

# Mason Draw Spring Condition Assessment

**Location:** Mason Draw Allotment, Manti-La Sal National Forest

**Date:** September 25, 2016    **Begin/End Time:** 12:30pm to 2:00pm

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## I. Introduction

The Mason Draw Spring is ecologically important for the water and nutrients supplied to surrounding vegetation and as wildlife habitat. The riparian habitat created by the spring is highly sensitive to ungulate browsing and trampling. The purpose of this assessment was to analyze the health and condition of the spring.

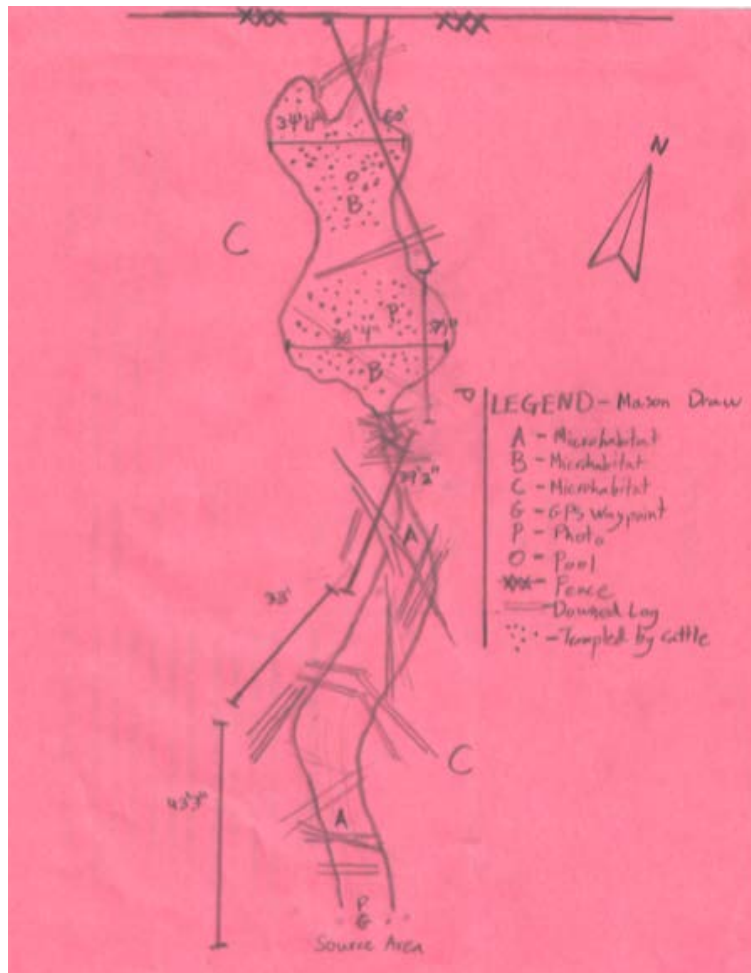
Mason Draw Spring is located close to the Loop Road on Mason Draw Allotment in the Manti-La Sal National Forest at E 0647896, N 4267291 with an elevation of 8,385 feet. The upper area of the spring is covered with downed logs, very dense shrubs, and other vegetation. No surface water was seen in the surrounding area of the spring, implying the source is intermittent. The lower part of the spring has been affected by grazing and browsing cattle, evident by the abundant bare ground, grazed vegetation, cow manure, and hoof prints dominating an approximate 30 square foot area. The spring is approximately 30 yards outside of a nearby fenced campground (Fig. 1).

## 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 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.

Mason Draw Spring contains three microhabitats. The first is the source of the spring and the drainage attached. The second is the outer habitat that surrounds the drainage. The third is the lower mudded area that was very trampled and devoid of vegetation. No microhabitats were protected by fencing.



III. Photographs



Fig. 2. Approximate site of source



Fig. 3. Lower trampled microhabitat (appx. 30 square feet)



Fig. 4. Outer microhabitat



Fig. 5. Elk scat

#### IV. Assessment:

**Browsing evidence.** Aspen were browsed in the lower drainage area. This is likely a result of cattle and deer as scat from both were found.

**Vegetation Composition.** Microhabitat A was largely dominated by dead and downed trees and healthy aspen. Other species include mosses, snowberry (*Symphoricarpos oreophilus*), and tall mountain larkspur (*Delphinium occidentale*). Non-native Kentucky bluegrass (*Poa pratensis*) and clovers were present.

Microhabitat B dominantly held aspen, more dead and downed trees, as well as native Great Basin wildrye (*Leymus cinereus*).

Microhabitat C was largely barren but had some browsed juvenile aspen, western wheatgrass (*Pascopyrum smithii*), non-native, invasive creeping bentgrass (*Agrostis stolonifera*), uncommon, native Great Basin wildrye (*Leymus cinereus*), and Scouler's willow (*Salix scouleriana*), . The microhabitat also included scattered, non-native stinging nettle (*Urtica dioica*).

**Wildlife evidence.** Deer and elk (Fig. 4) scat were found outside the drainage in the outer microhabitat. Cow manure and cattle hooves were observed within the lower drainage microhabitat (Fig. 2).

**Water Presence.** No water was present at Mason Draw Spring when visited. The spring is likely intermittent and only present during snow melt and after rain.

**Water Infrastructure.** There was no water infrastructure at Mason Draw Spring.

## V. Analysis:

Mason Draw Spring has a non-vegetated lower spring area. The source of the spring could not be identified, as no water or moist soils were found at the coordinates supplied for the source. Thus, a site was located as the most likely source, as it was very vegetated, within the proper drainage, and closest to the set of coordinates. This upper drainage was covered by downed wood and shrubs but was somewhat eroded and had less vegetation within the actual drainage. The outside area (surrounding the drainage) was healthy with many aspens and decomposing downed trees.

The lower drainage was a stark contrast to the upper drainage. It was extremely bare and muddy with hoof prints covering the area. We determined that both the upper and lower drainage microhabitats had a flow rate of 1 due to it being dry intermittent. Cow manure was found covering the ground, introducing bacteria to any natural spring that would pass through. The vegetation, mostly aspen, was browsed by ungulates.

## VI. Discussion:

.The lower drainage area at Mason Draw Spring should be fenced .This would prevent cattle from interfering with the spring system and stop any further erosion and loss of vegetation.