

SALMON ADVISORY SUBPANEL SUPPLEMENTAL REPORT ON
THE SACRAMENTO RIVER WINTER CHINOOK CONTROL RULE

On Tuesday, the Sacramento River Winter Chinook Workgroup (SRWCW) provided a presentation to the Salmon Advisory Subpanel (SAS) reviewing their analysis of the various control rules under consideration. The SAS very much appreciates their analysis and the presentation made to us based on their report to the Council (Agenda Item F.2.a, SRWCW Report 1). As part of the discussion, Dr. Mike O'Farrell outlined the topic of using the median rather than the mode in the analysis, which the SAS does support.

In recent years, the existing winter-run control rule has been superseded by more conservative criteria in recognition that years of California drought have stressed the entire Sacramento River ecosystem; and consequently, fishery regulations needed to be more responsive to current conditions than the backward-looking three-year geometric mean concept would allow. Additionally, the existing control rule has been an issue since its adoption, relative to the draconian actions mandated should the 3-year geometric mean drop below 500. Thus, the SAS is appreciative of this effort to again look at the potential impacts of various control rules and to seek the input of the Council in attempting to find the right balance between incidental impacts to Sacramento winter run and targeted utilization of Sacramento fall run Chinook.

Of the Control Rules (CRs) in the SRWCW report the SAS recommends CR 5 as the preferred alternative, offering the appropriate balance of protection and opportunity, followed by CR 4. Of the nine control rules that are included in the SRWCW report, there are three CRs that simply bound the extremes for analysis, but offer little merit beyond that: CRs 1, 2, and 8. The SAS considers these to be bounding cases only and so focused our discussion on the remaining six.

We note first that, per the SRWCW report, all of the remaining six Control Rules offer significant and comparable protection for the winter run fish. None of these remaining Control Rules expose the population to a detectable likelihood of a high risk of extinction. In no case does the probability of moderate extinction risk exposure exceed 0.03 (3 percent), even under any of the drought and climate change conditions. Under the contemporary condition there is an almost indiscernible difference that never exceeds 0.01 (1 percent) (Figures 3 and 5, pages 11 and 14 of the SRWCW report). In fact, all of these six Control Rules meet any rational standard of *de minimis* impacts on these fish.

The SAS considered the merits of the specific attributes of each Control Rule. CR 3 was felt to be more aggressive than necessary given that CRs 4 and 5 offer only slightly reduced opportunity, while achieving marginally better protection from moderate risk of extinction. CRs 6 and 7 have good protection metrics, but the catastrophic impact of complete closures at low predicted escapements (<833 fish and <500 fish) were felt to be too disruptive to the fishery for these Control Rules to be endorsed. This leaves CRs 4, 5, and 9 as viable Control Rules, all of which approach a reasonable balance between opportunity and risk. We then note that CR 9 offers less fishing opportunity than either CRs 4 or 5, and although it has the best protection ranking of the three, the difference is barely discernable. We are concerned that CR 9 unnecessarily begins to restrict the fishery at abundances much higher than either CRs 4 or 5, and also maintains a 10 percent impact

rate even as the escapement forecast approaches zero. And lastly, although CR 4 offers marginally greater fishing opportunity than CR 5, it too has the dubious distinction of allowing a constant level of fishing even as the projected population approaches zero.

Thus, of the Control Rules in the SRWCW report, CR 5 is our preferred alternative, offering what seems to the SAS, the appropriate balance of protection and opportunity, followed by CR 4.

However, we would like to introduce a new shape as shown in Figure 1 that is an attempt at reconciling the management strategy evaluation results, showing modest differences between risk of extinction but substantial differences in cost to the fishery. This new Control Rule provides a *de minimis* option at abundances below 500, ramps down fishing as the forecast of escapement falls below the most recent 10-year average (~3,000), and allows for a policy approach that recognizes the minimal gains in modeled extinction risk and the concerns related to fishing on an endangered species with a forecast of abundance that is severely depressed. We ask that the Council consider this additional Control Rule (CR 10) that strikes a balance between conservation and use objectives.

Figure 1, proposed SAS Control Rule.

