

**WRITTEN TESTOMONY OF  
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REPRESENTATIVE OF THE CALIFORNIA SALMON INDUSTRY**

**HEARING BEFORE THE  
SUBCOMMITTEE ON WATER, POWER AND OCEANS  
COMMITTEE ON NATURAL RESOURCES  
U.S. HOUSE OF REPRESENTATIVES**

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**Introduction**

Good morning, Chairman Fleming, Ranking Member Huffman, and Members of the Subcommittee. My name is Richard Pool and I am here today representing the salmon industry of California. This includes the commercial industry, the recreational industry, the charter boat industry, wholesalers, retailers and all of the related businesses and communities that serve and derive their livelihoods from the salmon resources of California.

I am Secretary of the Golden Gate Salmon Association, President of Water4Fish, and past board member of American Sportfishing Association. I am also a member of the two primary California commercial salmon organizations (Pacific Coast Federation of Fishermen's Associations and Small Boat Commercial Salmon Fishermen's Association) and I am a member of the San Francisco based charter fleet association (Golden Gate Fisherman's Association). I have served on numerous State and Federal salmon advisory committees for over 35 years. I am a resident of Lafayette California and my business is Pro-Troll Fishing Products, a manufacturer of salmon fishing equipment. We manufacture approximately 800 types of salmon lures, attractors and electronic devices for catching salmon. We sell all over the world but mainly in North America.

The subject of this hearing is the impact of three years of drought on the water supply. I will address these issues as they relate to the salmon of the Central Valley. In addition, I will discuss the impact the drought has had on the salmon and the impact it has had on those who derive their livelihoods from the harvest of salmon. Then, I would like to share with the committee some solutions to these serious problems and ask for your help.

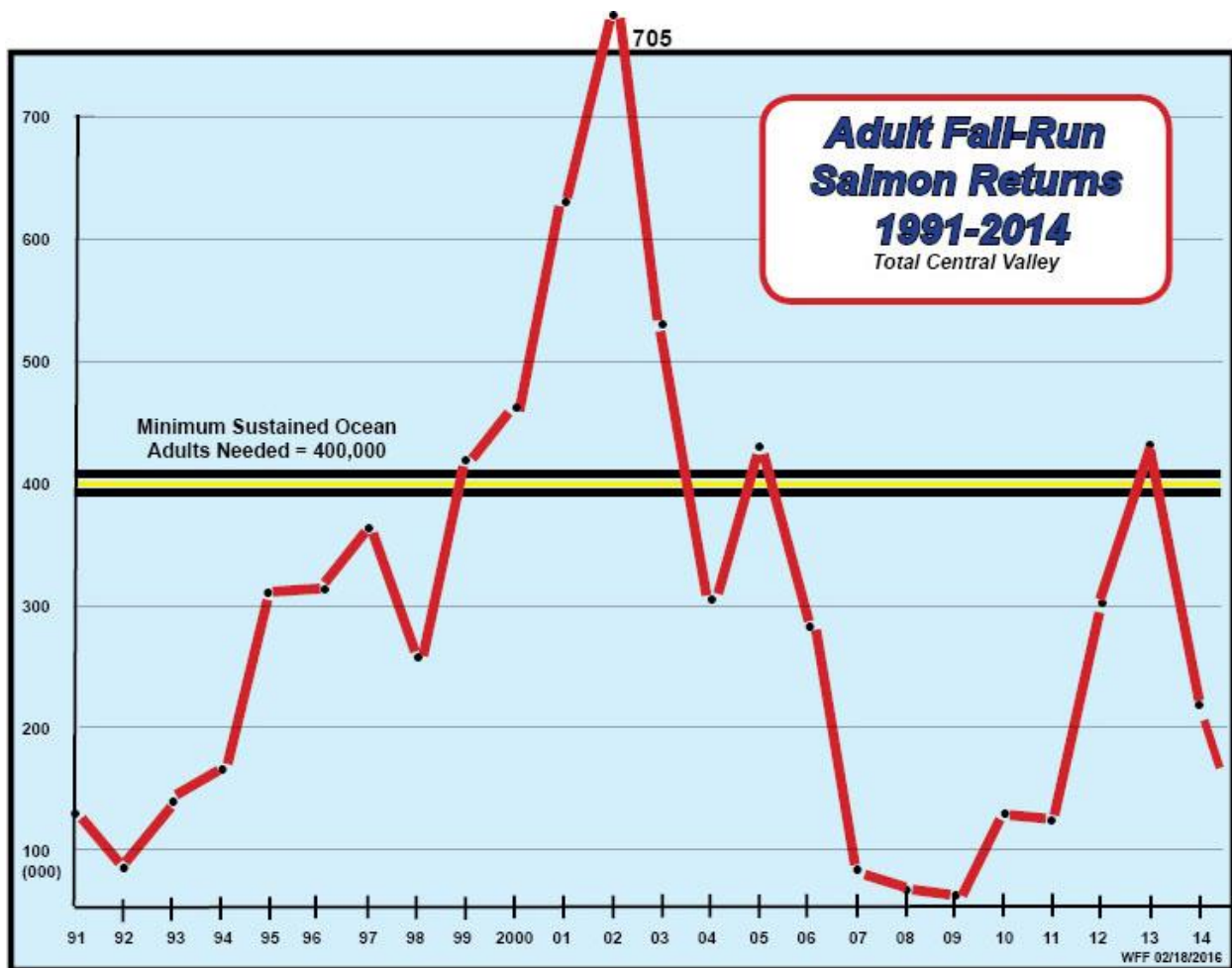
**Impacts of Drought on Salmon Runs and the Industry**

