

Trade-Offs and Decision Making: Should Cooper's Point Be Developed?

Guidance for the Teacher

INTRODUCTION

The development of land in a municipality often involves complex economic and environmental trade-offs. In this simulation, students take part in an activity in which those trade-offs become real as students try to improve a development plan submitted to a county's zoning board. In dealing with objections to the original plan, students will need to consider the scarcity of the land available for building, trade-offs of various plans, and the role of government in the economy. Students will also have to think at the margin to determine how much of each type of housing to build. Students' projects are evaluated by rubrics, which the teacher can use to keep students focused on their task.

The fictional Cooper's Point consists of 25,000 acres of prime beachfront property that are currently undeveloped. The property is put up for sale. A development company, Ronen Corporation, purchases an option to buy it with the contingency that the county's zoning board approve the development plan. The board rejects the plan. Working in groups, students must formulate a new plan that the board can approve. This activity should take about three class periods.

Materials for this simulation include a description of Cooper's Point, a topographic map of Cooper's Point, Ronen Corporation's development plan for Cooper's Point, the county zoning board's rejection notice of Ronen's plan, an outline map of Cooper's Point, and a rubric for evaluating student projects.

PROCEDURE

1. Distribute the description of Cooper's Point (Student Handout 1) and the topographic map and Ronen Corporation's development plan (Student Handout 2). With the class, read and discuss both handouts.
2. Explain that the county zoning board has the power to approve or reject any development plan. Show students the board's rejection notice (Student Handout 3); point out the cost information provided in the footnote.
3. Organize the class into small groups of students and explain that students should put themselves in the position of consultants to the Ronen Corporation. Their task is to modify the rejected plan so that it can be approved by the zoning board. Distribute copies of the rubric (Student Handout 4) and the outline map of Cooper's Point (Student Handout 5). Students can sketch

out their rough plans right on the outline map. Their final plans should be submitted on poster board and accompanied by a written report that explains how the modified plan addresses the objections of the board and how the plan provides economic and environmental benefits to the county, as well as the required level of profits to Ronen Corporation.

4. Have students present their development plans to the class. Discuss the pros and cons of each plan. Evaluate all plans against the rubric.

Debriefing the students. Discuss the reasons for the various restrictions on development, such as those regarding wetlands and endangered species. Stress the concepts of scarcity, trade-offs, opportunity cost, thinking at the margin, and government regulation in a mixed economy.

Trade-Offs and Decision Making—Student Handout 1

Cooper's Point: A Description

The choicest development property in the state has just been put up for sale. Cooper's Point consists of approximately 25,000 acres of beachfront, mixed hardwood and evergreen forest, marshland, and ponds. The property also has about six miles of frontage on Route 101, putting it within easy commuting distance of the city.

The current availability of such a large tract is something of an accident of history. The property was once owned by Archie Cooper, a lumber baron who bought the land so that he could cut the trees and mill them into lumber. As a matter of fact, Cooper's Point once had a sawmill. There was also a facility for the production of creosote, a flammable, oily liquid used as a wood preservative. The land was covered by a network of logging roads. The mill, the creosote plant, and the roads have all been abandoned. Once the trees were cut down, Cooper moved his main operations about 50 miles inland.

Archie Cooper never had any children. After his death in 1899, his property was inherited by his brother, two sisters, and several nieces and nephews. The descendants of the original inheritors now number 175, none of whom owns more than two percent of the estate. The property became a burden to the heirs, who began arguing over what to do with it. Meanwhile, taxes continued to increase. No plan of division could be worked out because beachfront parcels were so much more valuable than the rest. No one heir could afford to buy out all the others. Finally, in an almost miraculous development, the heirs unanimously decided it was time to sell. They put only one condition on the sale: They would sell no individual parcels. It would have to be a sale of the entire tract, or nothing at all.

