TOWN OF COLCHESTER

FISCAL VALUE OF LAND USE

FUNDED BY

CT DEPARTMENT OF AGRICULTURE AG-VIABILITY GRANT

Cost of Community Services Study
Build-out Analysis
Fiscal Impact Projection

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The Cost of Community Services Study is a tool used to demonstrate the cost to provide town services on a land use basis. The American Farm Land Trust developed the model 30 years ago, since then it has been used across the country to evaluate the differences between revenue generated and services required by specific land uses.

A **Build-Out Analysis** estimates the potential future development based on the amount of undeveloped land, site development limitations and zoning regulations.

Fiscal Impact Analysis studies how future development might impact the town's Mill Rate.

COST OF COMMUNITY SERVICES STUDY

Cost of Community Services Studies (COCS) are case studies that use a consistent methodology to determine the fiscal contribution of current land uses of a particular town. Because the methodology is consistent, COCS Studies can be compared to other towns. A COCS Study is a snapshot in time, for Colchester the snapshot is of fiscal year 2012-2013, and analyzes revenues and expenditures for each type of land use. A COCS Study provides a baseline of current information and a tool for comparison. The results of the Colchester COCS Study will be used with the results of the Colchester Build Out Analysis for a Future Fiscal Analysis.

METHODOLOGY

For this COCS Study Colchester's budget and other financial data for the 2012-2013 fiscal year was analyzed along with the Colchester Grand List of 10/1/11, the basis for determining Colchester's Mill Rate for 2012-2013. The Study focused on the amount needed to be raised by local taxes on property assessed (real estate, motor vehicles and personal property) to support the town services used. The findings are in the form of ratios that compare Colchester's 2012-2013 budgeted revenue to the budgeted expenditures allocated over Colchester's unique mix of land uses.

The basic steps of the study are:

1. Collect budget data for Colchester's 2012-2013 revenues and expenditures,
2. Determine the major land use categories in Colchester,
3. Allocate the full taxable Grand List by each land use category,
4. Allocate the town's revenues and expenditures by each land use category,
5. Analyze the data and calculate the revenue-to-expenditure ratios for each land use category.

For Colchester's Study, the data collected included the Fiscal Year 7/1/12 to 6/30/13 approved budget by department and category, debt payment schedule, detailed real estate assessment for 6386 properties, motor vehicles by assessment category and personal property by assessment category.

After reviewing the Grand List, it was determined that this Study will use the same major land use categories as the majority of other communities across the country. The categories are:

Residential: Single- and multi-family residences, condominiums, apartment buildings, and rental units and the people that inhabit them.

Commercial/Industrial: Businesses (such as retail, service and restaurants), manufacturers, industrial uses and utilities.

Open Space/Farm/Vacant: Undeveloped parcels, forestland, farmland and land zoned residential or commercial and assessed as excess land.

GRAND LIST ALLOCATION BY LAND USE CATEGORY

Colchester's Assessor's 10/1/11 Grand List was analyzed and properties allocated by the type of land uses per the assessor's database. The following summarizes the results of the analysis. The grand total of taxable properties is $1,186,104,840 as shown on the Mill Rate Calculation page of the budget document and used to determine the Mill Rate of 28.80 for the fiscal year 2012-2013.

Table 1
Town of Colchester
Grand List Data

	Residential	Commercial Industrial	Open Space Farm/Vacant	Total
Taxable Property:				
RE : Residences	870,216,010			870,216,010
less exemptions	(1,448,005)			(1,448,005)
RE: Commercial		117,725,670		117,725,670
RE: Open Space, Farm, Vacant			34,803,750	34,803,750
Motor Vehicles - by code	94,441,230	20,668,760	279,300	115,389,290
Personal Property - by code	978,020	33,274,075	3,666,030	37,918,125
Motor Vehicle supplement - by code %	10,803,639	2,364,410	31,951	13,200,000
Budgeted Prorates and BAA adjustments - by %	(1,395,420)	(249,077)	(55,503)	(1,700,000)
Total	973,595,474	173,783,838	38,725,528	1,186,104,840

BUDGET AND REVENUE ALLOCATIONS BY LAND USE CATEGORY

Each of Colchester's budgeted revenue and expenditure line items were allocated to the same three land use categories as the Grand List allocation. Each budget allocation was based on the 2012-2013 approved budget line item by line item for both revenues and expenditures. For example, the revenue items for a library grant and library fines and fees were allocated at 100% to the residential land use as was the budgeted expense for Cragin Library. Real estate tax revenue was allocated according to the Grand List Data shown above times the Mill Rate of 28.80. Certain revenues and expenditures were allocated by the percentage of each land use category to the total grand list.