When Central Valley salmon runs are healthy, they support over 20,000 jobs in the state with an economic contribution of \$1.4 billion dollars (Southwick Associates, August 9, 2012). These same fish also support about half of those same numbers in Oregon. Those salmon runs are the backbone of salmon fishing and are a major economic contributor for coastal communities all the way from Morro Bay California to Cape Falcon in Northern Oregon. California fish also contribute to the Washington State salmon fleet. When the salmon industry suffers, these communities also suffer. Both are currently suffering a lot.

The drought impact on these salmon has been devastating. Some of the impact was unavoidable and some of it was man-made. Let me start with a little history. The chart on the screen shows the history of the returns of the fall-run salmon from the ocean to the freshwater from 1991 to

2014. There are four salmon runs in the Central Valley. The fall-run has been the largest by a wide margin and it is the only one that supports the commercial and recreational salmon industry. As you can see, in 1991 and 1992 the run was nearly gone. At that point all the runs were near total collapse. In 1992 only 191 winter-run fish returned to spawn. At that point, the winter-run was petitioned for an endangered species listing under the Endangered Species Act. It was listed and a result, the Federal government spent \$1 billion on four major recovery projects in the Sacramento River. It worked and all runs including the fall-run shown here, benefitted.

You can see that by 2002, over 700,000 fall-run fish returned to spawn (Source: CDFW Ocean Salmon Fisheries Report 2009). That was a modern day record. On top of that, another 700,000 fall-run fish were harvested by the commercial salmon industry. That totals 1.4 million adult salmon that were in the ocean in 2002.



We then see the big slide in the returns between 2002 and 2007. There were two primary causes of that slide. First, from 2000 to 2006 average exports from the Delta increased to 6 million acre feet – a 20% increase over the previous decade. This was made possible by the weakening of federal protections for the Delta in 2004. The pumping went up, particularly in the springtime at a crucial time when all juvenile salmon migrate through the Delta. That impact took a heavy toll.

The second reason for this dramatic drop was that in 2005 and 2006 the ocean conditions for salmon survival were very poor. Very low numbers of fish came back. The result is what you see. By 2008 and 2009 the survival rate was so low that the entire salmon industry was shut down for those two years. The human impact of that shutdown was tragic. Fishing boats were scrapped because the owners could not pay the mooring fees. Homes were repossessed and nearly 100 coastal retail and service businesses failed. There were similar impacts on hotels, restaurants and other supporting businesses that relied on the salmon industry. My company lost money in those two years and also in the two following years until the runs recovered.

In 2009, the new biological restrictions on export pumping and upriver flow changes took effect and we began to see a recovery. Those changes, plus a very wet year in the winter of 2010 and the spring of 2011, allowed millions of additional juvenile salmon to avoid the losses and get to the ocean. The result was evidenced three years later when those fish matured and returned to freshwater in 2013.