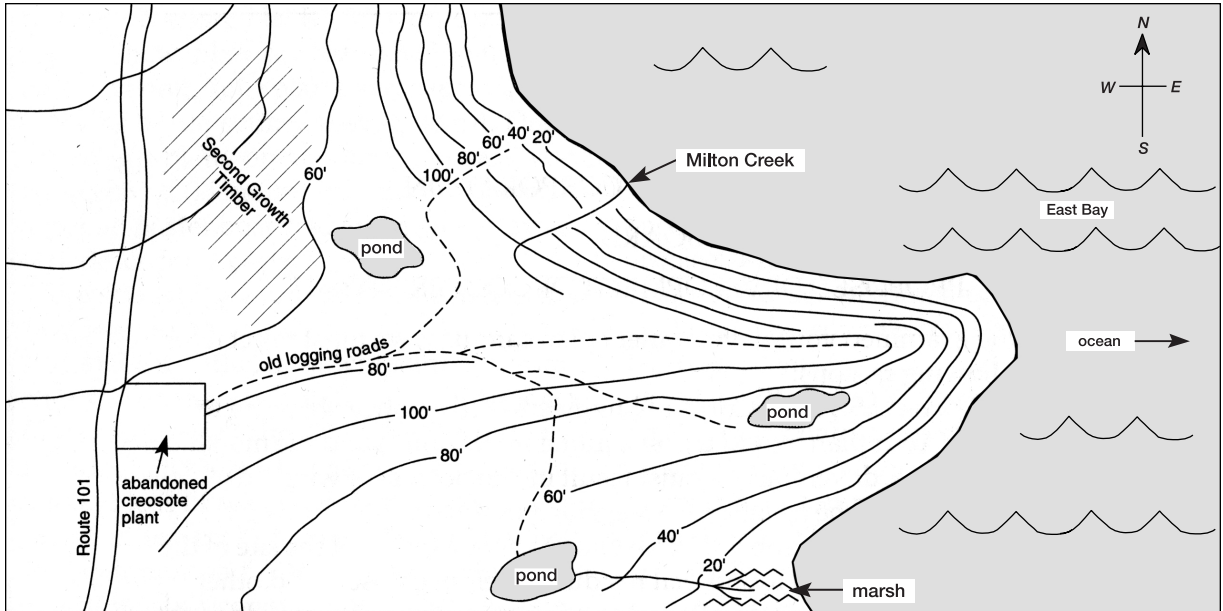
The Ronen Corporation paid \$500,000 for a one-year option to buy the property. Ronen is a reputable developer of resort properties in Florida, California, and Texas. It has the resources and expertise to turn Cooper's Point into a world-class development that would dramatically increase annual tax revenues to the county. Ronen has one year to get a development plan approved by the county zoning board. If it succeeds, it will exercise its option and buy Cooper's Point. If it fails, it will have spent \$500,000 for nothing.

The current plan calls for 90 houses on two-acre lots, 340 townhouses that each require one acre for building plus parking areas, and 100 apartments that each require a half acre of land for building and parking. The corporation plan estimates a profit of \$30,000 per house, \$20,000 per townhouse, and \$10,000 per apartment. These profit figures, totaling \$10.5 million, take into account all public facilities in the current plan.

Ronen Corporation will not develop the land if profits are estimated at less than \$7.5 million. Depending on the combination of houses, townhouses, and apartments, this level of profit requires building 380 to 390 dwellings at Cooper's Point.

Trade-Offs and Decision Making—Student Handout 2

Cooper's Point: Topography



Cooper's Point: Ronen Development Plan



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Trade-Offs and Decision Making—Student Handout 3**County Zoning Board Rejection Notice**

TO: RONEN DEVELOPMENT CORPORATION
FROM: COUNTY ZONING BOARD
RE: PROPOSED DEVELOPMENT OF COOPER'S POINT

Having examined your development plan carefully, we must reject it for the following reasons:

1. The US Army Corps of Engineers filed a notice objecting to your plan. Your plan would involve filling in the ponds and the marsh. By federal law, development must result in “no net loss of wetlands.” This alone would be grounds for rejecting your plan.
2. The Environmental Protection Agency examined the site of the old creosote plant and found that residual levels of creosote and other preservatives exceeded the allowable maximum. Your proposal does not include a plan to mitigate problems stemming from the creosote plant.*
3. The State Board of Insurance has examined your plan and found that approximately 100 building lots** in the southern quadrant of your proposed development are in the path of hurricanes. The board will not allow insurance companies to write policies on homes built on those lots.
4. The State Wildlife Authority has conducted a biological survey of Cooper's Point. Two species of lily now on the “threatened” list grow in the margins of the marsh. The wildlife authority objects to development on those grounds.
5. The State Water Board maintains that your proposed wastewater treatment facility is too small to serve the projected population of Cooper's Point.* The board also objects to the ratio of developed to undeveloped land in your plan. Board members contend that the total acreage of golf courses and lawns will create problems with pesticides and fertilizer runoff, which your plan does not address.*
6. The local Office of Emergency Management objects to the single entrance to Cooper's Point. In the event that a hurricane required evacuation, the lack of multiple exits could have tragic results.*

* The estimated cost of clean-up for the creosote plant is \$30,000. The wastewater treatment facility could be expanded to satisfy the concerns of the State Water Board for about \$50,000, with proper run-off control adding another \$20,000 to the bill. The entrance in the current plan for Cooper's Point will cost an estimated \$35,000 (already taken into account for profit purposes); a second entrance would cost about the same amount.

** The current plan shows 27 houses, 22 apartments, and 51 townhouses on these lots.

Trade-Offs and Decision Making—Student Handout 4

Evaluation Rubric

You have been hired by Ronen Corporation to devise a new plan for the development of Cooper's Point. Your plan must overcome the objections of the county zoning board. Draw your rough plans on the outline maps you have received (Student Handout 5). Submit your final project on poster board, accompanied by a descriptive paper.

Projects will be evaluated according to the following rubric:

A **SUPERIOR** project will address all objections in the rejection notice. It will have no residences in areas subject to flooding. It will have adequate exits for evacuation. There will be no net loss of wetlands. The plan will include a total of at least 380 to 390 house lots, apartments, and town-houses so that the project will be economically viable with minimum estimated profits of \$7.5 million. At least one third of the timbered lands will remain intact and the site of the creosote plant will undergo environmental cleanup prior to commercial use.

