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In relation to recent published research by Tien et al (2021) from the WSU salmonid. stormwater research group, it would be prudent to require that all runoff from surfaces that receive tire traffic be treated or infiltrated in such a way as to remove the tire exudate pollutants described in Tien et al 2021 and related subsequent research.

This treatment requirement should include not only retrofitting or redesigning existing direct stormwater outfalls, but also requiring effective infiltration or bioswale treatment prior to outfall release to salmon-bearing surface waters. In particular, this requirement should apply equally to those waters that are currently "exempt" (such as the Puyallup River), and thus allow construction of new direct outfalls after treating only for the 6-month storm. This level of treatment is inadequate to ensure removal of the tire exudate pollutant, and these rivers are becoming more polluted with greater salmonid mortality rates over time.

To better protect water quality as well as timing of flows to surface waters, all stormwater from new development should be infiltrated in uplands, only allowing overflow during extreme rainfall events (store and infiltrate at least up to the 2-yr storm).

As an aside, I note that infiltration is not recommended in many of our shallow glacial till soils, which do infiltrate effectively prior to development. In these soils, shallow broad infiltration facilities installed above the till surface do work the great majority of the time, and should be implemented. The overall philosophical goal should be to get water back into the ground onsite, and the practical goal should be to spread many small infiltration facilities across the site, and avoid the "one large pond" stormwater management systems.