We then come to the drought years of 2012 through 2018. The damage done to the salmon in these years is unparalleled. The main problems were lethal water temperatures, low river flows and extremely limited habitat, including spawning and rearing areas and the dewatering of redds (salmon egg nests) that were laid along the edges of the Sacramento River. Salmon laid their eggs when the flows were high, but when water flows were later cut, the redds were dried up causing high mortality.

If the water temperature in the spawning streams is 56 degrees Fahrenheit or lower, the salmon eggs are stressed but survive. But, above 56 degrees the eggs begin to die and at 62 degrees 100% of them die. Temperatures in 2014 and 2015 were over 62 degrees in almost every tributary in the Central Valley. The egg loss was near 100% (Sources: USBR CVO Temperature and Flow Reports, USGS National Water Information System Reports by Station).

The numbers of juvenile salmon migrating down the Sacramento River system are counted by the fish agencies with rotary screw traps near the city of Red Bluff. In 2014 the data showed that 95% or more of the juveniles that should have hatched and migrated to Red Bluff never showed up. This means survival was only 5%. The 2015 survival was worse yet. This represents a near complete loss of all four runs of the wild spawning salmon. A sustainable salmon fishery requires that in the order of 35% of the juveniles need to make it to the Golden Gate and out into the ocean. That did not happen and we have lost nearly 100% of all the wild spawning fish for two years running in all four of the Central Valley runs. That includes the severely depressed populations of the endangered winter-run. The bottom line of all of this is that in 2016, 2017 and in 2018, there will be an unsustainable low number of adult fish in the ocean. This will create another major disaster for the salmon industry.

Referring back to the chart, the yellow and black line near the center is at the ocean abundance figure of 400,000 fish. This represents the minimum number of adult salmon in the ocean that it takes for the commercial salmon industry to pay their bills and to make money. Normally they would harvest about half of these fish (200,000) and the other half would return to the freshwater to spawn. You can see that most of the recent years are well below that minimum. The 2015 commercial season is a good example. A high percentage of the commercial fishermen did not

catch enough fish in 2015 to pay for fuel and other bills. For a good part of the season their boats remained tied up at the docks. They are in a desperate financially condition particularly since the crab season was also canceled. I am aware of some who have already had to sell their boats to survive. Because of the drought, the 2016, 2017 and 2018 results are destined to be even worse than those of 2014 and 2015.

The California Legislature has registered deep concern about the severe losses in the salmon populations. Senator Mike McGuire is Chairman of the California Joint Committee on Fisheries and Aquaculture. In a Sacramento committee hearing in early February, he said, “These are truly desperate times. Imagine losing 75 to 100 percent of your annual income, and trying to survive. I cannot say this more bluntly. We are facing a fishery disaster in California and families who have relied on the mighty Pacific for their livelihood are on the brink”.

### **Uniting Salmon Stakeholders around Potential Solutions**

The salmon industry is obviously deeply concerned with this outlook for the next three years. Our future has been put very much in doubt. We have examined the issues carefully and worked hard to develop plans and actions that can turn this situation around. In 2011 we pulled all the key people in the industry together and created the Golden Gate Salmon Association (GGSA) to work on recovery. We then created a salmon rebuilding task force to develop strategies and actions that can rebuild the runs. The three fish agencies, along with the Bureau of Reclamation and the California Department of Water Resources, joined us in an advisory capacity.

GGSA now has 28 projects and a number of actions that the industry feels are very necessary to begin the turn around. We have shared them with some members of this Committee and would hope you can support them. The following are some of our concerns and proposed actions:

- We believe a great deal of money has been misdirected by the U.S. Fish and Wildlife Service and Bureau of Reclamation on spending the approximate \$25 million a year provided by the Central Valley Project Improvement Act (CVPIA) Legislation of 1992. Many of the water contractors that provide the annual \$25 million agree with us. We support the conclusions of the Listen to the River panel of 2008. This CVPIA program badly needs restructuring with a better management and better investment targets. There is an effort under way to do this and we urge Congress to help see that the CVPIA restructure is successful.
- In 2009, the National Marine Fisheries Service (NMFS) issued new biological opinions to make important changes to avoid extinctions. Several of these are languishing with little or no action. Some of them would be very helpful in arresting the declines. We urge more NMFS action.
- In recent years the annual water delivery plans of the Bureau of Reclamation and State Water Board have done damage to the winter and fall-run juveniles in the upper Sacramento River. These plans need to be better to avoid these damages. The agencies have admitted that to prevent additional damage to salmon, they must be more protective in 2016. With the loss of two out of three cohorts of endangered wild winter-run salmon (2014 and 2015) it is critical that we develop cold water pool resources in the winter and

spring and then protect them to support the temperature management needed later in the year.

