

Trends

“A curious thing happens when fish stocks decline: People who aren’t aware of the old levels accept the new ones as normal. Over generations, societies adjust their expectations downward to match prevailing conditions.”

(Kennedy Warne, National Geographic, April 2007)

“It may be the burden of an old person, that the further they can look back in life, the further they may try to look ahead.”

(Dr. Gordon Hartman (1927-2021) quoted in a blog authored by Dr. Robert Lackey, July 2008. Dr. Hartman was a lifelong pillar of the fisheries and conservation communities in British Columbia and beyond.)

As British Columbia’s steelhead scenario unfolds for another year I’m guilty of contemplating its future. Gone are the days when I’d be concerned about any rivers in my old stomping grounds on Vancouver Island or a couple of day trip rivers close to my school days home in South Burnaby. The Skeena still beckons though so I’ll focus on it with occasional reference to points south for context.

I learned long ago that predicting steelhead returns is only useful if you enjoy being wrong. Whereas that is a good guideline for the fish

themselves, I can't help but examine various other trends that illustrate with greater certainty the direction we seem unable to avoid. I'll begin with fish and human population realities.

A reasonable person observing the abundance of steelhead relative to BC's human population would have to conclude they're inversely related. The southwestern BC mainland, including the eastern Fraser Valley is home to about 61% of the province's 5.7 M residents. The southern half of the east coast of Vancouver Island contributes another 14%. That leaves 25% of the remaining population spread mostly between a half dozen major communities throughout the southern and central interior. The Skeena watershed, the heartland of most of BC's wild steelhead bearing rivers of consequence, is home to roughly 80,000 people or 1.4% of the province's population. The per capita abundance of steelhead is obviously very significantly higher with increasing distance from Vancouver. Much of that is directly related to what we have done to the habitat in too many rivers that produced enough steelhead to sustain prolific recreational fisheries that have become a distant memory in half a human lifespan.

Here's where I'm reminded of a seminal paper by Dr. Robert T. Lackey, demonstrably the most prolific and powerful contemporary messenger of facts surrounding fisheries management in the Pacific Northwest states and beyond.

https://www.researchgate.net/profile/Robert-Lackey/publication/228706099_Defending_Reality/links/09e41511d1c3db9607000000/Defending-Reality.pdf

A sobering quote: “The near certain growth in the human population in the Pacific Northwest through this century, coupled with little indication that most people will accept the enormous lifestyle changes necessary to perpetuate, much less restore, wild salmon, means that restoring “fishable” runs of wild salmon in California, Oregon, Washington and Idaho is a policy objective that is not likely to be achieved”.

In a later paper (Lackey, Robert T., Denise H. Lach, and Sally L. Duncan. 2006. Policy options to reverse the decline of wild Pacific salmon. Fisheries. 31(7): 344-351) he labelled the area bracketing Seattle through the lower Fraser Valley plus the southeast coast of Vancouver Island as Seavan in recognition that the issues were identical and independent of a border. BC’s population was 4.1M in 2006. It’s almost 30% greater today. Draw your own conclusions with respect to steelhead futures in the BC component of Seavan.

A few more numbers might be sobering. The most recent steelhead angler statistics for BC are three years old but they’re all we have to assess patterns. Allowing for COVID related travel restrictions that eliminated non-Canadian participation in the Skeena fishery in 2020 and a dramatic downturn in the supply of those fish one year later,

there is still instruction in the numbers. What they reveal is the average number of licensees has remained relatively stable at roughly 17-18,000 annually for the past decade. More interesting is the fact that about half of those who purchased a license reported they never went fishing. That puts the active steelhead angler population at 0.15% of the provincial population. That doesn't make for much of a political voice in support of sustaining BC's steelhead fishery. Of all days estimated to be fished for steelhead in BC in recent years, the Chilliwack/Vedder system, 65 miles east of downtown Vancouver and well within Seavan, has accounted for about one-third. That is directly attributable to the only remaining hatchery steelhead program of any consequence in the province. Today's BC wild steelhead reality is there is little left to attract angler interest outside the Dean River and the Skeena system and the former is not exactly easily accessible.

The steady encroachment of development throughout the best of what remains of BC's wild steelhead producing territory is not going to serve wild steelhead production or conservation well. History instructs that logging, mining, pipeline construction and operation, transportation corridor developments, urbanization and its inherent domestic water supply and waste products processing, etc. brought to bear on once pristine habitats are never without impact. Factor in that growing seasons at northern latitudes are short. A Sustut or Kispiox steelhead juvenile typically resides in its natal stream for at least two and up to four times as long as its Rogue or Deschutes cousins before achieving smolt size. Each additional year means less of them and,

ultimately, fewer adults returning. The best of the best Skeena tributaries, even in a pristine state and enjoying optimal weather and freshwater rearing conditions for several successive years, could never begin to match the smolt production of those southern rivers. Then we send them to a life of uncertainty at sea.

