**Section 352.423 Calculation of Preliminary Effluent Limitation**

a) The PEL is calculated in a simple mass balance approach reflecting the dilution allowance established in Section 352.422:

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| WQS | = | [(Qe)(PEL) + (Qd)(Cd)] / [Qe + Qd] |

or

|  |  |  |
| --- | --- | --- |
| PEL | = | [WQS(Qe + Qd) - (Qd)(Cd)] / Qe |

where:

|  |  |  |
| --- | --- | --- |
| WQS | = | applicable water quality standard, criteria or value |
| Qe | = | effluent flowrate |
| Qd | = | allowable dilution flowrate |
| Cd | = | background pollutant concentration in dilution water |

b) The representative background concentration of pollutants to develop TMDLs and WLAs calculated in the absence of a TMDL shall be established as follows:

1) "Background" represents all pollutant loadings, specifically loadings that:

A) Flow from upstream waters into the specified watershed, water body, or water body segment for which a TMDL or WLA in the absence of a TMDL is being developed.

B) Enter the specified watershed, water body, or water body segment through atmospheric deposition, chemical reaction, or sediment release or resuspension.

2) When determining what available data are acceptable for use in calculating background, the Agency shall use its best professional judgment, including consideration of the sampling location and the reliability of the data through comparison, in part, to detection and quantification levels. When data in more than 1 of the data sets or categories described in susection (3) of this subsection (b) exists, best professional judgment shall be used to select the data that most accurately reflects or estimates background concentrations. Pollutant degradation and transport information may be considered when using pollutant loading data to estimate a water column concentration.

3) The representative background concentration for a pollutant in the specified watershed, water body, or water body segment shall be established as the geometric mean of acceptable water column data or water column concentrations estimated through the use of acceptable or projected pollutant loading data. When determining the geometric mean of the data for a pollutant that includes values both above and below the detection level, values less than the detection level shall be assumed to be present at ½ of the detection level if the detection level is less than the lowest water quality value for that pollutant. If all of the acceptable data in a data set are below the detection level for a pollutant, then all the data for the pollutant in that data set shall be assumed to be zero. If the detection level of the available data is greater than the lowest water quality value for the pollutant, then the background concentration will be determined by the Agency on a case-by-case basis after considering all representative data, including acceptable fish tissue data.