

Remarks

Steve Kolmes

Focusing on the Columbia River as part of Pastoral Letter Steering Committee, traveling around the Northwest to public hearings and working as an environmental scientist, has given me a chance to think and hear a lot about salmon.

My more recent appointment to the National Marine Fisheries Service Technical Recovery Team for the Willamette and Lower Columbia River endangered salmonid restoration planning has added to that an opportunity to interact with fisheries biologists a good deal.

Understanding this background, please note that I speak as an individual rather than representing either group here. I have two bottom line messages I'd like to give you:

1. Thinking of the salmon fishery in isolation from other parts of our economy is futile
2. There is not enough water in the Columbia River to meet the aspirations of all the user groups: Whether we make societal decisions, or choose to effectively make them by inactivity, some distinguishable groups of people are going to lose out and pay a high price.

Remember: Returning salmon were once so plentiful that they scared horses along the banks of the Columbia River. Now we have a long difficult task ahead to preserve these organisms at any reasonable population density.

Economic activities that interact in these rivers:

1. Commercial salmon fishing at sea, where stocks mix by migration. The transition from river-mouth gillnetting to the marine fishery around 1910 made management of weak runs far more difficult. You can't control the take on weak or endangered runs as well with a marine fishery. The fates of coastal communities are tied to this issue, and it isn't just boats, it is the survival or death of entire coastal communities.
2. Gill netting by Native Americans in the rivers with all of the legal complications involved, due to treaties that were written in a very different time from today. There are religious and economic elements here, and issues of historical prejudice and of constitutional law.
3. The sports or recreational fishing in the ocean and in the rivers, which have significant lobbies associated with them.
4. Dams that produce the cheap hydroelectric power that is the engine of the Northwest's economy. With electric rates generally under 1/2 of the national levels, power-intensive industries are attracted to the Northwest, but this year for the first time we are facing power shortages. Supply has not kept up with population growth. Questions of flood control, dam removal, migration barriers for salmon are all linked. The often-ignored truth that the hydroelectric dams are the greatest air pollution abatement system in the region must be factored in. If not hydropower we build fossil fuelburning power plants, which act as enormous point sources of air and water pollution. At the same time the dams pose barriers to both downstream migration and to the return of salmon to breed in their natal streams. Flood control dams lower river temperatures and hydroelectric dams raise river temperatures. Oxygen levels are partly determined by water temperature. Dams are a very complex, many-sided issue.
5. Aluminum smelters are part of the Northwest's economy; they rely on hydroelectric power and on the water itself. But effluents from these facilities are released to the environment.
6. The silicon chip industry is here because of cheap power and clean water supplies. These facilities also have effluents that might cause environmental problems.
7. Forest products have been a traditional mainstay of some towns' economies, but logging has historically been done in a way that increases sediment loads in rivers, and pulp mills have had significant dioxin releases due to use of the free-chlorine process of paper-pulp bleaching. New logging practices and new bleaching practices cost more to use, and it remains to be seen how sediment and toxic releases would look if this industry were fully modernized.

8. Mature trees near riverbanks are vast natural air conditioning systems that shade and cool the rivers, but in part the abundant Northwestern forests were based on nutrients brought upstream by spawning salmon and spread into the forests by animals eating salmon carcasses. How salmon runs without carcasses for animals will affect forest growth remains to be seen.
9. Irrigated agriculture requires water to survive, especially East of the Cascade Mountains. Many gravity fed irrigation systems are not adequately screened to prevent migrating salmon from entering them, for example of the approximately 55,000 stream diversions in Oregon for irrigation, the National Research Council estimates that under 1,000 are properly screened to keep fish from being diverted along the water. Agriculture also produces pesticide and fertilizer runoff, both of which can have significant effects on fish. Very low sublethal pesticide levels interfere with salmon olfactory homing. The migratory farm workers, largely an underprivileged Hispanic community in some areas, have their interest opposed to those of the Native Americans in terms of where the water goes. It is hard to favor the disadvantaged when this sort of tension between two communities exists.
10. Not all runoff is from farms. Some of the worst pesticide and fertilizer runoff is from golf courses and suburban towns. Challenging these entities as polluters brings a very powerful constituency into the fray.
11. Urban runoff in general is harder to control than industrial sources of pollution. The suds that are used on SUV's in suburban driveways enter the watershed; they and other effluents of a modern lifestyle are unacknowledged contributions of our consumer lifestyle to salmon decline.
12. The question of dredging the 40 (or 43) foot deep navigation channel to the Port of Portland enters into the discussion on the Columbia. Now that the Swan Island site is being listed as a superfund location because of its contaminated sediments, this is an even more complicated issue. Recently the National Marine Fisheries Service revoked the corps of Engineers permit to go ahead with this project. No one knows where this will eventually end.
13. Channel dredging actually created the island at the Columbia River's mouth that is now home to the world's largest breeding colony of Caspian Terns, an endangered bird species that feeds voraciously on juvenile salmon. This situation would almost be funny if it were not so sad.
14. Almost 40% of the wheat exported from North America goes out of the Port of Portland, and it is economically viable only because of both the dredged channel and the dam-dependent barging industry. Barging provides a cheap and rather clean means of transporting goods that lets the intermountain west have some significant economic connection to the coast, but it depends on dams.
15. Urban development means lots of paved spaces that don't absorb rain, therefore lots of runoff producing increased flood risks. We have many people living too close to the rivers now for comfort, as population grows we are increasingly dependent on flood control dams.
16. In terms of salmon recovery, hatcheries are a serious issue. Hatchery fish are not genetically similar to the evolutionarily significant units of salmon that evolved in the streams of the Northwest and adapted to varying stream conditions. Is increasing numbers but diluting genetic stocks acceptable?
17. Barging or trucking salmon around barriers is a much debated issue. The olfactory memory associated with a downstream migration may be lacking in a barged or trucked fish, but this is one way of reducing mortality.

Doubtless there are other things I could mention, but I think I may have given you the idea by now. Trying to deal with salmon as an isolated fishery bears no relationship to the reality of the situation. There are mutually exclusive economic visions for the Northwest, some of which are compatible with salmon harvesting and some of which are not. We even see the Endangered Species Act and the Superfund laws colliding now in northwestern rivers, and how these legislative disagreements will be worked out is an open question.

There is only so much water in the Rivers of the Northwest, and all of the user groups involved in this region, including the marine fisheries interest, need to at least recognize the existence of a complexly interconnected set of interests competing for a water supply that cannot serve all of their desires.

