

A tale of two cornfields

Since 1990, Boulder County's population has grown by 35,000 people -- the equivalent of the populations of Louisville and Lafayette combined.

One way of balancing the impacts of growth is through open space purchases. An important goal of the Boulder County open space program is to preserve the quality of life of county residents. This means not only protecting wildlife habitat, but also using open space as a means to shape urban development, create buffers between communities and preserve agricultural lands.

But buying open space also makes economic sense. Preserving land for open space costs money, and Boulder County taxpayers have voted in support of spending public funds on these purchases. Residential development also is costly to county taxpayers. It requires public investment in capital, such as schools, roads, utility lines, electrical power generating capacity, libraries and recreational facilities, as well as ongoing public services, such as fire, police and emergency services, snow and ice removal, and the like. Even when local governments collect fees on new development, such revenues do not come close to covering the costs of the needed new facilities, particularly ones that are required outside the city or town where the growth takes place.

A recent national study by Washington D.C.-based Carrying Capacity Network estimates these kinds of infrastructure costs at \$10,200 per new resident in the Boulder/Longmont area. This compares to \$8,000 per new resident in Colorado Springs, \$8,500 in Denver and \$9,200 in Fort Collins/Loveland.

The specific components of these costs are not always easy to quantify. However, one variable of the equation, public schools, is relatively straightforward. Since the school districts in Boulder County are all at or near capacity, it is clear that development will require new schools.

The following example illustrates the relative taxpayer costs of open space compared to the school costs and estimated overall infrastructure costs associated with residential development. This is the "tale of two cornfields".

Photo by Rich Koopmann

Preserving agricultural land is a focus of the Boulder County open space program. This field is located on open space near Gunbarrel Ridge.

| Cost incurred | Per acre cost | Total cost |
|--|---------------|----------------|
| Infrastructure costs for 160-acre single family development at four units per acre | \$102,000 | \$16.3 million |
| School costs for 160-acre single family development at four units per acre | \$40,000 | \$6.47 million |
| Open space purchase of 155-acre farm with water and mineral rights | \$5,625 | \$871,000 |

"This little cornfield went to market."

The first cornfield is a 160-acre farm that was annexed to a Boulder County city and developed at a density of four units per acre. This low-density residential development creates 640 new homes and adds about 1,600 new residents, at an average of 2.52 persons per household. It generates 6,400 new automobile trips per day on the local roads.

Using the \$10,200 infrastructure costs per new resident, the new facilities needed to serve this development would cost about \$16.3 million. As one part of those costs, the public schools will gain more than 400 new students. According to the St. Vrain School District formula on student yields for single family residential development, the development will add 224 new elementary school students, 90 new middle school students, and 109 high school students. This represents 40 percent of the students required to build a new elementary school, 12 percent of a new middle school, and 9 percent of a new high school. The percentage share of constructing these new schools, based on St. Vrain School District's estimated construction costs, is about \$6.47 million, or more than \$40,000 an acre.

The infrastructure required by developing this cornfield could cost \$102,000 per acre, with \$40,000 an acre going to schools alone.

"This little cornfield stayed home."

The second example is a 155-acre farm near a lake in the northeast part of the county. Consisting of prime irrigated cropland and dryland, this farm is designated as land of national and state agricultural significance. Historically, it has produced winter wheat, summer wheat and corn.

In 1996, Boulder County purchased the farm for about \$5,625 per acre including water and mineral rights, for a total of about \$871,000. The farm will continue to produce crops, and the county will receive revenue from agricultural leases.

Preserving this cornfield cost taxpayers \$5,625 an acre.

The lesson?

There is a cost to the public for any change in the status of a property, whether by open space purchase or by development. Infrastructure costs of developing the farmland could be almost 19 times more expensive than buying the land outright as open space. Ultimately, the citizens of Boulder County decide whether they want to spend more tax revenue on open space or on the new facilities required by development.

