Readers' Forum: New thinking needed to solve Delta problems

By Robert Pyke
Guest Commentary
Posted: 12/23/2010 12:01:00 AM PST
Updated: 12/24/2010 11:50:26 AM PST
From the Contra Costa Times

RECENT COMMENTS by U.S. Interior Secretary Ken Salazar, Deputy Secretary David Hayes and U.S. Sen. Dianne Feinstein on the problems of the Delta are unnecessarily anchored to the past.

Despite what they have said, the Bay Delta Conservation Plan (BDCP) process is not the last, best hope for the Delta, nor the only game in town. The process has not only been bungled in execution, but its basic concept has always had a fatal flaw. No amount of tweaking the present plan will accomplish the plan's stated goals.

The BDCP process, a collaboration of water users and state and federal officials, is not really about conservation. The true goal is to sufficiently restore the Delta ecosystem so that pumping can continue despite the state and federal endangered species acts.

However, the goal of even this minimal level of ecosystem recovery is in conflict with the goal of sustainable exports at a relatively high level, because it is now widely agreed that, of all the multiple stressors impacting the Delta, changes in the flow pattern are the most important. It is principally changes to the natural flow pattern, with water being sucked across the Delta to the export pumps in the south Delta, that have transformed the Delta from an estuary into a weedy lake.

The problem with the current BDCP is that it relies on the idea of moving the export intakes from the south Delta to the north Delta, and conveying water from the Sacramento River to the south Delta pumps in a canal or a tunnel. This is a legacy idea that has been around since the 1920s -- an idea that was conceived when the ecology of the Delta was not a big issue, and it was planned that there would be diversions from the northern rivers that would in fact provide much of the export flows.

When then-Gov. Jerry Brown made a deal with the Sierra Club around 1980 to bar the planned diversions from the northern rivers in return for their support for a peripheral canal, he inadvertently caused the present stalemate. Without additional flow in the Sacramento River, moving the intakes from the south Delta to the north Delta simply changes the flow pattern in the Delta from cross-flow to no-flow. And no-flow is not better than cross-flow!

Any well-thought-out plan for getting out of this stalemate must start by recognizing both the need for more natural flows through the Delta and that precipitation in California is extremely variable. Thus, natural flows through the Delta should be restored to the maximum practical extent and more water should be extracted during periods of high flow. Much less, or zero, water should be extracted during periods of low flow.

A plan based on these principles would include four physical elements:

- Restoration of floodplains on the Sacramento and San Joaquin rivers, which offers significant flood management and environmental benefits in addition to stretching out floods to allow export pumping over a longer period of time.
- New pumping facilities somewhere in the west Delta to allow flows to pass through the Delta and toward Suisun and San Francisco bays in a natural way before surplus flows are extracted.
- One or more tunnels that can move the extracted water to a large temporary storage facility until the existing pumps can move it south.
- Additional south-of-Delta storage, much of it likely as groundwater, but also including new westside surface storage.

Because it has correct fundamentals, this is a plan that can succeed. In fact, because it includes integration of enlightened flood management, this is a plan that can provide not just a win-win, but a win-win-win.

Robert Pyke holds a Ph.D. in civil engineering from UC Berkeley and is a consultant with 40 years of experience in geotechnical, earthquake and water resources engineering in Australia and California.