

Student Reference Sheet B

Introduction to the Wood Thrush (*Hylocichla mustelina*)

The wood thrush can be found in the moist and shady deciduous forests throughout the eastern United States. Because the population has been declining at a rate of 1 to 2 percent each year for nearly 30 years (1966–1994), it has been the subject of many ecological research projects. Research conducted on the breeding grounds has centered on the effects of forest fragmentation on nesting success.

Forest fragmentation is the name given to the reduction of extensive, contiguous forest into smaller, isolated parcels separated by roads, houses, agricultural fields, utility lines, logging, and other development. Carving up a forested area into smaller parcels creates more forest

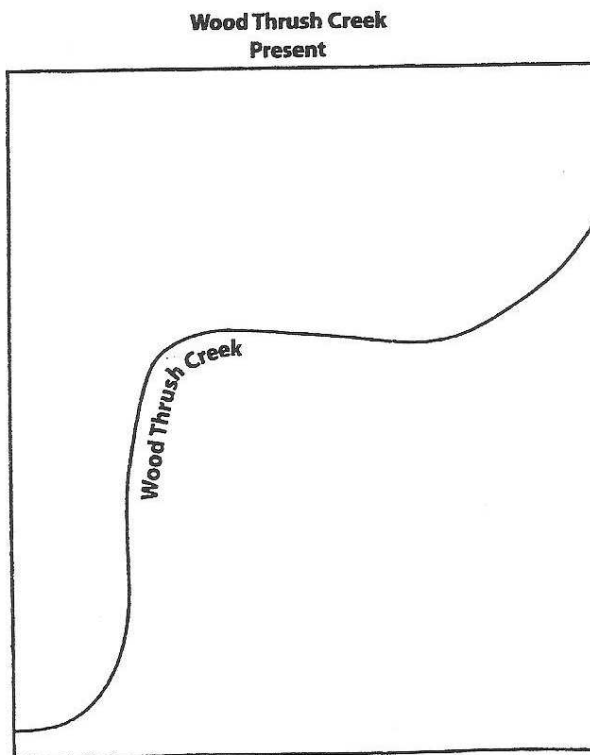
edge relative to forest interior. This process makes the wood thrush nests more susceptible to predators such as chipmunks, raccoons, blue jays, crows, and cowbirds. (The cowbird is a "brood parasite" that tends to select forest edges for reproduction and lays its eggs in other birds' nests. The "foster parents" usually raise the cowbird young at the expense of their own eggs and young.)

The Smithsonian Migratory Bird Center reports find that wood thrush nesting success is greatest in large forested areas. Success rates decline with smaller forest size as a result of increased predation on eggs and young.

Wood Thrush Creek Scenario: Present

The area around Wood Thrush Creek has been forested for many years. The area is privately owned, and Wood Thrush Creek is an excellent trout stream.

How many Wood Thrush nesting territories can be established in this wooded area?



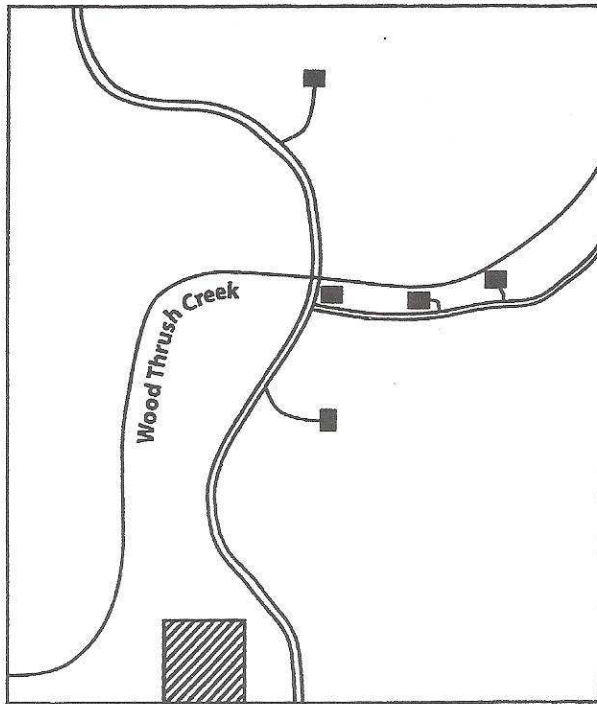
Wood Thrush Creek Scenario: A

The owner has decided to sell some of the land. The owner also established a timber sale to provide some income and forest products, which are in demand. People are moving into the area and building homes.