The ocean rearing territory for BC steelhead is well enough known from tagging studies over the past many decades. The Gulf of Alaska and the Central North Pacific, often well past the halfway point between North America and Japan, is home. Those areas are at the mercy of climate change. We're only beginning to see what we will according to a recent publication that indicates the cold years of today (La Nina) are hotter than the hot year (El Nino) a few decades ago.

<https://ourworldindata.org/global-temperatures-el-nino-la-nina>

Compounding any negative consequences of sea surface temperature oscillations we have that same ecosystem overloaded with pink and chum salmon from culture operations in Alaska, Russia and Japan. Alaska's aquaculture associations are the primary source of pink salmon while Russian and Japanese releases of chum salmon exceed Alaska's pinks by roughly 30%. Not to be outdone, Alaska also adds about two-thirds of the number of chums released by Russia and Japan to the same ecosystem. The science community has been raising red flags over the consequences for sympatric populations of other species

but, thus far at least, there is no end in sight for this classic example of Garrett Hardin's "Tragedy of the Commons".

https://pages.mtu.edu/~asmayer/rural_sustain/governance/Hardin%201968.pdf

The individual fisheries that bear on Skeena steelhead warrant highlighting. I'll not deal with those that occur outside the near shore waters known to be migration corridors for homing steelhead. Interception is enough of a mystery in waters under the jurisdiction of domestic governments that speculation around what happens beyond those waters is pointless. In order, then, we have Southeast Alaska net fisheries, Canadian domestic net fisheries, in-river (mostly net) fisheries and, finally, recreational fisheries. In essence these sectors are three solitudes. Interaction between their representatives is minimal. It is important to acknowledge, however, the commercial sector has a consistent history of cohesion in allocation and conservation discussions. As will be seen below, the other two sectors are hopelessly fractured in that respect.

For whatever reasons salmon and steelhead bound for northern BC rivers frequently landfall around Noyes Island (District 104), a lucrative spot for the Southeast Alaskan seine fishery targeting Skeena and Nass origin sockeye that are far more valuable than any pink or chum salmon that may have originated in Alaska. Unfortunately, co-

migrating steelhead destined for those same rivers are unavoidable. Canadian concern over that issue prompted Alaska to forbid the sale of steelhead three decades ago thus eliminating any data supported basis for such concerns. No data, no problem.

A bit of digression here gives some impression of the extent of the problem Alaska was disguising by terminating steelhead catch reporting. In the late 1970s and into the 80s BC supported a number of hatchery steelhead programs. Every steelhead smolt released bore a coded wire tag. At the time a Canadian contractor was employed to sample commercial fishery landings in both SEA fisheries and all our own fisheries along the BC coast. The objective was to estimate harvest rates of various stocks and species. The contractor in charge told me his crews, whose target sampling rate was 20% of landings, routinely recovered more marked steelhead in their sampling than were reported by the entire SEA fleets.

The Pacific Salmon Treaty between Canada and the US expires in 2028. The timing for addressing catch sharing imbalances under a revised treaty couldn't be worse. President Trump is almost certain to obstruct a treaty that might benefit Canadian origin fish. In fact, provisions currently in effect are likely at risk as trade wars escalate. No doubt Canada will threaten to harvest more US origin chinook in BC's tidal waters fisheries, but steelhead will never be on the table.

Skeena bound steelhead that reach Canadian waters immediately south of Alaska's District 104 seines and District 101 gill nets still face domestic seine and gill net fisheries. Whereas the impact of those fisheries in recent years is far less than it was all through the late stages of the last century and the first two decades of this one, the estimated abundance of Skeena steelhead has also declined. Those who fall back on test fishery data for comparisons between past and present to claim all is well never recognize the test fishery numbers reflect only the estimated number of steelhead that didn't get caught by commercial fisheries before reaching the test fishery. If the annual steelhead return is reconstructed to facilitate appropriate interannual comparisons, the test fishery figures from the 1980s and 90s could be doubled to account for the 50% harvest rate on steelhead that is never included in the latter-day comparisons of convenience. Domestic commercial nets do steelhead no favors, to be sure, but, if the impact of all other fisheries Skeena steelhead endure had been similarly reduced in the past decade, their status would have improved markedly.

Next in line we have FN fisheries. Apart from more than half of the total commercial fishing effort accounted for by FN members in the conventional commercial fisheries, there is additional fishing prosecuted by FNs. That fishing comes under the labels Food, Social and Ceremonial and/or Economic Opportunity. These fisheries occur mostly in tidal waters with the same gear employed when commercial fishing. Fishwheels, beach seines gill nets and angling are employed at

various times and locations in river. The wheels and beach seines represent token experiments conducted in addition to gill net fisheries, not in their replacement. FN angling in closed times and places, often with gear forbidden for everyone else is anything but negligible. The trend toward mild winters is not steelhead friendly in this regard. There is no consistent sampling or reporting of what occurs with respect to steelhead in any FN fishing. If Alaska's and our own commercial fishers are guilty of steelhead non-reporting, BC's FN fisheries are their equal. No one in a position to influence that situation shows any evidence of concern or even any interest. All that the people we pay to manage steelhead ever concern themselves with is how many steelhead are estimated to have passed the test fishery at the mouth of the Skeena. The more significant issues of how many of that number are removed and by what forces prior to spawning is never given any attention.

