As Sean pointed out yesterday, this week federal District Judge Wanger issued another ruling in the ongoing litigation over protection of the Delta smelt and restrictions on diversions from the Sacramento-San Joaquin river system. Reviewing the opinion, my first reaction was sympathy for the judge and his staff. There is no question that sorting through all the issues, the competing arguments, and the supporting scientific evidence in this case presents extraordinary challenges. Judge Wanger has necessarily absorbed a huge amount of information, and grapples with it in detail in his 225-page opinion. My second reaction was sympathy for the Fish and Wildlife Service, which itself faces a complex and difficult job evaluating the effects of operation of the state and federal water projects on the smelt with limited information under intense political and time pressures. Judge Wanger's opinion further complicates that job, and leaves considerable uncertainty about what exactly FWS needs to do.

The opinion includes some important victories for FWS and environmental interests. Judge Wanger rejected the water users' most extreme argument, that there was not enough evidence of a connection between project operations and smelt population dynamics to justify any diversion restrictions. And he endorsed the idea of adaptive management, explicitly noting that FWS may impose restrictions supported by less than certain evidence even as it acknowledges that more study is needed.

Overall, however, the opinion is clearly a win for the water users. Despite recognizing that the restrictions in the biological opinion are generally supported by the available scientific information, Judge Wanger repeatedly demands more detailed explanations of the specific regulatory limits imposed — for the specific flows required, the specific location of the X2 salinity threshold, the precise amount of incidental take authorized.

In one sense, Judge Wanger's ruling is familiar law — an administrative agency must supply an explanation for its regulatory actions, and must draw a rational connection between the evidence cited and the conclusions drawn. It is not unusual for courts to remand decisions, even highly technical ones, to agencies for more explanation. The problem in this case is that it is not clear what sort of explanation would satisfy Judge Wanger. Whenever scientific data is limited and uncertain, as it so often is in environmental and natural resource policy conflicts, there will be a range of defensible decisions. Courts must allow agencies discretion in such cases to choose among those decisions, based on the goals articulated in the statutes being implemented. (For a good model of how courts should approach judicial review under these circumstances, see Fishermen's Dock Cooperative v. Brown, 75 F.3d 164 (4th Cir. 1996)).

I would have no problem with this opinion if it simply pointed out places where additional

explanation of how FWS chose the particular restrictions it recommended on project operations. I have not reviewed the smelt biological opinion in detail, but it would not surprise me, given the size of the task, if there were places where FWS had simply neglected to explain its reasoning, which could include giving the benefit of the doubt to the species where information is thin. But Judge Wanger wants more than that, and what he wants will be impossible to provide.

Near the end of the opinion, Judge Wanger ruled that the biological opinion improperly failed to explain how the reasonable and prudent alternatives called for by FWS were consistent with the project purpose, within the action agency's legal authority, and economically and technically feasible, as required by FWS's ESA consultation regulations. I think this part of the opinion reveals Judge Wanger's attitude toward FWS's task. What he wants, consistent with his earlier NEPA rulings, is an explanation of why FWS did not adopt a set of RPAs that would have lesser consequences for water supply. Ultimately, I believe he wants FWS to find that perfect balance point at which the smelt (and salmon) can be saved from extinction at minimal cost to water users.

I sympathize with that intuition — we'd all like to be able to have everything. But the law does not require that FWS find that illusory perfect point, and for good reason. As Dave Owen (Berkeley Law alum and now associate professor of law at the University of Maine) has pointed out, that approach "can lead to fragile solutions prone to costly collapses." (Law, Environmental Dynamism, Reliability: The Rise and Fall of CALFED, 37 Environmental Law 1145 (2007)). I would go even further. If resource management agencies were required always to allow exploitation up to the very edge of resource collapse, collapse would be the rule because errors in estimating that point are common and systematically pushed by political pressures toward the side of over-exploitation. Rather than showing that they have only required the minimum adjustment to the system absolutely necessary, it should be enough for FWS to explain where the data are uncertain, why it is difficult to improve them (the preliminary National Research Council committee report on the Bay-Delta discusses this point at some length), and how it believes the balance it struck is consistent with the goals and requirements of the ESA.

There is another serious problem for FWS in Judge Wanger's approach to judicial review. In any major scientific report or evaluation, like the smelt biological opinion, there will always be some flaws. The water users paid some experts a lot of money to pick this biological opinion apart and find as many of those as possible. Judicial review should not encourage that kind of fly-specking or require that the agency produce a flawless document. To his credit, Judge Wanger doesn't fall into the worst version of that trap. He acknowledges at several points that agencies must be allowed to choose between conflicting scientific

interpretations, and are not required to have perfect data. Nonetheless, his approach encourages flyspecking because he does not ask strongly enough whether the asserted shortcomings of the biological opinion made a difference to the outcome in a way that would help the complaining parties. For example, Judge Wanger seems to be clearly right that the better scientific practice in evaluating take at the pumps would be to look at the proportion of the population taken, rather than raw numbers of fish killed. But as NRDC's Kate Poole has noted, not only is population data for smelt very hard to come by, that approach would actually have led to more restrictive pumping limits.