

Submitter: John Gardiner

On Behalf Of:

Committee: House Committee On Climate, Energy, and Environment

Measure: HB3464

My name is Dr. John Gardiner; I'm a retired Professional Engineer with a lifetime of global experience in environmentally sound river basin management and restoration. In many western countries, rivers have been severely damaged - morphologically and ecologically - by the removal of beavers, including blowing-up their dams, in the mistaken belief that beavers were a threat to fish (they are strictly herbivores) and their dams were not only a blockage to fish passage, but a constraint to draining floodwaters as quickly as possible to the ocean. Beavers were also valued for their pelts. In my view, the only worse approach to 'controlling rivers' is to encase them in concrete and to install impervious dams that do indeed block natural fish passage

Restoring beavers (and a good supply of their favorite food and construction materials) to the landscape is almost always the best way to restore river geomorphology and ecology - form and function. Beaver dams, through their influence on river hydrodynamics and sediment transport, will restore a river's connection with its floodplain and both the horizontal meanders of the river and the vertical meanders of the river bed that encourage biodiversity.

The beavers' permeable dams provide habitat for invertebrates that feed off plant detritus such as fallen leaves and support the food chain that includes fish and their predators such as eagles and bears. These predators will spread digested fish remains (with ocean nutrients in the case of salmonids) in the forest, encouraging the growth of riparian 'buffer' zones that have many functions related to retention of floodwater and enhancing water quality. In time, riparian trees not already harvested by beaver will fall into the watercourse, adding further to structural diversity and habitat.

The most cost-effective way to manage the risk of flooding is to maintain the upstream floodwater capacity of the river floodplain. This implies restoring the river-floodplain connectivity that is most effectively done by beaver dams. Removing the mistaken "predator" status from beavers will enable Oregon Fish and Wildlife Agency to 'manage' beavers and encourage their return to our rivers. I have summarized some of the major benefits of bringing beaver, the State icon, back to our riverine landscape. Please support this Bill.