FY 2010 RESEARCH PROBLEM STATEMENT

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TITLE (*more info*)

Flood Frequency Trends in Oregon

PROBLEM (Description of need) (*more info*)

Knowing which flood frequency analysis methodologies work best under specific assumptions and conditions results in greater accuracy when calculating design floods for stream structures such as culverts and bridges In addition, study results will indicate which regions are most difficult to quantify, and consequently may require further data collection, study and/or higher safety factors for design.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY (*more info*)

The objective is to investigate potential temporal trends in peak, mean and low-flow streamflow and snow pack time series for the state of Oregon. This will be done by using a medley of investigative techniques, with emphasis on nonparametric and distribution-free tests of nonstationarity in key streamflow parameters. Extra attention will be provided for parameters which are commonly ignored but still important, such as second and third order statistics.

BENEFITS (*more info*)

By identifying and perhaps quantifying potential temporal trends, such trends can be forecast and accounted for when constructing and/or retrofitting stream structures, creating long-term policy and usage plans, or for any other task requiring the forecasting of streamflow conditions. In addition, study results may help identify future areas of research needed in order to mitigate said temporal trends.

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