
MARTHA GARLICK, South Dakota Mines

Connecting Local of Movement of Mule Deer with Regional Spread of Chronic Wasting Disease

Chronic wasting disease (CWD) is an infectious, slow-developing prion disease that affects mule deer, as well as other members of the Cervidae family. Spatial models using ecological diffusion allow for aggregation of populations in desirable habitats and therefore allow an interaction between density dependent disease transmission and landscape structure. The techniques discussed in this talk can be extended to many ecological applications, such as modeling insect infestations, invasive species, and escaped genetically modified organisms, as well as other wildlife diseases.