Jim and Nancy Soriano

Dear Annie Sawabini,

Thank you for this opportunity to comment on the 2018 Streamflow Restoration Act, Chapter 90.94 RCW.

There may be areas where unlimited exempt wells for the next 20 years could be mitigated for Net Ecological Benefit. Even in Eastern WA. Maybe. But this RCW, which focuses on Instream Flows for Rivers, fails to consider the specificity of the tributaries that are important to the ecology of a Watershed.

We are specifically concerned about the unintended consequences that RCW 90.94 will have on a specific tributary to the Okanogan River, in the WRIA 49 watershed. This tributary is the Tunk Creek, which is an "important tributary from the east side of the Okanogan River "(pg 2-9). Even by Eastern WA standards, this tributary is very dry.

Tunk Valley is part of what is referred to as the "Omak Subbasin" in the 2009 WRIA 49 Watershed Report, pictured below, in the map of the East Central Subwatersheds, found in the WRIA 49 WATERSHED REPORT of 2009. We are writing to ask that the DOE exempt the Tunk Valley sub-basin from the RCW 90.94 directive to allow and plan for, unlimited new exempt wells, for the next 20 years. The consequences would be disastrous and could not be mitigated. Simply put, the potential for groundwater withdrawals, under RCW 90.54 exponentially exceeds the amount of water that has ever or will ever be available in the Tunk Valley subbasin and tributary to the Okanogan River.

There is evidence that, as a result of recent development that this aquifer is not being recharged. A unique combination of geology, low precipitation and over-appropriation have already resulted in the Tunk Valley's two largest senior water rights, in this high box canyon of 71 square miles, becoming worthless. Between the two of them, 100 acres of alfalfa was irrigated for decades. Now there is no longer a single acre that is irrigated in the Tunk Valley, because of impairment to these senior water rights. This is because of a very significant reduction in stream flow due to new exempt wells.

RCW 90.94.030 begins with the following exception to allowing unlimited exempt wells. It refers to

... requirements.... specified in the applicable rules adopted under this chapter or chapter 90.22 or 90.54 RCW.

90.54 RCW, "Rights not impaired" reads:
Nothing in this act shall affect or operate to impair any existing water rights.

90.94 RCW, by allowing unlimited exempt wells in Tunk Valley would increase impairment to senior water rights. A brief history of the valley will help to illustrate its extreme vulnerability to exempt wells.

The Tunk Valley was a part of the Colville Reservation until 1900 when the Federal Government opened it up to homesteaders. It was the original land rush. The entire valley was proved-up by the

time the drought hit in the 1920's. The creek went dry. The springs went dry. The wells went dry. Virtually every homesteader abandoned their land. And they didn't come back.

. This history demonstrates how quickly the aquifer was depleted;
and that low levels of precipitation result in slow aquifer recharge.
The WRIA 49 Watershed Report of 2009 discusses this local history:
"Significant trends in wet or dry periods have been observed over the past 100 years, (in WRIA 49) and the effects of these trends on water availability should be considered in watershed planning....long-term dry periods have a significant effect on cumulative water storage." (pg. 2-5 WRIA 49 Report)

When the homesteaders abandoned their farms, land-use converted to grazing and and timber resource. Up until the 1990's there were only 25 wells throughout the entire valley of 53,000 acres.

The Tunk Valley is a unique place. It is not on a road to anywhere else. The Tunk Valley Road dead-ends in the national forest which is impassable during winter months. This valley was one of the last places in the nation, to get electricity. And we still had party-lines for telephone service into the 1980's. This land is uniquely uncharacterized, until recently, by residential development. Grazing has proven to be a compatible land use with the water scarcity in this tributary.

Up until the late 1980's, there were only 25 exempt wells. But there are over 100 stock water rights in the Tunk Valley.

RCW 90.22 states that exempt wells cannot impair stockwater rights. This also prohibits unlimited exempt wells that would occur under 90.94 RCW

RCW 90.22.040 reads:

It shall be the policy of the state, and the department of ecology shall be so guided in the implementation of RCW 90.22.010 and 90.22.020, to retain sufficient minimum flows or levels in streams, lakes or other public waters to provide adequate waters in such water sources to satisfy stockwatering requirements for stock on riparian grazing lands which drink directly therefrom where such retention shall not result in an unconscionable waste of public waters. The policy hereof shall not apply to stockwatering relating to feed lots and other activities which are not related to normal stockgrazing land uses.

Senior water rights for irrigation have been already been impaired. It is reasonable to expect that Stockwater rights are also impaired in Tunk Valley. We drilled a 330 foot well for stockwater in 1992. It was reliable for over 20 years. This year it failed us. Instead of water the pump is in mud. Most stockwater rights in the Valley are surface water rights. They are associated with springs and the Tunk Creek. Approximately 25 surface stock water rights are associated with our land, and we are concerned about impairment.

The 90.94 RCW is not written to accomodate extremely dry areas within the state, such as the Tunk Valley. According to the WRIA 49 Report of 2009, the rate of precipitation for the Omak Subbasin, which Tunk Valley is included in, the annual precipitation is 13 inches. 96% of that is lost to evapotranspiration. Allowing for run-off during snow melt, sometimes when the ground is still frozen, doesn't leave much for aquifer recharge.

