

Land-Use Plan Design Project

Your goal in this final project is to develop a land-use design that balances the needs for human growth and development with the needs of the biotic and abiotic factors of ecosystems.

The Background: (summarized from Science in Action, 2001)

The town of Forest Grove has a population of 1200 people. The unemployment rate has been 20% for the past several years. The town council has decided to develop a piece of unused land. It hopes to attract businesses, industries, and people to Forest Grove. The piece of land has an area of 2000 hectares. (1 hectare measures 100mX100m). Because of your skills as a land-use planner, Forest Grove's town council has hired you to design a plan to develop this land.

You have been given a map of the features of the land around Forest Grove. Many different groups have ideas for how the land should be developed. You will have to decide which ideas to use, which to ignore, and which to change.

The Interest Groups: (summarized from Science in Action, 2001)

The Hospitality Company - wants to develop a camping and motel site. This complex will include a 25-unit motel, a small restaurant, a wooded camping area (about 5 hectares), a recreation centre with tennis courts, a swimming pool, and a boat-launching ramp.

The Distribution Company - wants to set up a large warehouse depot for transferring goods to and from the surrounding communities. They will need roads to get to the nearby highway.

The Housing Developers - want to build two new subdivisions for Forest Grove's growing population. The subdivisions will require roads to link them up with the existing town. They will need services like water and electricity. The people who move into the new homes will also want their garbage handled in some way.

The Businesses - will provide stores and services like restaurants, health care, a movie theatre, and a new shopping centre. Businesses will also need water, electricity and garbage handling.

The Local Farmers - There are currently 7 farms located to the west of the land you will be developing. All the farmers have expressed interest in expanding their operations. They would like some of the land set aside for them to lease or buy.

The Private Citizens - Many people in Forest Grove would like the land to be used for recreational purposes, such as parkland, with trails for walking and biking. They would also like to swim and boat on the river and in the lakes. A small group of citizens is urging you to leave the land as it is to preserve the local plant and animal populations. They are willing to consider limited use of the land for camping to attract people (and their money) to Forest Grove.

* The existing bodies of water cannot be moved.

* The existing roads cannot be moved, but new roads can be added.

The Assignment:

A. Please answer the following questions on lined paper before beginning your map.

1. How do the living things in the land around Forest Grove help the people of Forest Grove meet their basic needs? *Eg: The people in Forest Grove may rely on the trees in the forested area to help them meet their need for suitable living conditions (lumber for houses).*

2. How would each of the interest groups affect the air, water, animals, plants and land around Forest Grove. *Eg: If the farmland was increased and the farmers used DDT as a pesticide on their crops, animals could be affected as the DDT moved through the food chain.*

B. Please use the map and the markers provided to show which interest groups you will allow to develop and where they will develop.

C. Please answer the following question on lined paper **after finishing your map.**

___1. What will happen if the town council wants to add to your development plan 10 years from now?
(did you leave room or resources for growth?)

2. How did you balance the needs for human growth and development with the needs of the biotic and abiotic factors of the ecosystem?