A superior project will also be visually attractive. It will be neatly done, colorful, and easy to interpret. The written work will describe how the modified plan addresses each objection and how it provides economic and environmental benefits to the county, as well as the required level of profits to Ronen Corporation. The report will be thorough and grammatically correct. Spelling will be accurate.

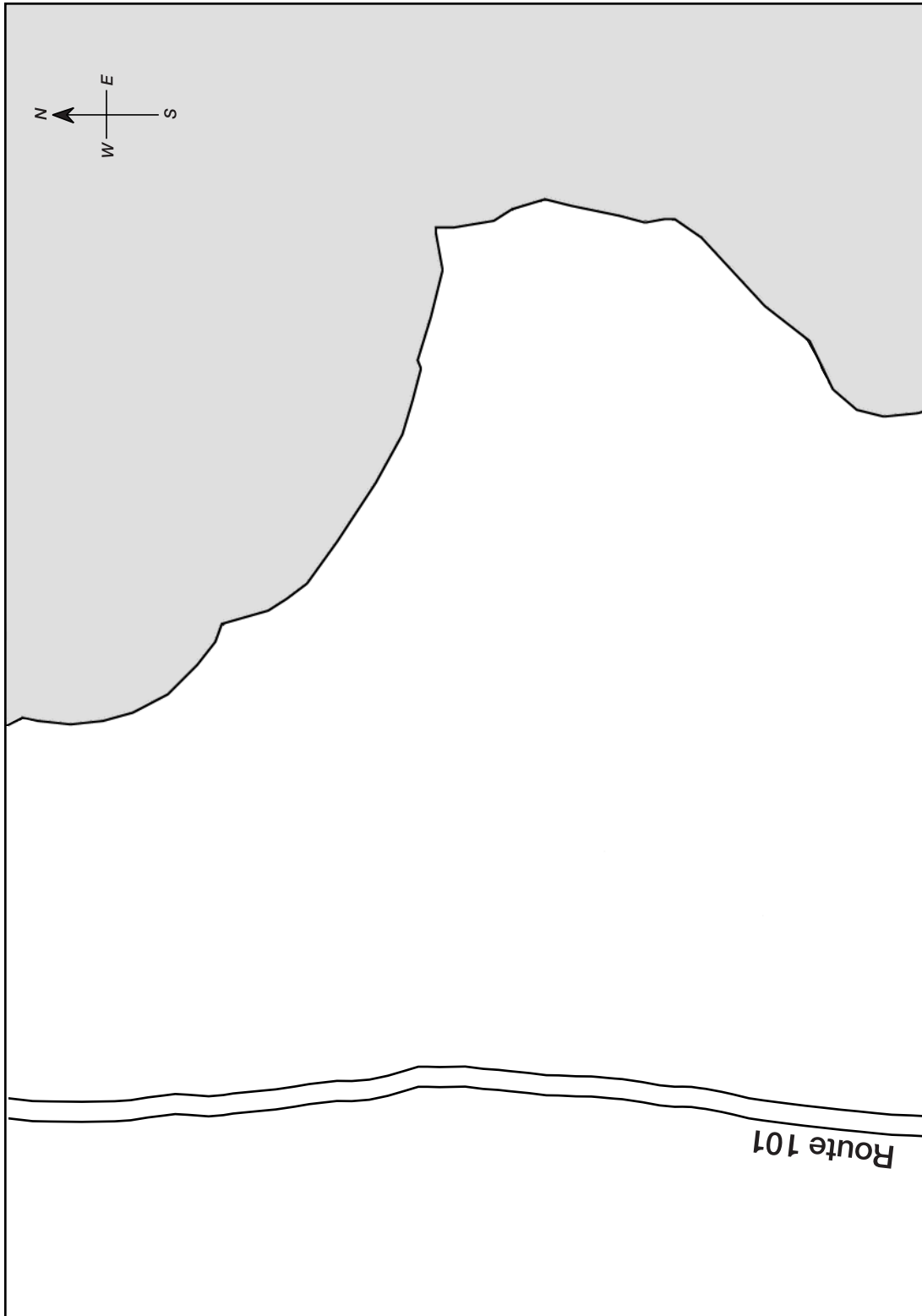
A **GOOD** project will satisfy at least 80 percent of the objections in the rejection notice. It will preserve all wetlands and substantial forest, and it will strike a reasonable balance between preservation of the natural beauty of Cooper's Point and the economic necessity of building at least 380 to 390 residences and providing minimum estimated profits of \$7.5 million. A good project will employ color and appropriate map symbols. The written work will meet reasonable standards of completeness and care.

A **FAIR** project will satisfy approximately half of the board's objections. It may include some impractical or contradictory remedies. There may be minor mistakes on the map and in the written materials. Physical presentation will be inferior.

A **POOR** project will be marked by an impractical design and lack of attention to the board's objections. It will show little effort to confront the complex environmental and economic trade-offs involved.

Trade-Offs and Decision Making—Student Handout 5

Cooper's Point: Outline Map



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