



5-2021

## Vignette 05: Blocking Culverts Impact Salmonid Survival

Northwest Indian Fisheries Commission

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### Recommended Citation

Northwest Indian Fisheries Commission. (2021). Blocking Culverts Impact Salmonid Survival. In K.L. Sobocinski, State of the Salish Sea. Salish Sea Institute, Western Washington University. <http://doi.org/10.25710/vfhh-3a69>

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# 05 | BLOCKING CULVERTS IMPACT SALMONID SURVIVAL

Excerpted from *State of Our Watersheds 2020*, authored by the Northwest Indian Fisheries Commission

During the first six years of implementing the U.S. v. Washington culvert case injunction, the State of Washington has corrected 150 fish-blocking culverts in the Puget Sound Region. At the current rate, if additional support is not gained, the corrections of the remaining 799 culverts would be completed in 32 years or the year 2052.

Usable habitat for Puget Sound salmon is a fraction of what it once was, and our ability to recover the salmon populations directly depends on the recovery of habitat (National Marine Fisheries Service 2007). "Impaired fish access is one of the more significant factors limiting salmonid productivity in many watersheds" (Joint Natural Resources Cabinet 1999). In 2013, the U.S. District Court ruled that "the Tribes and their individual members have been harmed economically, socially, educationally, and culturally by the greatly reduced salmon harvests that have resulted from State created or State-maintained fish passage barriers" (United States v. State of Washington 2013).

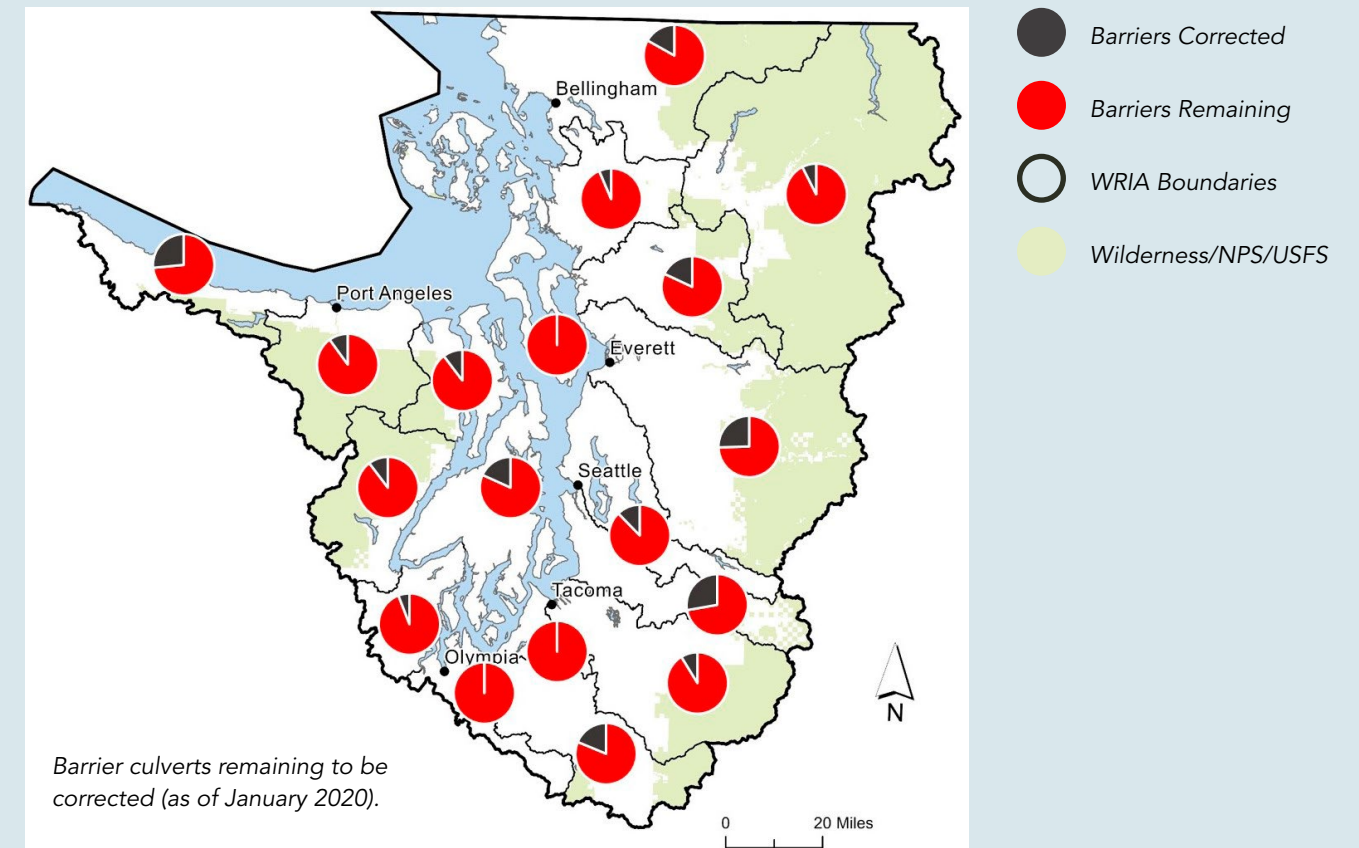
The Puget Sound Salmon Recovery Plan states that "the loss of rearing habitat quantity and quality is the primary factor affecting population performance," and that the status quo is unacceptable (National Marine Fisheries Service 2007). Not only do physical barriers limit fish passage and available habitat, they can also damage water quality and disrupt sediment deposition (Joint Natural Resources Cabinet 1999).