- There have been a number of federal legislative proposals that one way or another would overturn the current biological opinions in the Delta. Maintaining those biological opinions intact is critical to avoiding the complete loss of the salmon. In 2009, when the opinions were first put in place several water contractors filed lawsuits in an effort to overturn them. After two years of conflicting science testimony, the court upheld the B Os. It also then ordered the litigating water contractors and NGO's to form a committee to study and collaborate on the science until they agreed. That committee was formed and has made progress on reaching agreements. Where there are science disagreements, it continues to sponsor science studies to fill the gaps. I sit on that committee representing the salmon industry.
- The 28 salmon rebuilding projects developed by the GGSA task force spell out engineering changes that will result in more ocean salmon abundance. They do this by proposing physical changes that improve juvenile survival, add spawning and rearing area and reduce predation. Many of these projects have no impact on water deliveries and are supported by the contractors. We will furnish the entire list to the committee and urge your support. Some of the highlights are:
  - The plumbing from the Oroville Dam on the Feather River to the Thermalito Afterbay needs changing so that cold water can flow to the 20 miles below the Thermalito outlet. This can be a prime fall-run spawning area but its current temperature is lethal to eggs. DWR, water users and others agreed in 2006 that this retrofit was needed, but it has made little or no progress over the past decade.
  - In the upper Sacramento River, there are very few places where the newly hatched fry can hide from predators and grow until they are strong enough to migrate downstream. The predator losses are very high. More side channel rearing areas are needed where these fish can hide and feed and grow. Floodplain restoration in the Yolo and Sutter bypasses also could significantly improve fitness and survival.
  - In 2009, the National Marine Fisheries Service issued new biological opinions for the Delta pumps and the pump salvage system. Millions of out migrating juveniles are lost at these operations. The biological opinions call for major improvements here but they have never been enforced. NMFS needs to be more aggressive.
  - In low water years, the upper Sacramento River is running very slow. The newly hatched salmon fry are not strong enough to swim and migrate down the river on their own. A high percentage of them are lost to predators. Pulse flows from the Shasta and Keswick reservoirs are needed to push the juvenile fish down the river to safer areas.
- Several of the water contractors agree with our concerns and some are already helping bring some of the projects about. In the upper Sacramento River, a former salmon spawning area called Painter's Riffle was identified by GGSA as a potential spawning area but it was blocked by a high gravel barrier. The Glenn Colusa Irrigation District

(GCID) and Mr. Thad Bettner who is the General Manager of the District stepped forward and agreed to fund the project, offering their equipment and manpower at no charge to clear the barrier. GCID completed the project in 2014 and in the fall of 2015 the salmon successfully used it. Over a million new salmon fry are about now emerging from the area and beginning their migration. Mr. Bettner is present here today as a witness. We very much appreciate his help.

In the spring of 2015, a number of us from the fishing industry met with Chairman Hastings to discuss fishery issues in the different states. As the meeting progressed, I brought up the problems of the California salmon industry and asked for his help. Following his strong words about the salmon mess in California, we discussed some ideas that might be in the interest to all concerned. The Chairman asked that we send our ideas, which we did and continue to develop.

### **Conclusion**

In summary, it is very clear the salmon industry has a very difficult future in 2016, 2017 and 2018. These may be the worst years ever. If the conditions continue to get worse, every water user in this room and many more will suffer. If we get busy on the things the salmon need, we can keep that from happening. What do they need? They need adequate flows and temperature protections, as well as ambitious habitat restoration actions and they will recover.

We hope the Committee agrees that these actions are in everyone's interest. We are asking for the Committee's support wherever you can provide it and we stand ready to work with you and lend our resources and expertise as needed.

Thank you for the opportunity to provide testimony today. I appreciate the Subcommittee's time and attention to these important issues. I would be happy to answer any questions.