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HB 3217 – Artificial Beaver Dams

Before the Senate Committee on Environment and Natural Resources

Testimony of Martha O. Pagel

Thank you for the opportunity to provide this testimony in support of HB 3217, relating to a pilot program for voluntary stream restoration efforts in Eastern Oregon. These comments are submitted on behalf of the Silvies Valley Ranch ("SVR"), where voluntary efforts have been underway for several years – with excellent results. The purpose of HB 3217 is to provide a pathway for other landowners to benefit and learn from the experiences at SVR in restoring severely eroded streams and improving range productivity.

What the bill does:

- Recognizes problems with severe erosion in the beds of many small streams in Eastern Oregon.
- Promotes voluntary stream restoration efforts by private landowners.
- Creates a pilot program to simplify permitting under the state Removal-Fill Law for projects meeting specific requirements.
- Waives fish passage requirements up front for qualifying projects, but includes provisions to address fish passage after stream habitat is improved.

Why is it needed:

- Many small streams in Eastern Oregon have been significantly degraded and eroded over time – due in part to the near eradication of native beaver populations in the early 1800s.
- The affected streams tend to be very "flashy" – they are fed primarily by snow melt and many run for only short periods of time each year.

- Historically the beaver had a significant impact on stream systems and hydrology; beaver dams had the effect of slowing flows and allowing for natural overflow onto the surrounding flood plains.

- As a result of historic over-trapping, loss of habitat, and on-going erosion, many stream systems no longer support natural beaver populations.

- Without the benefits of natural beaver dams, flow velocity increases, exacerbating the erosion and down-cutting; as each season passes, the incision gets worse – many streams have been cut down 10 feet or more from the original/natural surface level.

- As the erosion gets deeper, stream channels are separated from the natural flood plain – resulting in a loss of natural riparian habitat along the adjacent uplands, which then typically become over-run with sage brush, juniper, or other upland vegetation.

- The loss of riparian vegetation, including aspens and cottonwood, inhibits the natural return of beaver – because of a lack of habitat and food supply.

- The use of "artificial beaver dams" – also known as "plug and pond" technique – is being explored throughout the West as a means of mimicking natural conditions to jump start a return to healthy, natural stream systems. The goal is to restore streams to promote the return of beaver populations for long-term sustainability.

- Implementation of these techniques in Oregon typically triggers the need for a Removal-Fill permit issued by the DSL. The application process for obtaining individual permits from DSL is complicated, time-consuming, and expensive for landowners – creating a disincentive for voluntary efforts.

- Voluntary stream restoration work would also be subject to current laws requiring fish passage or waivers issued by the Oregon Department of Fish and Wildlife (ODFW) – even though the affected streams are so degraded that they cannot support migratory fish. Although waivers likely could be obtained, the process is complicated, time consuming and expensive.

- The time, expense, and complications of going through an individual permit process with DSL, and seeking a fish passage waiver from ODFW result in a disincentive for private landowners to participate in voluntary stream restoration efforts.

How the bill addresses the problem:

- The bill directs DSL to set up a simplified permitting process to authorize voluntary stream restoration projects by private landowners to construct artificial beaver dams.

- The program would be established on a pilot basis in the Malheur Lake Basin of Eastern Oregon, and would be limited to small streams that are currently eroded to the extent that they do not support native migratory fish or beavers.

- The simplified process would be implemented through rulemaking by DSL that would include details as to how the artificial beaver dams are to be constructed, maintained, and monitored. Only projects meeting the rule specifications would be authorized under the program, but other voluntary work could be done by obtaining an individual permit, as needed, from DSL.

- The bill includes a waiver from separate ODFW fish passage requirements for qualifying streams that do not currently support native migratory fish, but includes provisions for providing for future fish passage to the extent practicable in initial construction of artificial beaver dams, or for working cooperatively with ODFW to provide for fish passage when stream conditions are restored to the point that native migratory fish can return.

What the bill does not do:

- The bill does not create an outright exemption from permitting requirements – instead, it directs DSL to establish rule provisions for either a general authorization or general permitting process that eliminates the need for landowners to obtain individual permits. Under these procedures, qualifying projects could proceed with a simplified notice process to confirm eligibility and compliance. The rules adopted by DSL would include specifications for how the artificial beaver dams are to be constructed and maintained.

- The bill does not authorize new storage or use of water that would otherwise require a water right. As a result of amendments on the House side, the bill clearly states that it does not modify any requirements for water rights under state water laws in ORS Chapter 537. Artificial beaver dams are not designed or intended to completely block the flow of water. They are designed to slow down the flow of water. Although some pooling occurs behind the artificial beaver dams, this type of hydrologic change typically does not require a water right. The bill and related pilot program would not authorize landowners to store water, to divert water from the stream, or to make other beneficial use of the water.

How the bill has been modified in response to House testimony:

Testimony during hearings before the House Committee on Rural Communities, Land Use and Water resulted in several amendments proposed by the bill's supporters in an attempt to clarify the intent and address specific concerns. These changes included:

- Clarification in the legislative findings that this would be a "pilot program" to determine whether construction of artificial beaver dams can help restore environmental and economic health.

- Addition of a definition for the term "low profile" in relation to the construction of artificial beaver dams.

- Revisions to the definition of "Qualifying stream" to limit the pilot project to streams that are currently incised or eroded to the point that they are not inhabited by native migratory fish or beavers before commencement of stream restoration work.

- Clarification that the program is designed to promote natural reintroduction of beavers when suitable habitat is restored over time.

- Requirements for specific information to be provided by participating landowners.

- Direction that the implementing rules to be adopted by DSL will include provisions, whenever practicable, for designing and constructing the artificial beaver dams in a way that will allow for fish passage or that can be modified to accommodate fish passage when stream restoration is successful.

- Clarification that nothing in this measure is intended to or shall be construed to modify any requirements for water rights.

Conclusion:

Stream restoration efforts at the Silvies Valley Ranch have demonstrated successful results from the use of "artificial beaver dams" to help reduce erosion and restore flood plain connectivity on deeply incised and severely degraded stream systems. The process is cost effective for landowners and produces not only improved streams, but also more productive uplands for traditional grazing operations. The work at SVR has been done in consultation with public and private interests including the Oregon Natural Desert Association, Burns Paiute Tribes, U. S. Forest Service, U.S. Department of Agriculture Agricultural Research Center, and academics such as Dr. Gordon Grant of the U.S. Forest Service and OSU, and Dr. Martin Doyle at Duke University.

This measure would create an incentive for other landowners to undertake similar voluntary stream restoration work by simplifying the DSL permitting process and related ODFW fish passage requirements. The bill does not exempt projects from permitting requirements and does not authorize landowners to divert, store or make beneficial use of the water. Administrative rules adopted by DSL to implement the pilot program will describe construction specifications and conditions for qualifying projects. The program will also require monitoring by participating landowners, and a follow-up report by DSL to the Legislative Assembly.

As a former Director of both the Department of State Lands and Water Resources Department, and having worked for more than 30 years on water and natural resources issues in Oregon, I know that effective watershed restoration is dependent on the cooperation and active involvement of private landowners. Oregon has a long history of promoting innovative public-private partnerships to achieve common resource restoration goals. This is an opportunity to take another step forward in that direction. I urge your support for HB 3217.

Example of erosion on Bridge Creek

Example of erosion on Cottonwood Creek – OSU Study Area

Cottonwood Creek

Example of stream restoration on Hay Creek