

# Four Realities Circumscribing the Future of the Salish Sea\*

## Robert T. Lackey

Department of Fisheries and Wildlife  
Oregon State University  
Corvallis, Oregon 97331

**Email:** [Robert.Lackey@oregonstate.edu](mailto:Robert.Lackey@oregonstate.edu)

**Phone:** (541) 737-0569

**Web:** <http://fw.oregonstate.edu/content/robert-lackey>

Lackey, Robert T. 2014. Four realities circumscribing the future of the Salish Sea. Plenary Keynote, *Salish Sea Ecosystem Conference*, April 30-May 2, Seattle, Washington.

---

*\*The Salish Sea comprises Puget Sound, the Strait of Georgia, and the Strait of Juan de Fuca.*

## Introduction

I'm really delighted to have this opportunity to address the 2014 Salish Sea Conference. Delighted, yes, but truth be told, I have another, more gleeful reaction. Someone has finally asked me to step outside the confines of science and contemplate the future!

Undoubtedly, you are sitting there wondering, exactly how does a hardcore scientist like this guy get asked to pontificate about the future? That is a really good question! Here's the inside story.

Someone from the Program Committee, someone you knew from long ago, calls early on Monday morning and begins praising whatever can be found worth praising about your professional record, then, eventually, asks:

*"Hey, Bob, want to give a keynote talk at the next Salish Sea Conference? We'll have dozens and dozens of scientific talks, but we also want someone who isn't afraid to drag us away from our professional comfort zones. Someone to place all this scientific stuff in a larger context. Someone to provoke us a bit. I am hoping that you would be willing to play that role for us?"*

How would you respond to such a clever pitch? I accepted and accepted with enthusiasm. So here I am: your designated provoker! A scientist tasked with playing the role of provocateur!

OK, let's get to the Program Committee's assignment.

First, forget about 2020 or 2030! The challenges facing the Salish Sea require a much longer time horizon. Think out to 2100, and beyond.

Second, the Salish Sea is mostly what we talk about here, but its future is largely driven by what happens in Salishland, the name I am applying to the watersheds that surround the Sea.

What plays out on Salishland over the next 86 years — and beyond 2100 — will both drive, and constrain the policy options for the Sea.

Over the next few minutes, I'm going to describe four fundamental realities that circumscribe the ecological future.

## Reality 1

The first reality that clearly circumscribes the future of the Salish Sea is obvious. I am sure that it would be at the top of your list.

The first reality:

***“Through this century, the growth of the human population of Salishland will both drive and constrain the future of the Salish Sea.”***

I realize that I am now straying into territory chock-full of land mines. As one of my oldest and dearest colleagues cautions me (and I’ll clean up his language a bit):

*“Bob, you are absolutely right, most people already know this, and that’s exactly why you should let it rest. Back off. You’ll leave the environmental activists in the audience depressed. Worse, you’ll have the scientists wondering why you are pontificating on the intuitively obvious. And, most disconcerting, you run the risk of being attacked by everyone else for being a racist, nativist, xenophobe, cultural imperialist, or, at the least, an economic elitist. Take my advice. Let it go.”*

Undoubtedly very sensible, and safe, advice.

Sensible and safe, yes, but the fact is that, if society wishes to do anything meaningful about changing the long-term trajectory for Salish Sea ecosystems, then something must be done about the unrelenting growth in the number of humans in Salishland.

Let me be clear, as a scientist, I am not arguing that society collectively ought to change current U.S. or Canadian population policy, but the simple fact is that the anticipated growth of the human population in Salishland — is a serious barrier, a show stopper, a colossal impediment to achieving the ecological goals that I have heard being pitched at this conference.

Demographers call this region “fill-in country” because most of the future population growth will be driven by people moving here, migration, not reproduction. For nearly two centuries, migration has been the main population driver in Salishland. Thus, annual growth rates for this region continue to be much higher than for the rest of the United States and Canada.

But let me get specific. Assuming governmental policy regarding migration remains unchanged, then the population of Salishland, currently 9 million, in 2100, will be 25 to 30 million.

You heard right. 9 million today, 25 to 30 million in 2100. A tripling, or more.

These added millions of people will demand: *houses, apartments, hotels, schools, tennis courts, sports stadiums, roads, airplanes, trains, Wal-Marts, electricity, drinking water, pipelines, super tankers, ski resorts, McDonalds, Starbucks, and — for the Canadians out there — add to my list Tim Hortons, Canadian Tire, and Superstores.*

It will be a long, long list. You can fill in the subsequent ecological effects. Think European population densities.

My take-home message from this first reality is simple: if society really wishes to do anything meaningful about altering the long-term ecological trajectory of the Salish Sea, then the population trajectory must change, and change dramatically.

