



May 18, 2015

Senator Chris Edwards, Chair
Senate Committee on Environment and Natural Resources
c/o Beth Riley, Committee Administrator (beth.reiley@state.or.us)

Dear Senator Edwards and fellow Committee Members,

Thank you for this opportunity to provide comments regarding House Bill 3217 which would adopt a pilot project for voluntary stream restoration and beaver recovery. The Oregon Natural Desert Association (ONDA) is an Oregon non-profit, public interest, conservation organization of more than 4,500 members and supporters. ONDA exists to protect, defend, and restore the health of Oregon's native deserts. ONDA has a long history of monitoring ecological conditions and wilderness values throughout eastern Oregon. ONDA actively participates in watershed restoration and decisions concerning land management in eastern Oregon.

Over the past decade, ONDA has been actively working with diverse stakeholders throughout Oregon's high desert to restore streams and recover native beaver populations. ONDA has engaged thousands of volunteers in these efforts.¹ Our work has focused primarily in the John Day River and Malheur Lake basins. Examples of this work includes: a longstanding partnership with the Confederated Tribes of Warm Springs to restore Pine Creek, a steelhead-bearing tributary of the Lower John Day River; a partnership with NOAA Fisheries, the National Park Service, the Bureau of Land Management, and private landowners to restore and recover beaver to Bridge Creek, another tributary of the Lower John Day River; and monitoring of Silvies Valley Ranch restoration efforts in partnership with the Burns Paiute Tribe along various tributaries of the Silvies River in the Malheur Lake Basin. These efforts have spanned over a decade and have included thousands of hours of project planning, on-the-ground work, and monitoring.

ONDA has advocated for passive restoration in many areas throughout Oregon's high desert and in areas such as the Hart Mountain Refuge, the removal of livestock has been shown significant benefits to stream recovery.² However, in many areas throughout Oregon's high desert, streams have become significantly entrenched and therefore disconnected from the historic floodplain. This has limited these watersheds' ability to store water. As a result, the streams experience rapid run-off and there is limited or sometimes no ability for riparian and stream-side vegetation to recover. Instead, these areas become dominated by upland vegetation such as western juniper and sagebrush. Without this streamside

¹ Examples of these projects can be found at <https://www.flickr.com/photos/oregonnaturaldesert/sets/>.

² <http://www.cof.orst.edu/hart/index.html>

habitat and structure, it is nearly impossible for beaver to naturally recover in these streams where they were historically abundant.

The importance of beaver to these systems cannot be overstated. Beavers are “ecosystem engineers” that were historically responsible for expanding wetland habitat that is critical to myriad fish and wildlife species; this role has been increasingly recognized both in recent scientific literature³ and the popular press.⁴ Beaver recovery is also recognized as a potential way to address threats of water shortage associated with climate change.⁵ Examples of benefits associated with beaver include slowing of snowmelt runoff, creation of ponds and wetlands benefitting fish, amphibians, and small mammals, increased groundwater recharge and elevated water tables, increased amounts of large woody debris known to be beneficial to fish, and natural filters benefitting water quality.⁶ ONDA’s work on a variety of projects has borne out these benefits and more recent projects have also begun to examine the benefit of such projects to local landowners and land managers.⁷

Specific to artificial beaver dams, it is important to note a potential drawback of this approach. Over the past field seasons, although we have documented benefits such as increased water tables, we have also documented higher water temperatures at dam sites. Our expectation is that as riparian vegetation recovers, these water temperature effects will be mitigated. For the sites described in this legislation, this is not a pressing issue because the pilot project is limited to streams that do not have resident fish populations. However, to the extent that this pilot project is successful and potentially extended to other sites, it will be important at that time to have a better understanding of such effects to ensure that the structures do not significantly impact resident fish populations. Likewise, ONDA suggests that the term “Artificial Beaver Dam” in Section 2a should be further defined to ensure that structures are built in a way that will allow fluvial geomorphic processes to take over once more natural habitat conditions are re-established. Our experience has shown that although such structures may have short-term benefits to retain water, they need to be built in a way that allows the stream to reclaim its historic meander over time and therefore ultimately allow more natural conditions to develop.

We are aware that concerns have been raised by Department of State Lands and Oregon Department of Fish and Wildlife regarding fish passage. As noted above, our hope is that restoration efforts made possible by this bill will recover beaver, fish and other native species in streams where they are currently absent. In many cases, we will not be able to recover native fish and beaver populations without the participation of private landowners. To encourage landowner participation, we will need to ensure that recovering fish to streams does not create new liabilities for landowners who are successful in restoring historic stream conditions. We would be happy to work with agencies and other stakeholders to determine whether changes in language would be appropriate to provide future assurances of passage in stream reaches as fish populations are restored. Alternatively, we look forward to working through such a process as part of future rulemaking efforts.

³ Pollock et al. 2014. <http://bioscience.oxfordjournals.org/content/64/4/279>.

⁴ <https://www.hcn.org/issues/41.10/voyage-of-the-dammed>

⁵ Melillo et al. (2014) DOI: 10.7930/J0Z31WJ2; <http://nca2014.globalchange.gov/>; Lawler (2009) DOI: 10.1111/j.1749-6632.2009.04147.x

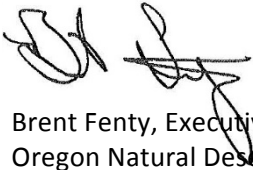
⁶ http://www.wildearthguardians.org/site/DocServer/Beaver_and_Climate_Change_Final.pdf

⁷ <http://www.wsj.com/articles/SB10001424053111904253204576512391087253596>

In developing this effort, it is important to note that there are new tools that will dramatically assist our efforts to more accurately understand historic beaver range and ensure that restoration is targeting the right places. Recent research in Oregon and Utah should be considered as regional priorities are developed and experts in this field should be engaged in such evaluations.⁸ These efforts by Utah State University and fellow researchers are particularly noteworthy because they will help us address questions regarding dam frequency and location and therefore should inform future implementation.

ONDA strongly supports scientifically credible evaluation of projects to ensure robust project design and to inform future efforts with the best available information. Collaboration among the landowners within the Malheur Lake basin, conservation organizations, land managers and other diverse stakeholders will continue to improve our common understanding of these ecosystems and inform how we can recover beaver to benefit ecological function and human needs. Thank you, again, for the opportunity to provide these perspectives regarding HB 3217 and we are pleased to offer our support of this effort.

Sincerely,



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Cc:

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⁸ <http://brat.joewheaton.org>