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Is it time for "Capitol Lagoon" yet?

by Bob Vadas, Jr.

Recently, Evergreen State College graduate student Melanie Kincaid undertook statistical analysis of 22 local people of various backgrounds and interests, albeit not necessarily a random sampling from the community, to assess their views on the Capitol Lake vs. estuary controversy. There were three obvious groups that defined most people, i.e., pro-estuary ('natural-resource'), pro-lake ('aesthetics'), and integrative ('political-compromise') folks.

The only common interest of the three main groups was a general concern about protecting Puget Sound, implying that major work will be needed to solve this management problem. Kincaid emphasized the need for reducing this polarization, so I discussed the idea of a compromise solution, i.e., brackish-lake management. Most likely, a new survey that focused more on the latter scenario would find more common ground among the three interest groups, as lagoon management is a potentially integrative solution. Michael Garrity of American Rivers has offered for support for this lagoon idea, and such dam reform would require collaboration with an engineer for feasibility in restarting backflushing.

Two environmental organizations, the Capitol Lake Improvement and Protection Association (CLIPA) and the Deschutes Estuary Restoration Team (DERT) characterize this controversy that prefer lake vs. estuary solutions, respectively. Moreover, the Olympia Chapter of Trout Unlimited took a stand in favor of estuarine restoration, for likely benefits to Chinook and chum salmon and sea-run cutthroat trout.

A brackish-lake management idea differs from creating a split basin to segregate fresh- and saltwater areas, as I'm promoting full-estuary flushing that can better improve water quality. Perhaps the Capitol Area Lake Adaptive Management Plan's (CLAMP) lack of consideration for this is because they aren't as familiar here with this alternative, as the more-southern Pacific states are, particularly California.

Based on my past biophysical research in California, I realized that anadromous salmonids regularly occur in stream basins with coastal lagoons, especially if they weren't depleted of their freshwater inputs, via human usage, to reduce winter flushing and worsen pollution problems. The lagoon idea has merit here, as Tacoma Metro Parks is planning such a brackish-lake ('pocket-estuary') restoration project farther north in Puget Sound for Titlow Lagoon, as the stagnant, algal-ridden ponds and tide gate there aren't fish-friendly.

A natural example occurs even farther north, i.e., in the Strait of Juan de Fuca, where Jimmy-come-lately Creek has regular sandbar-closure problems at its mouth that impact chum salmon, so an inter-agency partnership has formed to achieve estuarine restoration there.

CLIPA's bottom line is that the 5th Street dam forming Capitol Lake shouldn't be breached, which is consistent with a lagoon idea, except that I'm arguing for a salt- rather than freshwater lake. This can be accomplished by completely opening the dam during winter, much like what occurs naturally in the Pacific Southwest (PSW) via sandbars that form across all or most of each coastal stream's mouth during summer. When stream-flows are higher during winter, these sandbars naturally breach, allowing (a) in-migrations of adult salmonids and (b) out-migrations of juveniles (smolts) that these sea-run fishes need to complete their life cycles. But far south in California and in northern Baja California, sandbars are closed most of the year via lesser freshwater inputs, so only the most warm-adapted salmonid with high life-history flexibility was historically found there, i.e., steelhead. Indeed, this trout is better able to stay an extra year in the ocean before spawning, and can also remain longer in the stream before out-migrating, often living in the brackish lagoon where food is abundant for excellent growth. Other salmonid species need longer durations for the sandbars to be breached every year to spawn and rear in PSW-coastal streams.

Indeed, state agencies formerly promoted back-flushing of Capitol Lake with seawater, to better control aquatic-plant blooms that now plague the lake, which thus needs herbicidal treatments and is turning into a marsh. And although the New Zealand mud-snail can tolerate brackish water to some extent, this invader of Capitol Lake, which has caused closure of fishing and most water-contact recreation there, can better be controlled with higher-salinity conditions as winter back-flushing could accomplish. This control was emphasized by federal biologist Kevin Atkin, at last year's'

South Sound Estuary Association's (SSEA) training of beach stewards. Notably, any planned dredging work for the lake would need to address possible spreading problems for this exotic snail anyway.

"Capital Lagoon-fair", anyone? "Creature of the Black Lagoon" burgers might just work.

Bob Vadas, Jr. is a state fish biologist and is expressing his views as a private citizen.

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