

## **Background Information: Wildlife**

The location of new residential and commercial development can impact wildlife by limiting their ability to move around in a region. Certain kinds of development can have direct impacts on wildlife and habitat at the site level (e.g., filling in a wetland or harvesting in an active deer yard). Indirect, cumulative, impacts to wildlife can occur if many subdivisions and businesses are developed in a given region.

Following are a few factors about wildlife to consider when locating new development:

- Large undeveloped areas increase the resiliency of a region by maintaining areas with high biodiversity, particularly for species that need more space. Maintaining connectivity between undeveloped areas, especially large undeveloped blocks, within a region helps wildlife move around in search of food, water, and shelter.
- Noise and light associated with developed areas can discourage movement by some species. Structures and roads create barriers for wildlife, and can restrict the mobility of certain species.
- Domesticated animals and pets such as cats and dogs may impact nearby wildlife by introducing new predators to an area. As a result wildlife mortalities, and avoidance of certain areas by wildlife, may increase.
- Not all species are the same, and strategies that allow for connectivity of undeveloped areas for deer and moose may not work for amphibians or canids because they need larger or smaller areas in which to range.
- Maintaining connectivity between undeveloped areas requires that major roads be permeable – meaning that wildlife can move across them without much difficulty. Traffic volume and vehicle speeds are the two most influential variables in the degree to which a road is permeable.
  - Different volumes of traffic can create barriers for different species. For example, a road with 5,000 Average Annual Daily Trips (AADT) creates an impermeable barrier for most amphibians, whereas a road with 10,000 AADT creates an impermeable barrier for large mammals like deer, moose, and bear. However, as traffic volume goes up, avoidance increases and mortality spikes (wildlife are killed in the attempt to cross the road). At a certain level, the overall level of mortalities drops because the road has become such a

## *Adjacency Background Information*

barrier that most wildlife avoids it. Some data suggests that traffic volume can impede movement of certain species well before it becomes “impermeable” (e.g., ungulates have impaired movement around 2,500 AADT, but the road may not become impermeable until it reaches 10,000 AADT).

- Maine DOT keeps traffic count data for roads in the Commission’s service area. Some portions of major state routes in the UT have relatively high AADT numbers (such as roads near downtown Millinocket or Greenville), but most segments of major state roads outside of larger towns are under 4,000 AADT and many are between 1,000 – 2,500 AADT.
- Various landscape features can influence whether or not certain species choose to cross a busy road. Land cover is the most important variable. Some species are more likely to cross if there is vegetation on both sides of the road that can provide adequate cover.
- Maine DOT also maintains moose and deer crash data for areas in the Commission’s service area. Moose and deer crash sites can indicate areas near major roads where there may be ungulate habitat.