## Reality 2

OK, that first reality — the growth of the human population in this region — was an easy one. Now let's move to a second, but less obvious policy driver.

The second reality:

***“Proposed public policies in Salishland that are seen to cause a reduced standard of living are not politically viable.”***

After several decades of interacting professionally with the public, I have concluded, albeit reluctantly, that most people talk a great game when it comes to ecological and environmental issues, but talking rarely implies a genuine willingness to change. After all, who isn't supportive of something like *“a future that assures the health and well-being of our ecological life support system.”*

It will poll at 90%+. There is essentially unanimous support, right? Well, at least 90%+ support until people are told about the required costs, the tradeoffs, the sacrifices, in other words, achieving the goal would result in a reduced standard of living. Once understood, the commitment by most people falls dramatically.

More directly, over my career I have observed that most people simply will not accept a proposed policy that is seen as resulting in a reduced standard of living. There are a few exceptions for sure, but for most people, more importantly, for most voters, it is a non-starter. And people who want to get elected know this political reality.

As a scientist, I am not here to sermonize about this situation, but rather to acknowledge its existence. In short, it reminds me of what we tell our children when they whine about something in life just not being fair. As parents, we say: *“It is what it is; deal with it”*.

To those trying to predict the most likely future for the Salish Sea, and to those trying to alter current ecological trajectories, I offer the same advice: remember what your parents said, *“It is what it is; deal with it”*.

And if that is not a tough enough pill to swallow, don't forget about what economists like to call intergenerational welfare programs. To stave off financial insolvency, intergenerational welfare programs such as Social Security, Medicare, and their Canadian equivalents require a growing economy and, therefore, a growing population.

So, whatever environmental or ecological policies are proposed by advocates, they will have to be pitched as ones that encourage economic growth because there is negligible voter support for a reduced standard of living.

### Reality 3

OK, I've identified two of the four realities circumscribing the future of the Salish Sea.

Now I want to move to a reality that is front and center both at this conference and in the mass media.

The third reality:

***“Changing climate, as uncertain as it might be to fully understand, has altered, and will alter, the ecological dynamics of both the Salish Sea and Salishland.”***

To me, most of the public debate about climate change seems to be fixated on resolving how much of the temperature increase, or the rate of the increase, over the past 150 years is due to human actions. Interesting questions, but think in the longer term.

Specifically, look at the past 2,000 years for a more important ecological context.

There have been centuries of relative cold and centuries of relative warm. Climate has never been static. In short, select any century, there really is no so-called “normal” climate.

It is so easy to slip into the view that the climate that we have seen for the past century or two is “normal” and the baseline from which deviations are both unexpected and inherently undesirable. But why use the current situation as the baseline? Is the notion of a climate baseline even appropriate in ecology?

Was growing wine grapes in England during the Medieval Warm Period (from 900 – 1300 AD) normal or an aberration? Wine grapes haven’t grown in England for 800 years although they are now making a comeback as temperatures gradually rise.

Were the decade-long California mega-droughts of the 1500s normal or an aberration? These droughts 500 years ago dwarfed the one in the 1930s.

Or what about the past 150 years in California? These decades generally have been relatively wet compared to most of the past 2,000 years. Which century was normal? Why would anyone expect climate to stop changing?

The understandable tendency is to prattle on about the needed, but contentious adaptations to changing climate, but how does Society move past the increasingly quaint notions of *so-called* “natural” ecosystems and *supposedly* “native” species?

More specifically, think about a core ecological foundation of the U.S. Endangered Species Act or the Canadian Species at Risk Act. The implicit premise is a reasonably stable climate. So, is society being realistic in demanding that bureaucrats keep trying to hang on to species that are simply not viable with changing climatic conditions?

Indeed, this is a very unpleasant question to contemplate, but ultimately, of course, it is at its core a political question, informed by science, yes, but in the end, requires tough choices by the public from among competing and nasty policy trade-offs.

So, in short, climates have changed in the past and they will change in the future and this reality will, in part, circumscribe the future of both Salishland and the Salish Sea.

## Reality 4

OK, now for the fourth and final reality that will circumscribe the future of the Salish Sea. I will admit upfront that this one makes me feel uneasy because I have spent most of my career employed in the scientific enterprise, but this reality must be highlighted.

The fourth reality:

***“Funding scientific endeavors are often perceived to be, in fact they often are political indulgences.”***

More about indulgences shortly, but first let’s do a quick role play exercise. Work with me here. Imagine that you are an elected official and that you have heard the following:

- 1. Population growth in Salishland will continue unabated;*
- 2. Standards of living must be maintained, if not enhanced; and*
- 3. Changing climate will alter both the Salish Sea and Salishland.*

Now, for playing your role, as an elected official, what would be your response to these three sobering realities?

