Winter-Run Chinook Hammered In 2014
Hatchery Stocks Must Save 2017 Season

By John McManus and Dave Bitts

BETWEEN FEBRUARY 4TH AND 6th, in the middle of only the second wet deluge California received so far this last winter, federal officials released 612,000 rare juvenile winter-run Chinook salmon into the Sacramento River almost three hundred miles from the ocean in Redding, California.

Managers timed the release to take advantage of the runoff from the powerful storm system that dropped significant rain on California. From the release site, the smolts were on their own to make the 300-mile journey downstream, through the San Francisco Delta and Bay, and out to the ocean.

These juvenile winter-run salmon, raised in the Livingston Stone winter-run hatchery, represent some of the last of their kind from 2014. The California Dept. of Fish & Wildlife estimates that 95 percent of the naturally spawned winter-run salmon from 2014 failed to survive due to elevated river water temperatures. The elevated temperatures were caused by drought, compounded by human mismanagement of upstream cold water supplies.

The Livingston Stone Hatchery, located at the base of Shasta Dam, normally produces only 200,000 winter run smolts annually. State and federal fishery managers deserve credit for proactively pushing this limit in 2014 when they saw signs that the drought could wipe out the natural brood, fears which turned out to be correct. Normally the hatchery will only take wild winter-run for broodstock. Since all of the hatchery fish are fin clipped, it’s easy to sort them. Instead of collecting only the normal 120 adult wild fish, they took every adult that entered the fish trap in the Keswick Dam, including hatchery-reared fish. In all, they took 388 adult winter-run spawners into the hatchery.

Juvenile salmon are poor swimmers that rely on natural runoff to carry them from their birth rivers to the delta, bay, and ocean. Salmon advocates voiced concern about federal water managers’ plans to divert some of the runoff needed by the winter-run to agricultural and other users south of the Delta. Because natural flows are interrupted, those not sucked directly into the pumps linger in the river or delta before heading for sea, prolonging their chances of getting pulled off course. They generally end up heading out to the ocean around April as the northwest winds are picking up and krill blooms start to happen.

The survival of the sport and commercial salmon fishing industries south of Point Arena is linked to the survival of these juvenile winter-run salmon. Even though we don’t fish for them, when winter-run numbers are too small, several additional fishing restrictions kick in, forcing multiple area, size and timing restrictions.

Under the rule currently in place, whenever the average of the past three years’ winter-run returns falls below 4,000 fish, these restrictions start to kick in, becoming progressively more severe as the average falls. If the average is below 500 fish, no ocean salmon fishing is allowed below Pt. Arena. And this isn’t just your average old average: it’s a geometric mean, which heavily weights the weakest of the three years; the weaker the year, the heavier the weight.

We’ve had very few recent years where the average of the previous three years was as high as 4,000. In 2013, restrictions on salmon fishing based on this rule cost the west coast ocean salmon fishery several million dollars, while in 2014 the closures were shorter and less costly, but still bothersome.

Our fear is twofold. First, winter-run returns in 2016 may be hammered by NMFS’s decision to waive its own Biological Opinion in 2014 and allow increased pumping from the delta just as juvenile winter-run were transiting to the ocean. One weak adult return, caused in part by an action of the agency charged with protecting these fish, could cause severe restrictions in fishing for the following three years.

Second, it looks like the 2017 return will depend almost entirely on the hatchery juveniles currently moving downstream. Will that mean two weak years out of three? Does an under-500 fishery shutdown loom unless the rule is changed?
Let’s take another look at this winter-run salmon fisheries control rule. Implemented in 2010, it came from a thorough analysis of the risks to winter-run Chinook from ocean fishing, conducted by some highly competent agency biologists and math guys. They looked at several different control rules, including a) the rule in place under the Biological Opinion at that time, b) no fishing allowed, and c) four or five new proposed rules. All the rules except no fishing showed some risk, but all the new rules showed risks under 10 percent, and the differences between them were small. The rule we’ve got, which mysteriously appeared a bit later, causes one or two percent less risk, but costs a lot more fishing opportunity in a lot more years, than the rule we’d like to see, which is Rule #4 of the set originally considered.

To back up a bit and put these salmon fishing rules in context: the BiOp basically says that continuing Delta operations (high levels of pumping) as they were in 2009 will probably cause the extinction of all anadromous fish in the Central Valley: sturgeon, striped bass, and others as well as salmon. That’s a greater than 50 percent risk of extinction. Meanwhile, the highest risk from fishing under the rules considered by the tech guys is less than 10 percent of putting the fish at a moderate risk of extinction.

And all of the hypothetical new rules they considered would have allowed more fishing than we get under the rule adopted. Meanwhile NMFS waived its own BiOp (in 2014) to allow more pumping, which it says is the primary problem.

Winter-run Chinook are often found in Monterey Bay and points south; hence these areas have been disproportionately closed or seen size restrictions in recent years. Some fishermen are expecting to see additional restrictions on fishing in these areas as this year’s depressed stock reaches jack stage next year and adult stage in 2017. But restrictions in advance of actual information about the run would require throwing out the rules, under which they can only base restrictions on a) run predictions based on jack counts, or b) for winter-run, the previous years’ returns of adults.

Why did water managers miscalculate and run out of cold water in 2014?

Some point to an incident in October of 2013, when federal fishery managers chose to keep 29 winter-run redds inundated until about November 1. Doing so cost us a significant percent of the fall-run Chinook, and an estimated extra 100,000 acre-feet of water.

GGSA asked the fishery managers to consider the flexibility the 2009 salmon Biological Opinion affords them and to cut the water flows. Doing so would have saved untold fall-run Chinook that spawned in shallow waters that were later left high and dry before the eggs could hatch. It also would have saved a lot of water that could have been used in 2014.

We’ve all experienced way too much of the regulatory mentality of “let the fishermen pay for the harm other people do to salmon runs.” Now that risk assessments are being introduced into the regulatory framework, we have a chance to get rid of that mentality, and in fact we’re seeing it go away some. But, in spite of the risk assessment for salmon fisheries on winter-run, there’s way too much of this never-valid mentality left in the current control rule. We need to beat it back wherever it appears so it can be replaced with something more like “let’s see that everyone who impacts salmon runs pays their fair share.”

Some northern fishermen like to fish below Pt. Arena when fishing is good there. Some of us enjoy working with these folks, and we’d like them to continue to be able to enjoy good fishing below Pt. Arena.

If we can’t fish below Pt. Arena, southern fishermen will also be forced to migrate north, even to Washington, to share never-enough quotas among even more boats. So it is an issue that affects the entire CA/OR-WA salmon fisheries.

Meanwhile, salmon fishermen await word from NMFS on a possible new winter-run control rule, hopefully a rule whose costs to fishermen are more appropriate to the risks caused by fishing. It can’t come too soon.

However, NMFS personnel charged with reviewing the control rule recently announced that they would NOT have time to develop a new rule for this 2015 season, but are continuing to work a new draft rule, so this is something likely to hit us in future years. Clearly, salmon fishermen must keep an eye on this process as it develops.

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