## A proposed compromise solution for Lostine River Corridor

astern Oregon Legacy Lands, sponsor of Wallowology Discovery Center, has watched the Lostine River Fuels Reduction project unfold over several years. The conflation of values, science, politics and strong emotions has left little room for productive dialogue. Nonetheless, everyone agrees they love the Lostine River and Eagle Cap Wilderness. The Lostine provides us with an abundance of cold, clean water, rich fish and wildlife habitat, a riverine paradise, and access to our state's largest Wilderness Area.

It would be beneficial to find a solution to this problem and avoid actions that would cause lasting divisions in our com-



munity, or a lost sense of place for the Lostine River Corridor. For whatever reason, relatively low interest in the project resulted in at least one bid that was eventually withdrawn. While a slightly modified version of the sale has already been advertised, there is still time for a different course of action

In the spirit of solving this problem in everyone's favor, we'd like to proffer a compromise. Move forward with an 8-inch diameter limit and remove the smaller, most flammable trees where appropriate. This approach will save the mature and older trees with their thick fire-resistant bark, large carbon stores, and cool understory microclimate. It will also protect valuable fisheries and wildlife habitat, and reduce impacts on the sensitive cool-adapted forest understory species. This way we can move forward reducing tree density and fire risk where it matters most (small trees and flashy fuels) while retaining the large, older structures, in this cool, moist, riparian forest

environment. Local fire crews do an excellent job removing small-diameter trees, and could provide an efficient way to get this important work done.

This simple approach would reduce fire risk, provide employment opportunities, and largely maintain the character of the Lostine River Corridor we all cherish. It might also help soothe the wounds and scars many people on both sides of this issue have experienced, and provide opportunities for everyone to move forward together in a more unified manner.

David Mildrexler is a systems ecologist for Eastern Oregon Legacy Lands in Joseph.

## Increasing threatened or endangered species can deliver economic benefits

By Chris Branam

Oregon State University

CORVALLIS, Ore. A new study provides evidence that increasing the abundance of a threatened or endangered species can deliver large benefits to the citizens of the Pacific Northwest.

The study, published today in the journal PLOS ONE, finds that a two-thirds increase in the average annual number of returning coho salmon to the Oregon coast would generate up to \$518 million per year in non-market economic benefits to residents of the

The study comes the same week that the U.S. Department of Interior announced that it will implement a new rule that stipulates that economic impacts for listing a species be considered under the U.S. Endangered Species Act (ESA).

"When we think about actions to protect endangered and threatened species, we often focus on the costs," said David Lewis, an economist in OSU's College of Agricultural Sciences and corresponding author on the study. "The benefits of protecting threatened species are difficult to esti-



Oregon State University

Coho salmon spawning in the Tillamook River.

mate since they are considered to be non-market and arise from the public's values for things like the existence of abundant salmon in the wild. This study gives us a way to evaluate the benefits.'

"If an agency is considering a policy or program that would increase the number of salmon by a certain amount, our study translates the benefits for that amount of salmon to a dollar value," said Steven Dundas, study co-author and economist in OSU's College of Agricultural Sciences and Coastal Oregon Marine Experiment Station.

"This provides evidence of the economic value Pacific Northwest residents place on protecting threatened and endangered species," Dundas said. "We can compare it to how much we actually spend on salmon restoration activities, to see if there's a net benefit to more investment."

The study, a collaboration between OSU and the Alaska Fisheries Science Center in Seattle, also found that the public attaches a substantial value — up to \$277 million a year – to achieving conservation goals sooner rather than later.

"There are sizable benefits to achieving conservation goals quickly," Lewis said. "That has real implications for conservation programs, showing that there's significant value to the public in up-front investments."

Another key study finding: People benefit from

Oregon Coast coho salmon conservation even if the fish aren't declared recovered and removed from listing under the ESA.

"That's an important concept," Lewis said. "This indicates that we shouldn't evaluate ESA activities only by whether a species is recovered or not. It's not all or nothing.

