Objective
● To improve the predictive capabilities of subsurface flow models.

New Science
● Developed new equations that account for length scales at which predictions are made and hydrological measurements are collected.

Significance
● The new calculation method allows researchers to identify a scale at which predictions can be made with an acceptable (as defined by the researcher) level of uncertainty.
● Armed with these predictive models that account for uncertainty, land stewards and researchers can take appropriate actions to isolate and remove contaminants.
● Represents an increase in computational efficiency over existing models.

Natural logarithm of hydraulic conductivity as a function of the observation scale. Figures (a), (b)...(f) corresponds to the observation scales n, 2n, ... 6n, respectively.


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