

The Wildlife Scenario Builder of the Wildlife Contaminant Exposure Model

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The purpose of the Wildlife Contaminant Exposure Model (WCEM) is to provide a tool to systematically, efficiently, and transparently calculate wildlife exposure to chemical environmental contaminants. The Wildlife Scenario Builder (WSB) is contained in version 7.0 of the WCEM. The WSB consists of a database of species specific life-history data, taken from the Wildlife Exposures Factors Handbook, and allometric models that are used to calculate intake rates of air, water, food, soil, and sediment. The life-history database is fully searchable and all records have detailed documentation. The WSB database also allows for the inclusion of user-entered site-specific information. The WSB calculates metabolic requirements and then uses detailed dietary information to provide itemized daily intake rates of food, soil, and sediment. When intake rates from the WSB are combined with chemical concentrations in environmental media, exposure can be easily calculated. The WSB allows the user to document and provide rationale for values chosen. The use of metabolic requirements and factors allows the possibility of the WSB to directly export data into other models, e.g. individual-based models of movement or spatial ecological risk assessment models.