Because of this damage, "In 2001, the United States and western Washington Tribes brought an action against the State of Washington for their failure to construct and maintain fish passage on state-owned culverts." In 2007, the court ruled that the right of taking fish as secured by the Treaties, means that the State must "refrain from building or operating

culverts that hinder fish passage" (United States v. State of Washington 2013).

In March 2013, the U.S. District Court granted the permanent injunction requested by the Federal Government and Tribes, holding that the Tribes "have suffered irreparable injury in that their Treaty-based right of taking fish has been impermissibly infringed. The construction and operation of culverts that hinder free passage of fish has reduced the quantity and quality of salmon habitat, prevented access to spawning grounds, reduced salmon production in streams in the Case Area, and diminished the number of salmon available for harvest" (United States v. State of Washington 2013).

Multiple state agencies were affected by this ruling. Washington State Parks and the Department of Fish and Wildlife were required by state law to fix injunction culverts by Oct. 31, 2016 (Joint Natural Resources Cabinet 1999). This deadline was nearly met, but because some barrier culverts have been identified since the 2016 deadline, a few corrections still need to be made. Some Department of Natural Resources' culverts have a longer timeline for correction (United States v. State of Washington 2013).



Owner	Barriers Repaired	Barriers Remaining	Planned to be Repaired	Repaired between 2016-2019	Added to List	Removed From List
DNR	62	7	4	20	4	5
DOT Total	67	787	17	42	107	43
DOT < 200	2	152	1	1	28	11
DOT > 200	64	633	16	41	77	27
DOT Unknown	1	2	0	0	2	5
Parks	13	0	0	9	0	1
DFW	8	5	0	4	5	5
Total	150	799	21	75	116	54

Washington Department of Transportation (DOT) is required to fix culverts that block 200 meters or more of habitat by 2030. DOT culvert repair funding is less than 12% of where it needs to be to complete repairs by the court appointed deadline. DOT still needs to fix over 600 barrier culverts (>200m of habitat) in the PSR region; 16 are planned for repair in the 2020-2021 construction season.

Source: Map and table data comes from Washington State Department of Fish and Wildlife (2019), Washington State Department of Natural Resources (2019a; 2019b), Washington State Department of Transportation (2019; 2020), Curtis (2019), Washington State Department of Ecology Regions (2000), and Washington State Parks and Recreation Commission.