



Lesson 9: The Cost of Community Services:

Does Development Really Pay?

Objectives:

Students will be able to:

- Identify the types of services that are provided to citizens by a County/local government.
- Evaluate the tax revenue versus the costs of delivering services to different types of development.
- Use current data to evaluate whether a development will make or cost the County taxpayer dollars.
- Evaluate the advantages of spatial relations to delivery of services.

Core Learning Goals:

Social Studies: Goal 4 - Economics: The student will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers.

Expectation 4.1: The student will demonstrate an understanding of economic principles, institutions, and processes required to formulate government policy

Materials/Resources:

- [Student Handout: Cost of Community Services Fact Sheet](#)
- Calculator
- Index Cards (for Activity 2)

Background:

Communities make very important decisions on how they want to grow. Part of this decision involves looking at reliable information on the advantages and disadvantages of possible land uses. A Cost of Community Services Study is an inexpensive way to evaluate the economic contributions of open space, farmland, and residential and commercial development. These studies help communities



evaluate the costs of different combinations of land uses, and balance goals such as maintaining affordable housing, creating jobs, and conserving land and resources.



Unplanned development can also cause a community many unintended problems such as traffic congestion, loss of farmland and natural resources, air pollution and increased demand for public services such as new schools, roads, water, and libraries. While growth may need to occur in a given area, there are many factors such as density and design that may save the community money in public services.

Activity 1: Which Development Pays?

Have students read the attached fact sheet on the Cost of Community Services.

As a class, compile a list of all community services needed for a functioning community. Services may include: police, fire, hospital, schools, trash removal, water treatment, recycling, etc. Discuss how services are paid for within a community through local property taxes and user fees (e.g. for trash pickup or park admission). When community costs rise, they must be paid for by local residents in taxes and fees.



Look at the cost of community services data provided by the American Farmland Trust. Discuss:

- Which neighborhoods cost their county the most money? Why?
- Why do different communities have different costs for community services? What kind of neighborhood layout would make the county the most money? Is that feasible? What effect does converting natural resources and farmland to other land uses have on costs to the counties?
- What other land use or community design factors might affect the cost of services?
- Why does the American Farmland Trust collect this data?

Have students calculate the cost of services ratio for given development scenarios:

Example: Two neighborhoods are each 500 acres in size. Using the data provided, calculate how much the 500 acres costs each neighborhood to provide services. Assume that the tax rate for all land is \$1 for each acre, so each neighborhood generates \$500 in revenue. This example uses actual data collected by Frederick County on the costs of services for different land uses. How would the figures be different if the same development occurred in Carroll or Cecil County?

Ratio of Revenue Generated to Costs of Services in Dollars:

| County | Residential including farm houses | Combined Commercial & Industrial | Farm/ Forest/ Open Space |
|-----------|-----------------------------------|----------------------------------|--------------------------|
| Carroll | 1:1.15 | 1:0.48 | 1:0.45 |
| Cecil | 1:1.12 | 1:0.28 | 1:0.37 |
| Frederick | 1:1.14 | 1:0.50 | 1:0.53 |

Source: Carroll County Department of Management & Budget, 1994, Cecil County Office of Economic Development, 1994, American Farmland Trust, 1997

Neighborhood A: 400 acres of development occurred this year, of which all were residential. One hundred acres remained in farmland and open space.

Neighborhood B: 200 acres of development occurred this year: 125 acres were residential, 75 acres were commercial, and 300 acres remained in farmland and open space.

Neighborhood A: Cost of Services

| | |
|--|------------|
| 400 ac. Residential Development x \$1.14 | \$456 |
| <u>100 ac. Farmland and forest x .53</u> | <u>53</u> |
| Cost of Services | \$509 |
| Total Revenue | \$500 |
| <u>- Cost of Services</u> | <u>509</u> |
| | \$ -9 |

Percent of Tax Revenue spent on community services: $509/500 = 101.8\%$

Note: THIS COSTS THE COUNTY MORE IN SERVICES THAN IT TAKES IN FOR TAXES

Neighborhood B: Cost of Services

| | |
|--|------------|
| 125 ac. Residential Development x \$1.14 | \$142.5 |
| 75 ac. Commercial Development x .50 | 37.5 |
| <u>300 ac. Farmland and forest x .53</u> | <u>159</u> |
| Cost of Services | \$339 |
| Total Revenue | \$500 |
| <u>- Cost of Services</u> | <u>339</u> |
| | \$161 |

Percent of Tax Revenue spent on community services: $339/500 = 67.8\%$

Note: THIS COUNTY TAKES IN MORE IN REVENUES THAN IT COSTS TO PROVIDE

SERVICES

Activity 2: Mailman Relay

Ask students to hypothesize how they think neighborhood design might affect the delivery of services (e.g., trash pickup). Discuss element such as the proximity of houses to each other, the design of streets (e.g., through streets vs. cul-de-sacs), a grid layout vs. a random or linear design, and other features.

Divide the classroom into three groups (neighborhoods) of the same size. The first group of students' chairs/desks should be organized in a small tight circle, the second group of students should be in an unorganized loosely grouped bunch, the third group should be organized in a single file line with large spaces in between. Two to four students from each group will be designated as the service delivery people (runners). The runners should have one index card for every student in their group.

The relay race begins with a mail carrier delivering an index card (mail) to each student in his or her own neighborhood. When this is completed, a second student will deliver an index card (a newspaper) to each student in his or her own neighborhood. When this is completed, a runner (school bus driver) must then pick up a card (student) from each person in the neighborhood, followed by the garbage/recycling runner who must pick up the final index card. Runners cannot begin until the previous runner has delivered or picked up their service.

After students have completed the exercise discuss:

- How did the design of the neighborhood affect service delivery?
- What could communities do through design to lower service costs?
- What issues does your community face in providing services to current and future residents?

Extending the Lesson:

What issues in your community could be informed by a cost of services data? Contact your local planning office to find out how local officials estimate costs and revenues from planned development.

[Contents](#) | [The Cost of Community Services](#) | [Student Handout: Cost of Community Services Fact Sheet](#)

[Previous Lesson](#) | [Next Lesson](#)

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