'-tresses, given these threats.

Today, many of these same threats affect Ute ladies'-tresses at least at the site-specific level (Figure 2; Fertig *et al.* 2005), and some newer threats have emerged. For example, whereas over-collection had not materialized as a specific threat to Ute ladies'-tresses, vegetation succession and losses or reductions in pollinators appeared to be new threats (although they characterize pollinator availability as more of a potential threat). Current threats include competition from invasive species, vegetative succession, road and infrastructure construction, and changes in hydrology.



**Figure 2. Threats to Ute ladies'-tresses quantified as a percentage of known populations and known individuals (based upon the maximum count ever reported for all subpopulations comprising a given population). Adapted from Table 15 (p.81) of Fertig *et al.* (2005).**

Conversion of irrigation water to municipal use, flood control (includes riverbank stabilization), water development or redevelopment, and restoration projects targeting stream and riparian corridors (includes in-stream and habitat alteration) contribute to altered hydrologic regimes across the species' range. However, Ute ladies'-tresses has proliferated in areas with greatly altered, but stable and predictable hydrology (Fertig *et al.* 2005). Prominent examples include the Green River along the Colorado-Utah border (Ward and Naumann 1998); Diamond Fork Creek in the Spanish Fork watershed of Utah (Black and Gruwell 2004); the Columbia River in Washington (Cordell-Stine and Pope 2008); and the South Fork Snake River in Idaho (Idaho Conservation Data Center 2007). The species is also frequently encountered along streams and canals and in wet hay pastures in the Uinta Basin of eastern Utah, even though an extensive irrigation canal system was constructed in the early 1900s and natural streams are nearly dry all summer (Fertig *et al.* 2005, Kendrick 1989). Ute ladies'-tresses has colonized wetlands left behind when peat was mined, and also occurs in drainage ditches alongside roads and railroad tracks (Fertig *et al.* 2005). In the summer of 2012, the species was rediscovered in Salt Lake County, Utah, after decades of unsuccessful attempts to relocate an historical collection of the species in this county dating from 1953. The county property on which the orchid was recently found has been managed as a flood control basin with permitted horse grazing for the past 50 years.

In summary, Ute ladies'-tresses occurs in more than 50 populations distributed across 8 U.S. states and 1 Canadian province; these populations collectively contain some 80,000 individuals. Approximately 80 percent of known populations are associated with lands managed for agriculture or recreation, rivers regulated by dams, or other human-modified habitats (Fertig *et al.* 2005). Research, monitoring and management activities have demonstrated that ongoing patterns of land use across the range of the species are capable of mimicking or providing the conditions required for the species' persistence.

### **3. Environmental Baseline**

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, state, or private actions and other human activities in the action area. The environmental baseline also includes the anticipated impacts of all proposed Federal projects in the action area that have already undergone section 7 consultations and the impacts of state and private actions that are contemporaneous with the consultations in progress.

#### **3.1 Status of the Species within the Action Area**

The action area contains human-created habitat for Ute ladies'-tresses. The canal was created in the 1960's and contains a clay liner through the majority of the canal segment. The canal provides water for a six-month period during the growing season, and is dry the remainder of the year. Vegetation management along the open canal includes regular prescribed burning of all vegetation in the early spring and weeds are spot-sprayed with 2,4-D on an as needed basis throughout the remainder of the growing season.

Ute ladies'-tresses was known to occur along the canal for many years; however, a complete census was not performed until 2013. A total of 269 Ute ladies'-tresses flowering individuals were identified along the entire canal segment in 2013; the majority of individuals were South of Hwy 40. Wetlands adjacent to the canal that are entirely or largely supported by seepage from the canal total 3.22 acres. No Ute ladies'-tresses were found in adjacent wetlands in 2013.

Three years of Ute ladies'-tresses surveys will be performed prior to construction for all canal segments except for the first canal segment and adjacent wetlands of phase 1. Two consecutive years of Ute ladies'-tresses surveys will be performed prior to construction of the first canal segment and adjacent wetlands (0.59 acres) of phase 1. The remaining canal segments and adjacent wetlands (2.63) will be surveyed for two consecutive years followed by an additional year of surveys prior to construction of each segment. These surveys are not entirely consistent with USFWS protocols that recommend three consecutive years of surveys (USFWS 1992b and 2007). Therefore, BOR acknowledges the inability to document all Ute ladies'-tresses individuals within the project area.

