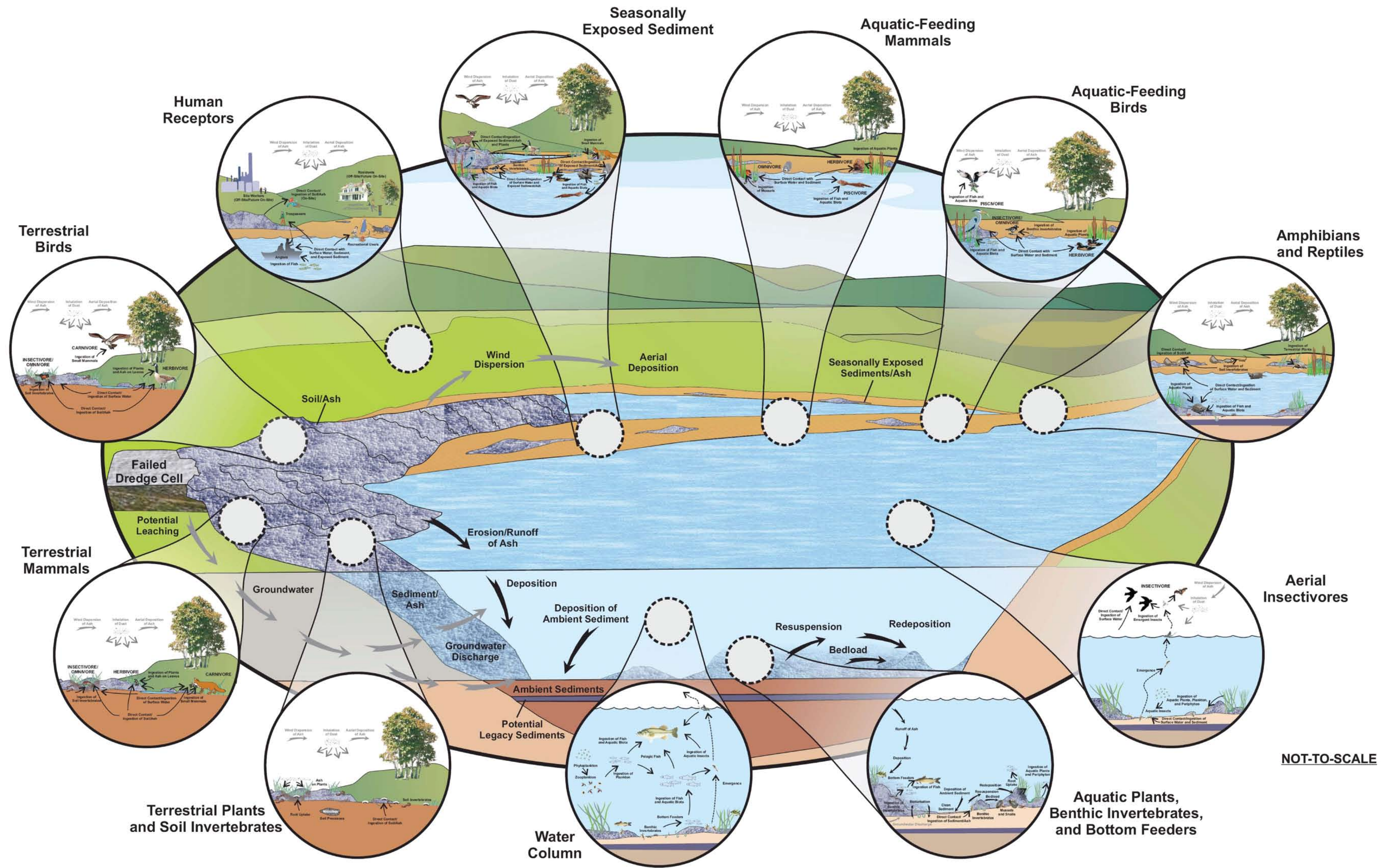


# CONCEPTUAL SITE MODEL

The size and complexity of the potentially affected ecosystems necessitate a comprehensive environmental sampling and monitoring program, which TVA has implemented in cooperation with numerous federal, state, and academic organizations.

A conceptual site model (CSM) was developed to summarize and illustrate the ecological receptors and potential exposure pathways associated with the Kingston fly ash release. The direct exposure pathways being evaluated at this site include exposures to ash as soil, as ash sediment, sediment pore water, groundwater discharging to surface water, surface water and seasonally exposed sediment. Dietary exposures are also a concern for some ash-related metals, including arsenic and selenium. The ecological receptors for which bioaccumulation and food web pathways are being studied at this site include fish, benthos, emergent insects, birds and mammals, amphibians, reptiles and others. The conceptual site model is used to organize and evaluate the numerous field and laboratory studies being performed by TVA and others at the site.



NOT-TO-SCALE