

**Pacific Northwest Region
Malheur National Forest
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www.fs.usda.gov/malheur**

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Camp Creek Headwaters Project: A Comprehensive Study

JOHN DAY, PRAIRIE CITY, and HINES, Ore. – This summer survey crews have been out on the Malheur National Forest gathering data or implementing aquatics restoration projects. These projects are performed during the narrow ‘instream window’ where juvenile anadromous fish, a fish that is born in fresh water, spends most of its life in the sea and returns to fresh water to spawn.

One type of restoration project focuses on increasing beaver habitat, such as those underway in the Upper Camp Creek-Middle Fork John Day River subwatershed. Beaver were historically abundant on Camp Creek, and their dams had a strong influence on the vegetative productivity of the riparian corridor. In the 1800’s and 1900’s, beaver trapping was widespread through the Middle Fork John Day Subbasin, and the resulting loss of these ‘watershed technicians’ caused channel incision (the process of channel bed lowering) and left a narrow strip of alder-dominated riparian vegetation. As a result, water is quickly flushed through Camp Creek, and habitat for juvenile steelhead is degraded.

The purpose of the activities proposed within the project area is to add beaver dam analogues (BDA) to mimic beaver dams and raise the water table upstream of the structure. The objective of a BDA is multifold: (1) provide for increased growth of riparian vegetation and improved shade, (2) attenuate peak flows to increase water storage later into the summer, (3) induce sediment deposition immediately upstream of the BDA, (4) provide more miles of high quality juvenile steelhead rearing habitat downstream, (5) provide cover for beaver, (6) facilitate expansion and colonization of headwater meadow areas, (7) decrease stream energy within incised channels and reconnect floodplains, and (8) reconnect abandoned side channels within meadow. Beaver dam analogs will have willow whips and other vegetation interwoven between posts, an activity planned for mid-September through mid-November, after willows become dormant. If planting is successful, the willows’ roots will provide a “live” vegetative mat for the bottom of beaver dam analogues.



Figure 1: Placing beaver dam analogues.

The addition of large and coarse wood is another aquatics restoration activity planned for this summer, which will create fish habitat and hydrological complexity by



for the greatest good

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(continued)

increasing roughness instream and within the floodplain. These logs or trees with root wads attached may also provide anchor points for beaver dams.

There is a high success rate associated with these activities, as evidenced by similar past projects (e.g., the Bridge Creek intensively monitored watershed on the Lower Fork John Day River), which show measurable improvements in riparian vegetation, water quality, and fish abundance. The anticipated response time for these activities is between one to five years.

Approximately 66 Beaver dam analogs have been constructed this summer, with an average of 10-15 posts per structure along four miles of Camp Creek. Poles were obtained from lodgepole pine that had encroached within the meadows due to lowered water tables.

Please see <http://www.fs.usda.gov/detail/malheur/landmanagement/projects/?cid=stelprd3817723> for more information about the Aquatics Restoration Decision, and a list of ongoing restoration projects.

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Figure 2: Camp Creek beaver dam analogues.



Figure 3: Camp Creek beaver dam analogues.