#### **3.2 Factors affecting the species within the Action Area**

The main threat to Ute ladies'-tresses within the action area is the alteration of hydrology within the canal system and destruction of habitat associated with the Project. Project

activities are anticipated to destroy both suitable and occupied habitat of Ute ladies'-tresses within the action area because the canal closure will remove the water source currently supporting the species.

Prior to this Project, threats to the species from invasive species and vegetative succession were regularly addressed from vegetation management activities along the canal described in section 3.1.

### **3.3 Recent Section 7 Consultations**

No formal section 7 consultations for Ute ladies'-tresses have occurred within the action area.

## **4. Effects of the Action**

Regulations pursuant to section 7 of the Act define effects of the action as “the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with the action, that will be added to the environmental baseline” (50 CFR § 402.02). Direct effects are defined as the direct or immediate effects of the action on the species or its habitat. Indirect effects are defined as those effects that are caused by or result from the proposed action, are later in time, and are reasonably certain to occur.

The effects of the Project will result in the complete loss of all Ute ladies'-tresses individuals and habitat within the action area. By transporting water via a pipe rather than an open canal, the hydrology of the canal will be altered sufficiently such that the species will not be supported in both the short and long term. The open canal supported riparian vegetation including Ute ladies'-tresses and removal of the water source will alter the vegetation within the action area. The dry soils surrounding the piped canal will no longer support riparian vegetation or Ute ladies'-tresses.

To minimize the impact of the Project to Ute ladies'-tresses individuals, BOR commits to salvaging all flowering Ute ladies'-tresses individuals within the action area, and transplanting them within suitable habitat on a nearby BOR property. To compensate for the likely high mortality rate of transplanted individuals, BOR commits to funding research on the propagation of the species with the goal of transplanting 900 individuals into suitable habitat on a nearby BOR property. The property is owned by BOR and is not anticipated to be sold.

## **5. Cumulative Effects**

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Cumulative effects are not anticipated within the action area. The canal is managed by BOR and any future activities in the action area will involve Federal actions.

## **6. Conclusion**

After reviewing the current status of the Ute ladies'-tresses, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the Ute ladies'-tresses. No critical habitat is designated for this species and therefore none would be affected.

We base our conclusion on the following reasons:

- The total number of Ute ladies'-tresses individuals to be impacted by the proposed Project is 269. This represents only 0.3% of the total range-wide population of the species which is estimated to be 80,000 individuals (Fertig *et al.* 2005).
- The applicant's commitment to minimize and compensate for impacts to Ute ladies'-tresses individuals reduces the amount of overall loss of individual plants. If the propagation and transplantation of the species is successful, the net loss of individuals from the Project is anticipated to be zero.

## **7. Incidental Take Statement**

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR § 17.3). Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR § 17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

### **Amount or Extent of Take Anticipated**

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of federally listed plants or the malicious damage of such plants on areas under Federal jurisdiction, or the

destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of a State criminal trespass law.

### **Reporting Requirements**

If listed plants are crushed or injured during construction activities, immediate notification must be made to our Salt Lake City Field Office at (801) 975-3330. Pertinent information including the date, time, and location shall be recorded and provided to us.

### **8. Conservation Recommendations**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

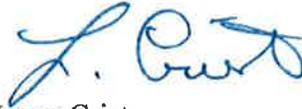
We recommend that BOR consider utilizing conservation easements to protect additional occupied habitat of Ute ladies' tresses. This will allow BOR to assist with Ute ladies'-tresses conservation and recovery efforts on a landscape level, rather than on a small, project-specific basis. We also recommend that on BOR property where the Ute ladies'-tresses exist, noxious weeds will be monitored and controlled, so as not to negatively affect Ute ladies'-tresses and its habitat.

### **9. Re-initiation Notice – Closing Statement**

This concludes formal consultation on the proposed Steinaker Service Canal Closure Project. As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action is retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may impact listed species in a manner or to an extent not considered in this opinion, 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion, or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded or if the terms and conditions of this Biological Opinion are not fully implemented, any operations causing such take must cease immediately pending re-initiation.

Thank you for your coordination in preparing the biological assessment and your interest in conserving threatened and endangered species. If you have any questions about this BO or impacts to Ute ladies'-tresses please contact Jennifer Lewinsohn at 801-975-3330 ext. 138.

Sincerely,



Larry Crist  
Utah Field Supervisor

Electronic cc:

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Mr. Tim Kennedy, Project Manager, U.S. Army Corps of Engineers, 533 West  
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Mr. Daren Rasmussen, Stream Alteration Specialist, Utah Division of Water  
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Utah 84114-6300

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