

# Comments from Mike McKay, 1/1/21

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Mr. Strong - Please send this to the Planning Commission for the meeting on 1/14/21. Thanks.

## **Prohibit Gravel Scalping in the Channel Migration Zone**

Please consider language which would prohibit mining (gravel scalping) in the Channel Migration Zone.

I have firsthand experience how this activity can seriously impact endangered Chinook salmon in the Nooksack River. I was doing field surveys at the time as a fisheries biologist with the Lummi Tribe. These were spawner surveys documenting locations of Chinook and Chum redds (salmon nests). This took place in late September in the 1980s at a sandbar downstream of the Everson Bridge on the right bank (North side).

At that time it was not widely known about Chinook spawning in that part of the lower river. I had talked to several gravel scalping company employees during this activity and they vehemently denied seeing any salmon spawning at these excavation sites. Washington Department of Fish and Wildlife had reluctantly issued permits for gravel scalping activities. Operators were required by WDFW to re-grade areas they excavated at the end of each day. Unfortunately this was routinely ignored.

In this case of the Everson sandbar, the bar was dredged and the sand/silt/gravel material was stockpiled in large heaps immediately upstream of several active Chinook redds that I observed being constructed. A few days later there was a high flow event, as is common this time of year during rainstorms (late September). The stockpiled mounds were eroded away and essentially covered the redds downstream I had observed earlier. I carefully documented this with a report and photos which was sent to WDFW permit writers. Since this time WDFW has been reluctant to issue new permits for this activity on the Nooksack River.

I have researched the effects of fine sediments on salmon redds in the literature. What occurs is that the fines less than 0.5 mm are driven down into the stream bed by the swift water into the newly built redd(s) and form a layer which effectively suffocates the eggs. This fine sediment impedes the flow of oxygenated water around the egg pockets. Adult female salmon are careful to remove fine sediments from the redd during their excavation and egg laying. While some natural occurring fines accumulate in the egg pockets as the result of high flow events, this amount usually doesn't restrict flows of circulating water to any large extent, and certainly not to the degree that an eroded nearby source of newly excavated sediment would.

There are numerous sandy/gravel areas in the lowlands of Whatcom County not adjacent to the river available for gravel extraction. Gravel scalping should not be an allowed activity in the Channel Migration Zone or next to any flowing rivers or streams.

Thank you for this opportunity to comment. - Mike MacKay