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Trout Unlimited testimony in Support of SB 3

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Chair Helm and Committee members-

I am Tom Wolf, here representing the over 3000 members of Trout Unlimited here in Oregon. Trout Unlimited members are passionate both about the sport of angling and about protecting the habitat of our wild native salmonids. TU volunteers want to make sure that harmful practices that impact stream riparian are regulated to limited their impact. A very harmful practice is motorized suction dredge mining, which can have numerous adverse impacts on streams and rivers. That is why Trout Unlimited, and its members are supporting SB 3 in our testimony today. This bill will provide regulations and rules concerning a use that can have devastating impacts on young salmon, eggs, stream structure and macroinvertebrates. It will even keep motorized suction dredge mining equipment off essential salmon habitat as defined by state regulations. SB 3 will have positive benefits for our native wild salmon and trout.

Motorized suction dredge mining has numerous negative impacts on streams, and I will cover these in the following remarks.

1.Suction dredge mining operations result in the loss of important in-stream structure, including boulders and large woody debris.

Large structure such as boulders, large woody debris, root wads, etc. provide vital benefits to streams for many reasons. These structures provide shade and cover for fish plus helping to develop pools which can provide needed resting spots in swift currents. This type of structure also helps provide habitat for macroinvertebrates. Deep pools and large woody materials are considered vital habitat for salmonids such as trout and salmon.

Suction dredge operators often remove large woody structure and boulders in order to acquire better access to central stream channels in order to operate their dredges. Even if boulders and large woody debris are not directly removed, their stability can be impacted by the removal of surrounding sediment. Removal of even a small amount of large woody debris can have significant impact on fisheries habitat because many streams already have a deficit of large wood as compared to their historical condition.

2. Dredge Mining operations can degrade valuable riparian habitat.

Sufficient trees and shrubs are needed in riparian areas to provide shade to stream systems, filter out sediments from upstream land uses, provide large woody debris that will fall into streams, provide leaf litter and other stream nutrients directly into streams and protect streams banks form accelerated rates of erosion. There has been observations of dredge operators damaging or removing important riparian vegetation in order to access their claim. While the amount of vegetation removed by a single dredge miner can be small, the cumulative impact resulting from a series of claims along a salmon stream can be substantial.

In addition to vegetation loss, the stream banks themselves can be damaged by the operation of motorized suction dredge mining equipment. In one California study, 4% of dredge operators would observed to damage and destabilize stream banks during their operation. This seems like a small number but even this can have a negative impact on salmon habitat in streams.

3. Suction dredge mining can accelerate sedimentation rates, which causes adverse impacts to fisheries in streams.

Numerous studies have documented the detrimental impacts of increased sedimentation caused by suction dredge mining. A 2009 study conducted by the California Department of Fish and Game found 6 different studies that found increased sedimentation downstream from suction dredge mining operations. So the increase in sedimentation depends on the type of substrate and stream discharge rates but in some cases there were as much as 10 to 20 fold increase in fine stream sediments over background conditions. These increased sedimentation rates can negatively impact salmon habitat by filling downstream pools , by decreasing quality of habitat for macroinvertebrates in streams and by increasing sedimentation on spawning gravel areas. If there are too much fine material on spawning areas, salmonid eggs can be smothered as dissolved oxygen can be prevented from reaching spawning redds.

4. Mining activity results in increased scouring on salmon redds in suction dredge tailings

Unstable gravel created by suction dredge mining operations can attract salmon to spawn there. This deposited gravel is usually unstable because it doesn't have fine sedimentation that would lead to some stability in spawning gravel. This unstable spawning gravel, leading to negative impacts for redds deposited there, has been observed in Klamath and SW Oregon streams.

5.Suction dredge mining can lead to loss of aquatic macroinvertebrates

In some studies conducted, there has been found that macroinvertebrates, in the short term, are found to be negatively impacted in stream sections below mining operations as compared to non-suction dredge mined areas. What is not known or studied is the long-term impact on macroinvertebrates by removed of large woody debris or instream boulders because of suction dredge mining operations. The long-term impact could be severe.

6.Suction dredge mining can cause direct impact to spawning eggs and young juvenile fish

In a study done by Forest Service in 1998 on the effects of suction dredge mining on streams and fishes, FS scientists found that young fish suffered high mortality when entrained by suction dredge mining. They found mortality of 29-62 % on cutthroat trout and up to 80% on young rainbow trout. The

impact on other small species or young of other species was also found to be high. Suction dredge mining causes the flow of fine sedimentation which can smother small fish or eggs-and it can, during the operation, suck up young fish fry and eggs, thus leading to their death or destruction.

Suction dredge mining not only has a negative environmental impact but by reducing the amount of returning salmon and steelhead, it can have a negative impact on recreational and commercial fishing in Oregon. There have been or will be others that will talk more about the over $ 1 billion generated by recreational fishing annually for the economy of Oregon but suffice it to say, the negative impacts of suction dredge mining can lower the amount of money generated by fishing, much of which gets into rural economies with the use of hotels, restaurants, equipment and gas. Recreational fishing is a very big economic driver in this state and especially on rivers like the Rogue and other SW Oregon streams. Limiting suction dredge mining will help with this important economic driver.

In Conclusion, the studies conducted by many scientists, including Trout Unlimited's Senior Scientist Jack Williams has concluded, based on good data, that suction dredge mining can have a negative impact on stream habitat, macroinvertebrates, young and small fish and salmon eggs. The California Fish and Game Department reviewed over 600 scientific publications looking at impacts ranging from water quality degradation to streambed alteration to direct fish/macroinvertebrate mortality. Since this review, California has suspended suction dredge mining activity, a move supported by the nation's largest organization of professional fishery biologists. For a huge state such as California to declare a moratorium on suction dredge mining, the evidence must have been conclusive on the negative impacts of this practice-and Trout Unlimited believes it was very conclusive.

Obviously, it depends on various users, some being worse then others. But the data suggests that there needs to be regulations that will limit the negative impacts of suction dredge mining. SB 3 is a bill that limits suction dredge mining while still allowing it and offers a long term solution to the problems that suction dredge mining brings. Trout Unlimited urges the committee to support SB 3 and pass it on to House floor. To protect Oregon's stream, it is the right thing to do.