Two technical revisions are being made to the criteria values generated by these monthly sliding scale equations. First, to facilitate compliance, the number of days resulting from the monthly equations will be rounded up or down to the nearest whole number. Second, at extremely low flows, the monthly equations include unjustified extrapolations beyond the existing data. For that reason, when the previous month's index is less than 500,000 acrefeet, the number of days of compliance required for the current month shall be zero.

Revising the Roe Island "trigger" for monthly compliance. As a result of the above changes to the Estuarine Habitat criteria, the "trigger" for the Roe Island location must be restated as a month-tomonth trigger. The Proposed Rule stated, in effect, that if the salinity dropped below 2 ppt at Roe Island at any time during the February to June period due to uncontrolled hydrologic conditions, the Roe Island requirements were "triggered" for the remainder of the February to June compliance period. In the final rule, the "trigger" is evaluated on a monthly basis. If the 14day moving average salinity at Roe Island falls below 2 ppt on any day during the last 14 days of a month, compliance with the Roe Island criteria would be "triggered" for the following month.

For example, assume that the sliding scale of unimpaired flow (PMI) for January indicates that the 2 ppt salinity value shall be attained for 18 days at Roe Island in February, *if* the Roe Island criteria is "triggered." If the 14-day moving average salinity in the last part of January is below 2 ppt at Roe Island, the Roe Island criteria would in fact be triggered for 18 days in February. Assume then that the system is operated to meet the 18 days in February, but that a large storm in mid-February results in the salinities of less than 2 ppt at Roe

Island for the entire month of February. This would "trigger" the Roe Island criteria in March. If the sliding scale, PMI-based calculation required 31 days of compliance at Roe Island in March in this scenario, compliance for April (for 13 days, for example) would also be triggered, since the 2 ppt would be met during the last 14 days of March. If April is a dry month, the 2 ppt criteria could be met for the required 13 days early in the month, the 14-day moving average salinity in the last half of April would never go below 2 ppt at Roe Island, and the Roe Island criteria would not be triggered for May at all.

Although somewhat complicated, this monthly triggering mechanism is essential to assure that the criteria applicable in a given month reflect the actual distribution of storm events throughout the February to June compliance period. As explained in more detail above, accounting for the natural hydrologic cycles in a manner reflecting the reference period assures protection of the designated uses without unnecessarily affecting water project operations.

(iv) Alternative Measures of Attaining the Criteria.

In the Proposed Rule, EPA indicated that it believed a State Board implementation plan that relied on the salinity-flow models, without making additional allowances for "confidence intervals", would adequately protect the designated uses. EPA's further review of the comments and continued discussions with the project operators has confirmed this belief.

In addition, EPA believes that the Estuarine Habitat use would be protected if the Estuarine Habitat criteria are directly measured as either a daily salinity value or as a 14-day moving average salinity value. Further, EPA's review of the new CCWD model correlating flow and salinity suggests that the Estuarine Habitat use would be

protected at the Chipps and Roe Island monitoring sites if the modeled "flow equivalent" of the applicable 2 ppt criteria is provided. According to the CCWD model, the steady state flows that would satisfy these flow equivalent requirements are 29,220 cubic feet per second (cfs) for the Roe Island monitoring site and 11,400 cfs for the Chipps Island monitoring site (Denton, pers. comm.). This "flow equivalence" measure of attainment with the criteria would not be available at the Confluence monitoring site because of assumptions in the CCWD model about antecedent conditions in Suisun Bay.23

Accordingly, the State Board could adopt an implementation plan providing that project operators would attain the criteria in any one of three ways: (1) the daily salinity value meets the requirement, (2) the 14-day moving average salinity meets the requirement, or (3) at the Chipps and Roe Island monitoring sites, the system is operated on that day so as to meet the "flow equivalent," using the CCWD model, of the stated salinity criteria. EPA notes that the available modeling data indicate that under most circumstances, the most efficient approach (in terms of water usage) to meeting the criteria would be to attain the specified salinity value rather than the alternative flow equivalent.

c. Revised Estuarine Habitat Criteria

Final estuarine habitat criteria reflecting the changes discussed above are shown below at 40 CFR 131.37(a)(1). These revised criteria provide the many equations necessary to define month-bymonth sliding scales and, thereby, the applicable criteria.

For illustration purposes only, Table 2 presents representative examples of the required number of days of compliance in different months across a range of possible values of the PMI index of unimpaired flow.

PMI	Chipps Island					Roe Island (if triggered)			
	Feb	Mar	Apr	May	Jun	Feb	Mar	Apr	May
1000		31	2	0	0	13	4	2	C
1250			7	0	0	17	7	4	C
1500			15	0	0	19	10	8	C
1750			21	0	0	21	13	11	C
2000			26	1	0	22	16	15	C
2500			29	16	1	24	20	21	2
3000			29	29	7	25	24	25	5
4000			30	31	25	26	27	28	18
5000					29	27	29	29	26

²³ That is, to make this finding that the "flow equivalence" would protect the designated use at the Chipps and Roe Island locations, EPA had to make assumptions in the CCWD model that the 2 ppt salinity value was actually being attained at the Confluence. Given that assumption, EPA cannot

find that the "flow equivalence" at the Confluence is protective.