While on the subject of FN fisheries I would be negligent if I didn't mention the 25-yr old mark/recapture steelhead population estimation program that occurs at Witset (formerly Moricetown) on the Skeena's largest tributary, the Bulkley River. A quarter century later and the only thing that can be said is the damage done to the stock that once supported the largest catch of wild steelhead of any river in BC has been completely ignored. Millions of taxpayer dollars later and nary a word has appeared on paper in more than a decade. I've commented on that travesty extensively, to no avail. Response to anything

perceived as criticism of a FN project in the world of the present is just not going to happen.

Beyond any biological issues surrounding FN fishing, we have the ever more impactful politics. Last June I tried to refresh myself on which organizations in the FN community have the greatest influence on the fate of Skeena steelhead. In short order I came up with seven. I doubt I got them all. Beyond these umbrella organizations we have the individual FNs. There are six of them between Skeena tidewaters and headwaters. Within each of the six, decision making authority is confused by organizational structures that include hereditary chiefs, elected chiefs, houses and clans. What most people fail to appreciate is each FN is a separate government empowered to deal, government to government, regarding treaties. Those negotiations occur behind closed doors. The general public only learns what terms and conditions may be attached to any treaty after it is ratified by the governments involved. While all of that is going on we have two overarching issues, one policy the other legal. The policy is the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP), the law relating to BC's implementation of UNDRIP is known as the BC Declaration of the Rights of Indigenous Peoples Act. For a flavor of where this is taking us, consider a quote from the leader of the all-powerful Union of BC Indian Chiefs:

“First Nations in British Columbia have long witnessed flagrant double standards around the monitoring of sport fishing and endured the violence of catch-and-release practices. In the era of the BC

Declaration of the Rights of Indigenous Peoples Act (DRIPA), the Governments of BC and Canada cannot relegate the significance and wellbeing of fish to an economical or recreational calculus. By Resolution 2019-48, the UBCIC Chiefs-in-Assembly call upon the Governments of Canada and British Columbia to end the needless suffering of fish caused by catch-and-release practices.”

This isn't going to go away and there is no evidence to be found that elected representatives of either federal or provincial governments are prepared to stand up for recreational fishers.

Lastly, we have the recreational fishery. The number of voices there exceeds even the FN circumstances. At a glance I see three federations, two foundations, two boards (each with local and provincial sub-committees), two angling guide associations, a tourism association, two societies (one with local and provincial sub-committees), a couple of chambers of commerce and numerous local fishing clubs. Then there are the US based conservation groups now actively pursuing partnerships with BC First Nations to capitalize on Canadian government dollars readily accessible to those exhibiting such alliances. Members of the various groups often belong to several. Most recently, a steelhead committee comprised of volunteers from several of the foregoing groups has emerged. The chairperson has instructed his members they are not to communicate anything about their in-camera proceedings. How anyone can connect the dots in all of this and somehow navigate the quagmire is beyond my comprehension.

Getting down to the fundamentals of managing the recreational steelhead fishery, the critical issue is matching steelhead supply with the sport safely available. For Skeena, at least, there hasn't been a regulation change of any consequence since classified waters legislation was introduced in 1990. Over a 12-fold range in abundance between 1998 and 2021, the only measure of consequence was an in-season regulation forbidding steelhead angling (not all angling, just steelhead angling) after mid-October in 2021. That was the response to the worst ever steelhead return (about half of the already downward revised threshold of the critical conservation concern zone).

Fishery managers would have to be awfully naïve to believe that the ability of the recreational fishing community to catch an increasing proportion of the available supply of steelhead has not increased markedly over the past 30 years. Think about more and bigger boats, contemporary gear efficiency, ever expanding road networks, helicopters, guides (the legally licensed guides are not a problem; it's the illegal operators that are far too prevalent and never challenged) and climate change that has broadened the steelhead angling window substantially. Then add social media. I refer to present circumstances as an illusion of abundance. Catches tend to hold up, not because there are as many steelhead as once upon a time but because we are catching an increasing proportion of the available supply. If managers intend to manage they need to turn their minds to the cumulative impacts of all of this. Alternately they can maintain the status quo and merely

preside over the demise of a once treasured resource. One is left to wonder if that's the preferred alternative to the hard work it would take to do otherwise when the broader government objective appears to be handoff of salmon management to the sector that vehemently objects to recreational steelhead fishers who play with their food.

I said at the outset it's an annual wait and see game regarding the supply of Skeena steelhead. Present circumstances preclude any action to significantly influence a low steelhead return before too late. The politics of altering that situation are insurmountable. Anyone who can offer credible argument to the contrary is invited to do so. For those who cherish the opportunity to fish for the magnificent wild Skeena steelhead, you might want to do that while you still can. The trends are not in your favor.