North Point Spring Condition Assessment

Location: Trail Mountain Allotment, North Trail East Pasture, Manti-La Sal National Forest
Date: September 28, 2016 Begin/End Time: 12:30 pm to 1:30pm
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I. Introduction

The purpose of this assessment is to analyze the condition of a fragile riparian environment. Springs are an important source of life for surrounding wildlife. Protection and maintenance of springs is quite critical for surrounding forest and wildlife health.

North Point Spring is located in the Manti-La Sal National Forest, with the coordinates of NAD 83 481098E, 4355226N and an elevation of 9,041 feet. A fenced exclosure protects infrastructure of the spring system. No water was found in or outside the exclosure. Water may be present on a seasonal basis, as healthy aspen and grasses were found. Outside the exclosure is a large trough that was holding no water and needs maintenance. The outer area is largely dominated by sagebrush, aspen, and conifers. The exclosure is broken due to downed trees, and thus ungulates have trampled the spring system. The outer area is also quite trampled, with many hoof prints surrounding the trough.

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 of the 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 ranked from 0-4; 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 substantially degraded.

We defined two microhabitats. The first microhabitat is inside the exclosure. The second is outside the exclosure with the trough as the main defining feature.



Fig. 1. North Point Spring

III. Photographs



Fig. 2. Microhabitat 1 with two water grates



Fig. 3. Microhabitat 2



Fig. 4. A fallen aspen has broken the wire fence



Fig. 5. A second aspen has broken the log fence

IV. Assessment

Browsing evidence. Inside and outside the exclosure, grasses and aspen were both browsed and somewhat trampled. Outside the exclosure, there was more sagebrush which was quite healthy and abundant.

Vegetation Composition. Inside the exclosure, there were mature aspen and young, browsed aspen; invasive exotic musk thistle (*Carduus nutans*) and houndstongue (*Cynoglossum officinale*); sagebrush (*Artemesia tridentata*) scattered around the edges; native Booth's willow (*Salix boothii*); native grasses; stinging nettle (*Uritca dioica*); and Nebraska sedge (*Carex nebrascensis*). Sagebrush dominated the landscape outside the exclosure, but there were also mature aspen and conifers, as well as native grasses, and exotic musk thistle, and Kentucky bluegrass (*Poa pratensis*).

Wildlife evidence. The only wildlife presence found was deer scat inside the exclosure.

Water Infrastructure. Water infrastructure included white piping starting at the source and connecting to two water grates within the exclosure (Fig. 2). A metal cylinder was found above the first grate. A black tube was found coming out of the ground below the second grates and connected to the large trough outside the fence. Black tubing was also found on the ground next to the trough, though not attached to the trough.

V. Analysis

The North Point Spring is in a disappointing state. The spring seems to have been previously maintained, as there are signs of two separate fence attempts (one with wood and one with barbed wire). The fence needs to be repaired, as two fallen aspen have collapsed the fencing in two locations (Figs. 4, 5). This has led to a browsed interior, as well as many observed cow patties and cattle hoof prints.

Outside the exclosure, the landscape is in even worse shape, due to a heavily trampled cattle path and many cow patties. This, however, is expected near a watering trough.

The trough looks dilapidated and ineffective due to unattached tubing, possibly done after cattle had left.

While the environment first appears healthy with mature aspen and abundant sagebrush, closer inspection shows trampled ground, eroded soils, browsed grasses and aspen, and ineffective water infrastructure. Water has been captured at the spring source, thus eliminating that particular habitat.

VI. Discussion:

The spring does not appear to be flowing with water and it is not clear whether the trough is being seasonally used.

The fence needs to be repaired, due to aspen having broken the fencing in two places

Cattle grazing in the area should be more heavily restricted so as to properly care for spring systems and the fragile ecosystems they supply.