First, I will guess that you would quickly note that these very unpleasant realities are far beyond your mandate as an elected official.

Second, you are most certain that you don’t want to talk substantively about them now or ever.

And third, as a person who will be facing the voters soon, you absolutely want to change the topic!

But there is more. As an elected official — now, be honest here — your instinct would be to give the public something that shows that you care, something that demonstrates that you are responsive, something that will make voters feel better. That something is often science. It may be research, it may be demo projects, it may be commissioning panels of eminent scientists, but funding scientific endeavors implicitly provides the public with what it desires.

For example, people genuinely want wild salmon to prosper, but people also want modern highways, and people want state-of-the-art airports, and people want cheap, reliable electricity, and people want reasonably priced houses surrounded by at least a little land, but the reality is that few people ever make unpleasant choices in favor of wild salmon.

How many elected officials candidly tell the voters that they can't have it all? The fact is well funded and highly visible science activities often do hide unpleasant policy trade-offs. This is a time-tested human behavior: avoiding tough, contentious, unpopular policy choices by sponsoring noble deeds.

There are many other examples from the past. Think about European history, 500 or 600 years ago, for the classic and most famous example. When people sinned in those long-ago days, some representatives of the Church offered indulgences to cleanse the sin for a price paid to the Church. The good news? Sinners felt better about their past bad behavior and the Church was pleased to receive the much-needed cash. Pretty much everyone was happy with the arrangement.

How similar is this long ago system to the modern tactic of funding science that really doesn't fix the problem? For the most part, elected officials feel good. Most members of the public feel good. And, of course, as a funded scientist, I *always* felt good.

## Conclusion

OK, there you have it: my take on the four realities that will principally circumscribe the future of the Salish Sea for the rest of this century.

These realities should not be categorized as doom and gloom. And they are surely not examples of irrational exuberance. Rather, I think they are simply blunt, unvarnished appraisals of the future, perhaps troubling to some, but my guess is that they ring true for most of you.



I'll conclude with a prediction, and offer an opportunity, especially an opportunity to those early in their careers:

*“Any strategy targeted to change the current ecological direction of the Salish Sea must respond to these four realities or that strategy will not succeed. It will be added to an already long list of prior, noble, earnest — and failed strategies.”*

Look down the road to the end of this century, to 2100, less than 9 decades away, only several dozen generations of salmon beyond today's runs, just a few Pacific Decadal Oscillations from now, to a time when Salishland's human population will be probably be triple, or more, than today's level. Even given all this, there are still policy options that are likely to be ecologically viable and probably socially acceptable, but the range of options continues to narrow.

If society genuinely wishes to change the current ecological trajectory of the Salish Sea, then most of us here know that these four realities must change. As unwelcome as it may be, the public needs to hear the same message.

Thank you.

\*\*\*\*\*

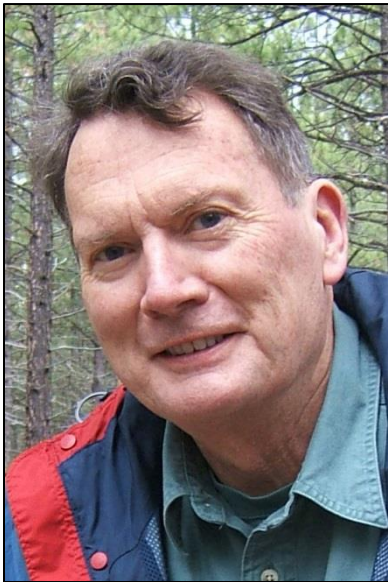
## About the Speaker:

*Dr. Bob Lackey is professor of fisheries science at Oregon State University. In 2008 he retired from 27 years with the Environmental Protection Agency's national research laboratory in Corvallis where he served as Deputy Director, among other senior science and management jobs. Since his very first fisheries job mucking out raceways in a California trout hatchery, he has worked on an assortment of natural resource issues from various positions in government and academia. His professional assignments involved diverse aspects of natural resource management, but mostly he has operated at the interface between science and policy. He has published over 100 articles in scientific journals. Dr. Lackey has long been an educator, having taught at five North American universities and currently teaches a graduate course in ecological policy. Canadian by birth, he is now a U.S.-Canadian dual-citizen living in Corvallis, Oregon.*

**Email:** [Robert.Lackey@oregonstate.edu](mailto:Robert.Lackey@oregonstate.edu)

**Phone:** (541) 737-0569

**Web:** <http://fw.oregonstate.edu/content/robert-lackey>



----- end -----