For the study, the researchers mailed veys to 5,000 randomly selected households in Oregon, Washington, Idaho and northern California in the fall of 2017. The surveys included scenarios with levels of attributes associated with improving the abundance of Oregon Coast coho salmon: how many fish come back from the ocean, how quickly they come back and what their conservation status would be under the

Associated with these scenarios was an annual per-household cost from a combination of additional taxes and higher prices for lumber and agricultural products, ranging from \$10 to \$350 per year. Survey respondents then chose their preferred conservation scenario or a status quo option with \$0 cost.

Twenty-one percent of the surveys were returned. By analyzing the responses, the researchers determined the public's average household willingness to pay for salmon conservation, which is then multiplied by the number of Pacific Northwest households to get the final benefit numbers.

"The surveys create a situation for someone to make a decision about a public good — as if increases in salmon abundance were something they could choose off the shelf at the grocery store," Dundas said.

Lewis, Dundas and co-author David Kling are all on the faculty in OSU's Department of Applied Economics. Co-authors also included Daniel Lew at the Alaska Fisheries Center and Sally Hacker in the Department of Integrative Biology in the College of Science at

The National Oceanic and Atmospheric Administration funded the study through its National Centers for Coastal Ocean Science Competitive Research Program.

## Confederated Tribes of the Umatilla and others establish Pacific lamprey exhibit at the Oregon Zoo

The ancient, eel-like fish are settling into the Great Northwest habitat

The Oregon Zoo's new est residents are also its oldest. Five Pacific lamprey moved into the Cascade Stream building in the Great Northwest area earlier this month, and the ancient fish are making themselves right at home. Older than dinosaurs and even trees, this 400-million year old native species is an important part of the history and culture of the Pacific Northwest.

"We're thrilled to welcome Pacific lamprey to the Great Northwest," said Shelly Pettit, the zoo's senior fish keeper. "It's a great opportunity for people to see them up close and learn about this unique species.'

The Pacific lamprey is an eel-like fish with a jawless mouth, third eye and no scales. Since the zoo's lamprey can often be seen suctioned onto the glass of their habitat displaying rings of sharp teeth, it's no wonder Pettit and the rest of the lamprey care team like to point



A Pacific lamprey swimming in its new home at the Oregon Zoo. The lamprey exhibit is a collaboration among the Confederated Tribes of the Umatilla Indian Reservation and others to help acquaint the public with the Pacific lamprey's life cycles and value to both ecosystems and tribal fisheries.

factor.

"Lamprey have a lot of charm once you get to know them, even if they aren't your typical cuddly critter," Pettit said. "We've been saying 'the cuteness is coming' to get visitors ready to meet these fish. The cuteness is here now, and it's been really fun to introduce people to a different type of adorable animal.'

The five Pacific lamprey came to the zoo from the Confederated Tribes of

vation as part of a tribal led effort which collects lamprey that are returning to fresh water below the three lowest dams on the Columbia River. Their new habitat in the Cascade Stream building was paid for in part by the U.S. Fish & Wildlife Service. When the fish are ready to spawn, the tribal team will transport them to their original range on tributaries of the upper Columbia River and the Snake River.

Pacific lamprey have sur-

mass extinctions, but in the past 70 years their numbers have declined due to a combination of habitat loss, climate change and lack of food. Now designated as a Species of Concern by U.S. Fish & Wildlife Service and by Oregon's and Washington's departments of Fish & Wildlife, the lamprey are disappearing from their native ranges in the Pacific Northwest.

Native American tribes are collaborating with Federal, State and local agencies to aid Pacific lamprey recovery. These groups are installing passage structures, removing dams to ease passage and restoring damaged streams to help lamprey spawn and rear young. By moving lamprey to areas where they used to live above the dams along the Columbia — they allow the industrious Pacific lamprey to rebuild their own habitat.







