

Creating a Land-Use Model

Land-use plans are drawn up by planners, but they are created with the combined input of various members of a community. Along with three other people, you are meeting to plan the development of 400 acres of land for your growing city. Your team is composed of the following four members:

TEAM MEMBERS

The Planner is concerned with creating a plan that encourages the sort of growth that will attract businesses and new citizens to the area.

The Developer bought the land from the city and is interested in the right to build housing and a shopping center.

The Conservationist is interested in preserving open space and natural areas from further development.

The Law Enforcer ensures that all of the laws and regulations are met for any new development project.

OBJECTIVES

Create a simulated land-use model.

Recognize conflicts of interest that arise during a negotiation.

Analyze and draw conclusions about the effect of compromise on the desired outcome for each interested party in a land-use plan.

MATERIALS

- colored pencils
- graph paper
- pens

Procedure

1. Have each team member select one of the four jobs above.
2. Use all or part of a large piece of graph paper as your map. Mark off an area that will represent 400 square acres. Determine the approximate scale, and label the sides of your area accordingly.
3. The planner will color in the map as follows:
 - a. 40 acres will be fresh water (rivers and/or lakes) and are colored light blue.
 - b. 80 acres will be wetlands that are right next to some of the fresh water and are colored light purple or lavender.
 - c. 40 acres will be land that is too sloped for building and will be colored tan.
 - d. 240 acres is land that is good for development and will be colored light green.
4. Once the land is colored in, it cannot be altered. That will be the land you work with.

Creating a Land-Use Model *continued*

5. After the area is colored in, the group must discuss how and where to put the following items:

- a. 40 acres for a landfill
- b. 20 acres for utilities such as power plants, water treatment facilities, etc.
- c. 40 acres for parks and wildlife
- d. 20 acres for housing. Try to put the houses near a beautiful area.

e. 40 acres for shopping

f. 20 acres for anything that the group agrees to add. For example, you could add a few acres for community gardens or for sports and playing fields. The law enforcer cannot suggest anything, but if the group can't agree on what to add, the law enforcer may cast the deciding vote.

g. 40 acres of roads and bridges (you can divide an acre up so that you can build long, thin roads rather than create short, fat roads that are an entire acre thick). Make sure at least one road goes into and out of town.

6. The law enforcer should make sure that the plans abide by the planning regulations by checking the map for violations.

7. Use the key under the map to mark which areas are which. For example, an R denotes a road or bridge. Use a pencil and write in the things softly at first in case changes are to be made. You may need a second copy of the map in case you make mistakes the first time.

LAWS

At least 10 percent of each type of habitat must be preserved.
Landfills must be at least two acres away from all housing, wetlands and fresh water sites.
Roads and bridges may cross rivers and wetlands but they must go around large natural areas.
Roads must be connected to all developed areas of the city.
There must be no building over wetlands, slopes and fresh water. Only parks may partially cover these habitats and roads/bridges may cross them.

Analysis

1. **Describing Events** Did everyone on your team agree on the plan, or were there conflicts of interest? Explain.

Creating a Land-Use Model *continued*

2. Describing Events Were you able to get everything your team wanted into the plan or did it face any problems? Describe what happened.

3. Identifying Patterns How did the features of the land constrain the plan that you made? Did you encounter any problems?

Conclusions

4. Evaluating Results Does the plan your group created meet the needs of all of the group members? Does it allow for development while preserving the environment?

Creating a Land-Use Model *continued*

5. Evaluating Models How do you think this land planning “simulation” compares to the real-life process of land-use planning?

Extension

1. Research and Communications Look in the newspaper or on the Internet for a story about a land-use debate in your area. Identify the different members involved. Role-play with your team to see what forces will bear on this controversy.