

ONE-PER-TWO-YEAR AND ONE-PER-FIVE-YEAR PULSE FLOW STANDARDS IMPLEMENTATION

Basic concepts:

1. Applies only to applications for right to divert or impound at least 10% of volume of smallest applicable one-per-two-year pulse flow standard.
2. Except to the extent required under step 6, permits to which this provision applies would not include a condition spelling out the one-per-two-year or one-per-five-year pulse flow requirement.
3. Applications to which this provision applies would be evaluated to see if an applicable one-per-two-year or one-per-five-year pulse flow requirement would be impaired.
4. A one-per-two-year or one-per-five-year pulse flow requirement would be considered impaired if the permit, in combination with other permits subject to the standards, would reduce the frequency of attainment of an applicable one-per-two-year or one-per-five-year pulse flow by 10% or more or would reduce the average volume of protected pulses by 10% or more.
5. The baseline for comparison would be permits in effect at the time of adoption of the standards and the analysis would consider the period of record.
6. If an impairment is indicated, any permit issued would be adjusted/conditioned in an appropriate manner to avoid the impairment.

Possible rule language to implement the concepts:

A water right application to which this Subchapter applies that seeks authorization to divert or impound in a calendar year more than 10% of the volume of an applicable one-per-two-year pulse flow standard shall not result in impairment of an applicable one-per-two-year or one-per-five-year pulse flow standard set out in Figure ____ [*this would be a table with the 1-per-2-year and 1-per-5-year pulse flows for each gage*]. For purposes of this subsection, an impairment of an applicable one-per-two-year or one-per-five-year pulse flow standard would result if, when modeled over the applicable period-of-record, the authorization, subject to any applicable special conditions and considered in combination with other authorizations subject to this Subchapter, is predicted to result in a reduction of ten percent or more in either the frequency of attainment with, or the average volume of pulses protected by, the relevant pulse flow standard when compared to the baseline predicted to occur under permits as they existed at the time of adoption of this subsection.

Example Application of Modeling Approach for One-Per-Two-Year
and One-Per-Five-Year Pulse Flow Standards

Llano River at Llano

1 Pulse Per 2 Years: Trigger = 17,400 cfs
Volume = 89,300 af
Duration= 22 days

1 Pulse Per 5 Years Trigger = 41,100 cfs
Volume = 214,000 af
Duration= 27 days

Application of concepts:

1. 10% of 89,300 af = 8,930 af, so would apply only to application to divert or impound at least 8,930 af/yr; smaller applications need not receive assessment for this component.
2. For applications to which the provision applies, a modeling assessment would be undertaken and impairment found if:
 - a. Frequency of attainment of either the 1-per-2-year or 1-per-5-year pulse flow standard would be reduced by 10% or more compared to permits in effect when standards adopted; or
 - b. Average volume of pulses protected by either the 1-per-2-year or 1-per-5-year pulse flow standard would be reduced by 10% or more compared to permits in effect when standards adopted.
3. If no impairment found, when considering cumulative impacts of permits subject to the standards, permit could be issued without permit conditions addressing the 1-per-2-year or 1-per-5-year pulse flow standards.
4. If impairment is found, when considering cumulative impacts of permits subject to the standards, permit could only be issued with the inclusion of appropriate conditions to achieve compliance with the 1-per-2-year and 1-per-5-year pulse flow standards.