

# Will Pacific Salmon Survive the Next Century?

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# Will Pacific Salmon Survive the Next Century?

*Editor's Note: We asked four longtime observers of the salmon crisis to provide their assessment of whether native Pacific salmon will still be surviving in the next hundred years in the Northwest. Below are their responses, edited for space and clarity. The editors want to thank the contributors.*

## A Salmon-Centric View of the 21st Century

by Robert T. Lackey

The decline of salmon was caused by an extensively studied, but still poorly understood, combination of factors. Determining the relative importance of these factors has been complicated by the overlapping influences of random and cyclic changes in ocean and climatic conditions. The runs remain relatively low for many of the same reasons that caused the original decline. The "record" runs in the Columbia River over the most recent few years have been anticipated by many familiar with the historic pattern of salmon abundance, that is, a pattern of changes driven predominantly by ocean conditions. The majority of these runs are of hatchery origin and small compared to pre-1850 levels.

In spite of the failure of most wild salmon restoration efforts, the goal (and legal requirement) of restoring these runs appears to enjoy continued widespread public support. Billions of dollars continue to be spent in a so-far failed attempt to reverse the long-term, overall decline.

How can it be that although the direct causes of the decline are reasonably well known and although the public appears to be supportive of changing the downward trajectory for wild salmon, the long-term prognosis is nevertheless poor for California, Oregon, Washington, and Idaho? The answer is that effecting any change in the long-term, downward trend for wild salmon is probably futile in the absence of substantial shifts in the factors that drive the decline.

There are six root causes, or core drivers, of the salmon decline. Society has minimal control over two of them, climate and ocean conditions. However, society could control the other four drivers:

1. The economic rules of the game, especially the international and domestic drive for economic efficiency

2. The increasing scarcity of and competition for key natural resources, especially for high-quality water
3. The increasing human population in the region and the requirement to meet its basic needs
4. Individual and collective lifestyle choices and priorities

Without substantial changes in these four drivers, the status of wild salmon through this century will likely continue the downward spiral of the past 150 years. An assessment of current individual and societal priorities provides little indication that the public appears willing to make substantial changes in any of the drivers.

Not all salmon restoration options require draconian changes in these drivers. Some options are likely to be ecologically achievable and less socially disruptive than current wild salmon recovery strategies, but these options also have much more modest restoration objectives, require extensive hatchery intervention, or involve creating protected areas.

## Will Pacific Salmon Survive the Next Century?

by Jim Lichatowich

Will salmon survive the next century? The answer to that question is yes.

Salmon are survivors and I am confident in their ability to persist. Over the past several thousand years, they have survived extreme changes in their habitat, so I believe there will be salmon around a century from now somewhere along the Pacific Rim.

The more important questions are, Will salmon still penetrate the rivers of the Pacific Northwest and will they still be able to migrate, spawn, and rear in them? Will they still call the region's rivers home or will they be found only in hatcheries, like so many feedlot cattle? Will the salmon still be close to the people—as close as the nearest stream—or will they lose their status as regional icon and fade into a distant memory, remembered on coffee cups, T-shirts, posters, and other trivia? Will the people of the Pacific Northwest find the courage and the will to move over a little and make room for salmon in watersheds of the Pacific Northwest?

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**Jim Lichatowich** is a fisheries scientist who has been a member of numerous independent science teams in the region, including Oregon's Independent Multidisciplinary Science Team and the Independent Scientific Advisory Board for the Northwest Power Planning Council. He is also author of *Salmon Without Rivers*.

I am not as optimistic about the answers to those questions. Although we can obtain more information from research to help us better understand the needs of the salmon, we do not have the political will to use the information we have now. For example, recent attempts by some in the legislature to declare by statute that there are no differences between hatchery and wild fish fly in the face of what we have learned over the past century. It was an attempt to face the problems of the 21st century by returning to the 19th.

In a speech to the Oregon chapter of the American Fisheries Society a few years ago, Governor Kitzhaber challenged the region's political leaders to create a vision for the region, a vision of healthy rivers and robust salmon alongside a healthy economy and the trade-offs needed to achieve it. His challenge has remained unanswered, and as long as political leaders lack the courage to rise to Kitzhaber's challenge, the fate of the salmon will remain uncertain.

## The Future of Wild Salmon in Oregon

By Gordon Reeves

**T**he demands on salmon habitat, particularly on freshwater habitats, will continue to grow as the human population of the Pacific Northwest increases. Whether society will accommodate the needs of salmon in a way that allows the fish to persist is an unanswered question. I think it is unlikely that we will. Economics and basic human requirements will trump the needs of salmon.

However, a part of me is more optimistic. One reason for this is that I think salmon represent a part of the emotional culture of the Pacific Northwest that will be difficult for people to lose.

In the past 13 years, I have worked on several efforts to develop conservation plans for salmon. During this time we have made major strides in protecting and managing the ecosystems on which these fish depend. Some argue that we haven't done enough. But I say we are moving in the right direction (albeit slowly) and have preserved options for the future.

The main reason for my optimism is the fish. Salmon and other anadromous fish have survived in the Pacific Northwest for thousands of years in harsh environments—volcanoes, floods, fires, and glaciers, to name a few. Salmon survived by being able to adapt—by seeking new areas and quickly adjusting to new situations. They were like dandelions! I think salmon populations can exist without our having to go to extreme measures. Their survival will require that we develop different approaches to land-management practices than we currently have and that we forgo some economic gains. But if we can have the discus-

sions that lead to such changes, there is no doubt in my mind that the fish can return.

Will they return everywhere and will they be as abundant as in the "good old days"? No. There will be places where society will be unable or unwilling to make the necessary changes for that to occur. However, I don't think that the changes in human behavior or activities will need to be as great as many contend for strong salmon populations to persist in the future. It is my hope that we recognize this soon so that there will be fish in our region.

## A Forecast for Salmon Survival

By Stan Gregory

**W**ill native Pacific salmon and sea-run steelhead and cutthroat trout survive a century from now as species? Almost certainly. Will local stocks with unique life histories become extinct over the next century? Almost certainly.

Human populations in the Pacific Northwest are certain to increase, more than doubling over the next century. Local habitat degradation and overharvest are likely to cause continued loss of unique stocks in areas of the Northwest. But the widespread distribution, regional straying, and high fecundity of salmon and anadromous trout make them resilient as a species.

The greater risk is our society's ability to maintain the healthy and livable environment of the Pacific Northwest. Polluted waters that cannot support young salmon are signals of the toxicity of our water, air, and soil that directly influence our survival. Repeated overharvest of salmon and other fish indicates our inability to contain natural resource consumption and sustain the fish for our children. The miles of streams and rivers with eroding banks devoid of streamside forests and pools filled with lost soils speak loudly about our willingness to destroy the world we share.

The average American citizen now requires roughly 30 acres to provide the resources he or she consumes annually. Citizens of other countries require far fewer—France, 18 acres; Mexico, 6 acres; India, 3 acres.

We have made many advances in regional decisions about natural resources. The Willamette River is far less polluted now than it was 50 years ago. Land uses are more carefully considered. But without considering our current course of actions carefully, the most likely outcomes for our region will not sustain the resources on which we depend.

Our efforts to conserve and restore the region's salmon and watersheds over the next century are more about helping our children survive than our need to have salmon in our world. And salmon are one of the many signs we have about how successful we are in this endeavor.

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