The subbasins east of the Okanogan River, including Tunk Valley, are geologically very different from the land west of the Okanogan River. The east side of the River is a more ancient and

distinctly different continent!
Precipitation is the only source of water for aquifer recharge, in the Tunk Valley

Over 40 years ago, in 1976, when DOE established an Instream Flow Rule for the Okanogan River, the DOE recognized that water was extremely limited in Tunk Valley and the other subbasin/tributaries east of the Okanogan River. DOE closed these tributaries to surface water withdrawals for 6 months out of the year, EVERY YEAR.

DOE also specified that if groundwater was found to be in continuity with surface water, then groundwater withdrawals would be interrupted, EVERY YEAR, between May and October, as with Surface water withdrawals.
This annual six-month closure to surface (and ground water rights) was made when there were only 25 shallow hand-dug wells in the entire valley. Now there are hundreds, with the potential of thousands more, although the aquifer is already tapped out.

Unfortunately, 90.94 RCW does not recognize the lack of water resource in these tributaries, which DOE was able to recognize and protect, over 40 years ago.

The graph below, taken from the 2009 WRIA 49 Watershed Report shows that from 1920, below average precipitation in the Okanogan, continued for 60 years until the 1980's.

Coincidentally, the 1980's the was time when the local mill, which owned land in the Tunk Valley for decades, went bankrupt and sold thousands of acres to out-of-county developers. This was virtually the first time, since the drought, that land in the Valley became available. It was the second land rush in Tunk Valley.

Most of these parcels remain undeveloped, so far, but approximately 300 wells have been drilled, mostly at the top of the valley, where the headwaters are. Many of these wells are not even used for full time residences, but for "second homes". The impaired certified senior water rights, mentioned above, are located about 12 miles "downhill", from the exempt wells. The land between the wells and the impaired water rights have remained in open space grazing.

Both of the impaired senior water rights, which were surface water rights, coming directly from the Tunk Creek, became worthless around the time those wells started being dug in the headwaters, on the land that used to belong to the local Omak Mill.

The Tunk Valley has gone dry before and it is looking like history could repeat itself if unlimited wells are allowed to be drilled in this semi-arid subbasin. Even without factoring in climate change, there is not enough water to support thousands of new wells on existing parcels. This is a remote valley and there is no realistic or economically viable way to mitigate for additional exempt wells and put water back in the Tunk Creek Tributary.

In addition to considering impairment of certified senior water rights, including stockwater rights in Tunk Valley, the irreversible damage that would happen to fish habitat, with additional wells, should be considered.
While spawning occurs throughout the mainstem Okanogan, redds appear to be concentrated in areas immediately downstream of mainstemtributary confluences (e.g., Omak Creek, Tunk Creek, and Bonaparte Creek). The role that tributaries may play in maintaining mainstem spawning

habitat, either through transport and deposition of sediment or altered hydraulic properties is a topic that merits further investigation. (WRIA 49 report, pg. 2-13)

The "role that (Tunk Creek Tributary and other tributaries to the Okanogan River) play in maintaining mainstem spawning habitat..." could not be mitigated. The potential consumption of exempt wells would exceed more water than this valley has EVER had. 90.94 RCW was not written with over-appropriated tributaries in mind. The streamflow has been measured, by the DOE as decreasing to as little as 0.02 cfs in late summer, without any additional wells.

The WRIA 49 Report of 2009 states that the Tunk Creek is already over-appropriated by 1,300 %.

Salmonoids are not the only threatened and endangered species that depend on water in the Tunk Valley. The Sharp-tailed Grouse is a species that is found only in a few places in the Washington State. WDFW is now considering uplisting these birds from Threatened to Endangered. Tunk Valley is one of the few remaining habitats left statewide, for this species.

Sharp-tailed Grouse require two things which are rarely found in combination anymore. One is large un-fragmented habitat, of at least 20,000 acres. Second, riparian habitat. The birds depend on the buds on deciduous trees, for food in the winter.

Of the few remaining habitats for Sharp-tailed Grouse, in the state, WDFW recently chose the Tunk Valley to release about 35 sharp-tailed grouse that were captured in British Columbia, last Spring. The purpose was to bring genetic diversity to the local grouse. This was a logistically complicated effort, which took years to accomplish, which signifies the importance of these grouse. Sharp-tailed Grouse and their unique critical habitat are another reason to protect water resource and riparian habitat in the Tunk Tributary.

Tunk Valley was ground zero for the largest Wildfire in State history, just three years ago. There was no water to fight fire. The creek was dry and the power was out for weeks. Fire trucks showed up and didn't know where to get water. This is another consideration regarding water -scarcity that should be included in land use planning, but which is not incorporated in 90.94 RCW.

Our impression is that 90.94 is asking that we pull a rabbit out of a hat, when it asks that 20 years of new exempt wells be mitigated for a Net Ecological Benefit. This is mission impossible for Tunk Valley.

Thank you for considering these comments. And please let us know if you require documentation or would like to discuss.

Sincerely,

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98849