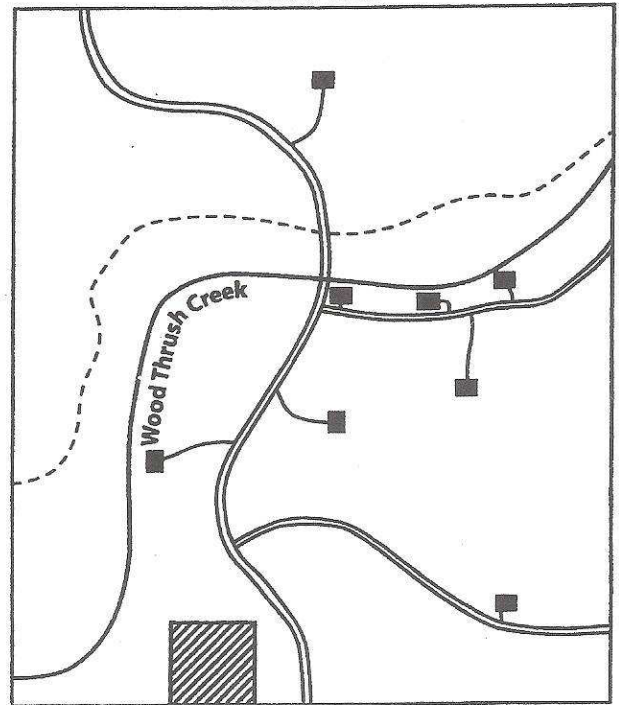
- What are the changes in Scenario A during the first 10 years?
- What are the possible reasons those changes are occurring?

- How do the changes affect the wood thrush? How many circles will still fit in the forested areas if the circles cannot cover human structures represented on the map?
- What are the changes in Scenario A after 20 years? How many circles will still fit in the forested areas?

Wood Thrush Creek
Future: 10 Years



Wood Thrush Creek
Future: 20 Years



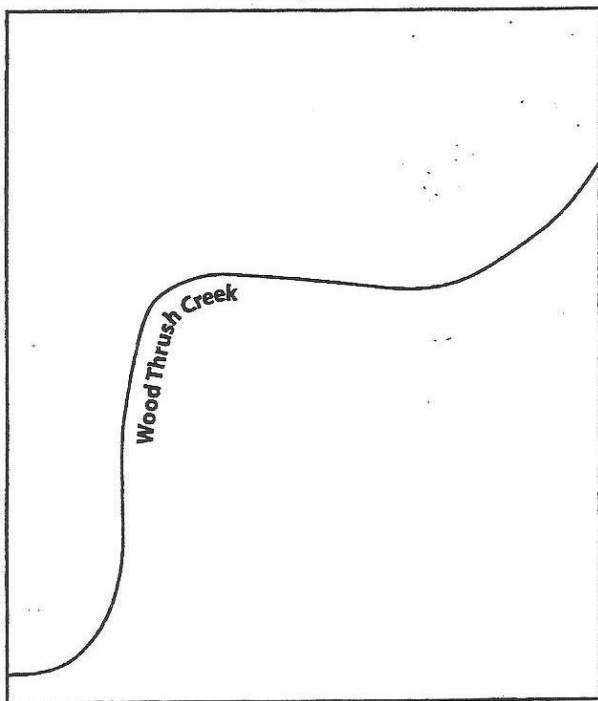
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Wood Thrush Creek Scenario: B

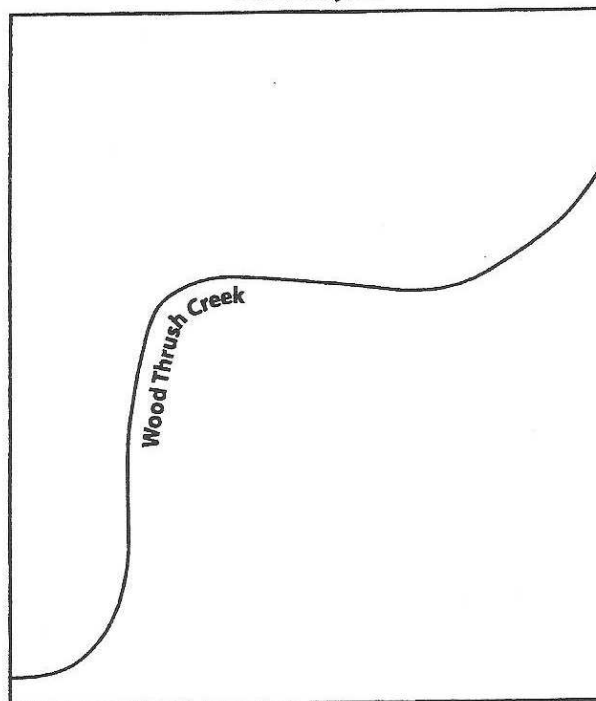
Scenario B presents a different kind of change to the area. Your group will decide where to put the houses, roads, and other developments. Use the same number of homes and a logged area as in Scenario A. Fill in the areas with your plans. Try to provide for the maximum of forested areas large enough to support nesting areas for the wood thrush. Add a 4-inch long snowmobile/ATV trail on the Future: 20 Years map.

- What decisions did your team make when mapping the development?
- How would those changes affect the wood thrush? How many nest sites did you have in the first 10 years? Second 10 years?
- How do these changes compare to those in Scenario A?

Wood Thrush Creek
Future: 10 years



Wood Thrush Creek
Future: 20 years



Paved Road



House/Driveway



Logged Area - Select Cut



Snowmobile/ATV Trail