Testimony for the field hearing of the Senate Commerce Committee, Senator Cantwell presiding. Tuesday May 27th, 2008. In Seattle, WA.

Brett Bishop presenting on behalf of the Pacific Coast Shellfish Growers Association.

My name is Brett Bishop and today I am representing commercial shellfish growers on the Pacific Coast from Alaska to California. For the record, 85% of all shellfish produced on the West Coast are grown in Washington, where we've farmed shellfish for 150 years. We're actually the largest producer of farmed shellfish in the entire United States.

My family's farm is on Little Skookum Bay in Mason County. We are a traditional family farm, with tides. My parents live next door, Mom is 91 and Dad is 93. My two teenage boys are the sixth generation to live on the old homestead and grow clams and oysters in Little Skookum Bay.

We are typical of most other shellfish growers, and we are all facing unprecedented problems that appear to be linked to warming oceans and low oxygen conditions. The 'dead zone,' identified in 2002 off the Coast of Oregon, has now been observed by researchers all the way up into Canada. We've been able to correlate the dead zone and upwelling events with the presence of a marine bacteria, ***Vibrio tubiashii***, in many of our growing areas and hatcheries. Vibrio tubiashii thrives in low oxygen (hypoxic) and no oxygen (anoxic) conditions.

In the wild, it kills oyster larva and seed up to at least 1 mm. which has interrupted the natural cycle of propagation, resulting in little or no "natural set" in the bays and estuaries where we make our living. While many growers in Puget Sound, Oregon and California depend primarily on hatchery-produced seed, many growers in Willapa Bay, which produces almost 60% of Washington States oysters, continue to depend on natural set seed. Growers there are reporting that they are now experiencing their third year with virtually no seed set. This forces them to rely on hatchery production of juvenile shellfish to assure adequate crops, but ***Vibrio tubiashii*** has infected most of our West Coast hatcheries. Our largest producer of larvae, Whiskey Creek Hatchery, has in fact had to close their doors temporarily, and lay off staff, while they retrofit their operation with a series of filtration systems in an attempt to keep the ***Vibrio tubiashii*** out of the water they are pumping into their facility from Netarts Bay in Oregon. Growers have been donating funds to Whiskey Creek, to aid them in their research into solutions for hatcheries. If a way is found to rid the hatcheries of ***Vibrio tubiashii***, and a system can be engineered that allows us to grow seed up to at least 1 mm in size, we may be able to save our shellfish farmers.

Left unresolved is the ability of oysters to reproduce in the wild.

I need to be clear about this; the current situation puts both the marine eco-system and shellfish growers in extreme jeopardy. Diminished natural reproduction coupled with failing hatcheries puts us in a position where we stand to lose it all.

A problem of even greater magnitude is the acidification of seawater. A NOAA researcher, Richard Feely, reports finding levels of acidity along the Pacific Coast of North America that were not predicted until 50 to 100 years from now. This acidity dissolves calcium carbonate, the stuff that shells are made of. If diatoms, corals and shellfish succumb to this, it might collapse not only the shellfish industry, but the entire marine food chain. Life as we have known it might soon change.

It is a dark and gloomy picture that I just painted. In counterpoint to that, let me tell you something else; shellfish growers might be the only category of people who stand to benefit from the effects of climate change. As polar ice melts and sea levels rise, our front yards and lawns may become suitable places for growing clams and oysters.

Of course, our businesses would have to survive financially to reap any benefits from that future day. This is why we need to solve the problem in the hatcheries now, and address the acidification of the oceans.

Our shellfish crops perform vital eco-system functions as they filter-feed. Just about every human activity that occurs on the uplands contributes nutrients to the marine environment. When a clam or oyster is harvested, it becomes one of the very few human activities that result in a withdrawal of nutrients from the water. Clean and healthy oceans need filter feeding shellfish, whether it's my family that's growing them or not.

From the perspective of the Bishop family it looks like this: we have invested everything we have and everything that we are in our farm. We have been growing as we could afford to for the last one hundred and twenty four years. We have a mortgage with Farm Credit Services. We employ 27 people year-round with gross sales of $2.8 million dollars.

If we can't grow our shellfish, the bank will foreclose on the mortgage, we will lose the farm, our homes, and six generations of our hopes and dreams and investments. That is most of everything that we hold dear.

This is what I am reporting to you folks today.

I thank you for your attention.