

Cottonwood Creek Spring Condition Assessment

Location: Trail Mountain Allotment, Trail Canyon Pasture, Manti-La Sal National Forest

Date: September 28, 2016 **Begin/End Time:** 3:00pm to 4:00pm

Surveyors:

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I. Introduction

The purpose of this assessment is to assess the condition of Cottonwood Creek Spring, including human and animal impacts. Cottonwood Creek Spring is located along Cottonwood Creek, east of Joe's Valley Reservoir, and adjacent to an unnamed road and across the road from a wooden horse enclosure. Due to its proximity to the road and the horse enclosure, the spring area is accessible to people.

Cottonwood Creek Spring is in the Trail Canyon Allotment of the Manti-La Sal National Forest. The Trail Canyon Allotment has been an allotment since 1943 and in the past has supported up to 220 cow-calf pairs. The spring is at NAD 83 482514E and 4354133N at an elevation of 7,755 feet. The spring is in an area filled with aspen, willows, and conifer trees.

II. Spring Evaluation Methods:

Materials used included a GPS, compass, ruler, distometer, camera, clipboard with data sheets, one large map and one small map, and a pen. The group divided into four distinct roles: recorder, illustrator, botanist, and photographer/GPS handler. The recorder compiled all observations and data onto the data entry sheet. The illustrator made a comprehensive map of the spring. The botanist collected plant samples and identified plants, wildlife, and animal scat. The photographer/GPS handler took GPS points and photographs of important components of the spring area, including microhabitats, animal scat, wildlife, plants, and specific spring features. Plant identification was done on site when the botanist could successfully identify the plant, and plant samples were taken from the site when the plants could not be identified. Unidentified plant samples were pressed and will be sent to a botanist for identification.

Flow is assessed on a ranking from 0-4. A rank of 0 is dry or dewatered and is identified as no water present and likely no water for last year, dewatered; 1 is dry intermittent and is identified as dry, no water present but likely water present intermittently; 2 is erratic intermittent and is

identified as wet, damp soils, likely water present erratically and intermittently; 3 is regular intermittent and is identified as wet, surface water/flow present, likely water present regularly but intermittently; and 4 is perennial and is identified as wet, surface water/flow present, low, moderate, or large flow likely always present. Disturbance is assessed on a ranking from 0-3. A rank of 0 is no or negligible disturbance; 1 is light impact, but spring site is not degraded; 2 is moderate impact, spring site is somewhat degraded; and 3 is high impact, spring site is substantially degraded.

III. Photographs



Fig. 1: Cow carcass



Fig. 2: Boundary of Microhabitat A



Fig. 3: Debris in the streambed



Fig. 4: Cow patty in Microhabitat A



Fig. 5: Beer bottle in the riparian area



Fig. 6: Ungulate trampling in the streambed.



Fig. 7: Ungulate hoof print in the streambed



Fig. 8: Washed-out streambed



Fig. 9: View of riparian area



Fig. 10: Broken fence



Fig. 11: Streambed wall

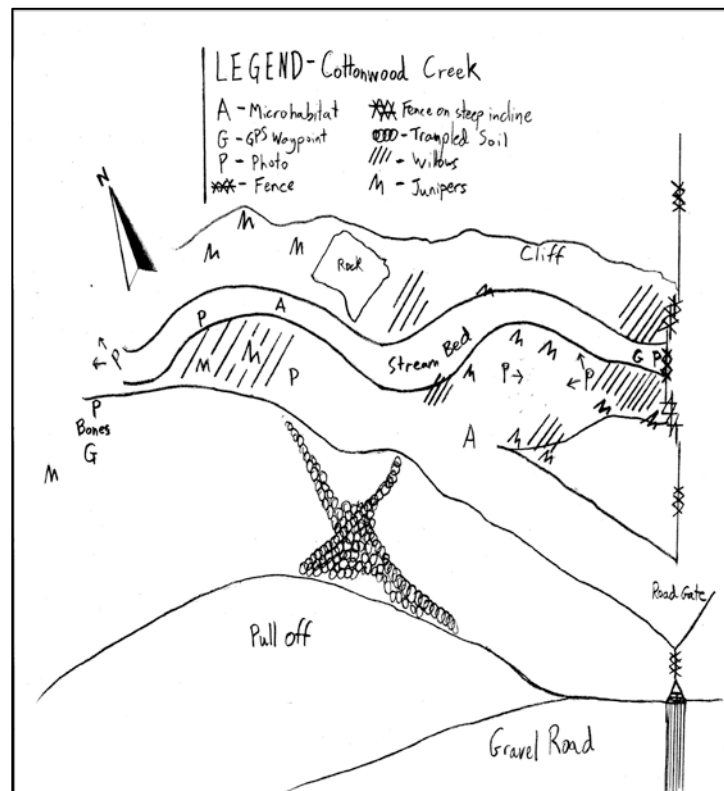


Fig 12: Map of spring area

IV. Assessment

There were not multiple distinct microhabitats for the Cottonwood Creek Spring so the whole spring area was categorized as Microhabitat A. In Microhabitat A cattle impacts were extensive. The aspen, grasses, and shrubs in the area were extensively browsed.

Numerous cow patties were in the muddy area that was probably previously a stream (Fig. 4). A fence does not enclose the spring area but there is a fence on the south side of the spring that is not maintained (Fig. 10). Cattle were grazing on the other side of this fence. There was no other evidence of wildlife.

No water was present in Microhabitat A and no source was identified. As evidenced by dried mud spots, large amounts of debris, and the look of a streambed, there has historically been a stream fed by the spring running through Microhabitat A (Figs. 3, 11). It ranked as erratic intermittent (2) because there was damp soil and water is likely intermittent. No water infrastructure was present.

Overall the most common vegetation was willow. Grasses, trees, rocks, downed trees/ debris, and bare ground (dried mud) were common. There were also scattered shrubs and aspen. The most common native species were Rocky Mountain juniper (*Juniperus scopulorum*), mountain willow (*Salix monticola*), thinleaf alder (*Alnus tenuifolia*), coyote willow (*Salix exigua*), Wood's rose (*Rosa woodsii*), aspen and sagebrush.

The common exotic invasive was Kentucky bluegrass (*Poa pratensis*).

V. Analysis

The overall condition of the Cottonwood Creek Spring is highly impacted and the spring site is substantially degraded from human and cattle disturbance. Trash was scattered all around the spring site, particularly beer cans and bottles (Fig. 5). The streambed looked washed out and eroded, possibly from a recent flash flood and there was an accumulation of debris on the south side of the streambed (Figs. 3, 8, 9). Herbaceous and woody vegetation was extensively grazed and browsed, most likely by cattle as evidenced by the cow carcass, abundance of cow patties and hoof marks in the dried mud (Figs. 1,4,6,7).

VI. Discussion

The greatest disturbances to the spring are from cattle and humans.

In order to restrict cattle access to the spring area, the current fence should be fixed and there should be a fence built to enclose the spring and keep cattle out.

In order to help deter people from throwing garbage, particularly beer cans, an informational sign about the value of springs could be put up above the spring near the road.