Colchester's expenditure budget for 2012-2013 was $50,281,526 offset by an equal amount of revenues from local taxes, intergovernmental sources, fees, interest and other revenues. The summary of the Study is shown in Table 2 on the following page.

Table 2
Town of Colchester
Summary - Cost of Community Services
Based on 2012-2013 FY Budget

	2012-2013 Budget Total	Residential	Commercial Industrial	Open Space Farm/Vacant
Grand List	1,186,104,840	973,595,474	173,783,838	38,725,528
Revenue				
Real Estate Tax Revenue	28,853,792	23,684,181	4,227,554	942,057
Personal Property Tax Revenue	1,092,042	0	1,004,679	87,363
Other Taxes	4,266,649	3,493,711	743,792	29,146
Total Tax Revenue	34,212,483	27,177,892	5,976,025	1,058,566
Intergovernmental Revenues	14,889,100	14,760,386	116,937	11,777
Local Revenue	1,120,829	896,641	190452	33736
Other Revenues	59,114	46,959	10,326	1,829
Total General Fund Revenue	50,281,526	42,881,878	6,293,740	1,105,908
Town Government Expenditures				
General Government	3,266,599	2,785,872	408,880	71,847
Public Safety	2,211,618	1,886,147	276,828	48,643
Public Works	3,271,201	2,789,797	409,456	71,948
Community & Human Services	1,385,631	1,385,631	-0-	-0-
Capital Projects & Debt Pmts	2,622,317	2,580,847	35,272	6,198
	12,757,366	11,428,294	1,130,436	198,636
Board of Education	37,524,160	37,524,160	-0-	-0-
Total General Fund Expenditures	50,281,526	48,952,454	1,130,436	198,636
Total Revenue	50,281,526	42,881,878	6,293,740	1,105,908
Total Expenditure	50,281,526	48,952,454	1,130,436	198,636
Cost of Services Used for every $1 Paid in Taxes		**1.14**	**0.18**	**0.18**

COST OF COMMUNITY SERVICES STUDY SUMMARY

The results of the Study show that for every $1 paid by a residential use, $1.14 is used in services, meaning that residential properties do not provide sufficient revenue to support the cost of services provided to them. The results for the other two land use categories both indicate that for every $1 paid by those uses, only 18 cents is needed for their services. Table 3 below shows the results of this study for Colchester, and Table 4 shows the results from similar studies in Connecticut.

Colchester Cost of Community Services Study

The dollar cost of services for every dollar paid in local taxes

	Residential	Commercial Industrial	Open Space Farm/Vacant
Colchester 12-13	**1.14**	**.18**	**.18**

Table 3. Cost of Community Services Study shows the amount of services provided to each land use category for every $1.00 paid in local taxes. These results indicate that as land use shifts from undeveloped to residential use, the demand for services increases. This increased demand will result in an increased Mill Rate.

Other Connecticut COCS Studies

The dollar cost of services for every dollar paid in local taxes

	Residential	Commercial Industrial	Open Space Farm/Vacant
Bolton (1)	**1.05**	**.23**	**.50**
Brooklyn (3)	**1.09**	**.17**	**.30**
Coventry (3)	**1.06**	**.25**	**.25**
Durham (2)	**1.07**	**.27**	**.23**
Farmington (2)	**1.33**	**.32**	**.31**
Lebanon (3)	**1.12**	**.16**	**.17**
Litchfield	**1.11**	**.34**	**.34**
Pomfret (2)	**1.06**	**.27**	**.86**
Windham (3)	**1.15**	**.24**	**.19**

(1) Geisler; (2) SNE Forest Consortium; (3)Stahl

Table 4. Cost of Community Services Studies for other Connecticut towns parallels Colchester's results and shows that the more developed towns have increased demand for services from residential properties.

Although counterintuitive, development over time may not bring lower taxes. There is an immediate increase in tax revenue, but gradually the demand for increased services, and the need to upgrade infrastructure, increases expenditures to an amount that exceeds the increased revenue, resulting in an increasing Mill Rate. Even new commercial and industrial development can trigger an increase in residential development, require additional infrastructure, increase traffic, and have other impacts that can contribute to an increased cost of services also resulting in an increasing Mill Rate.

BUILD-OUT ANALYSIS

A Build-Out Analysis estimates the maximum development possible in a community. This study is based on Colchester's land use as determined by the Town Assessor. A Build-Out Analysis isn't an attempt to forecast what will happen, but rather what is possible under current land use regulations. For this analysis, the proposed Colchester Zoning Regulations, district boundaries and minimum lot size was used.

METHODOLOGY

The first step in estimating the amount of additional development possible is to determine how the land is currently used. Second, the average percentage of town-wide site limitations is calculated. Third, the parcels with the greatest potential for development are identified. Lastly, the build-out is calculated.

PARCEL INFORMATION

Once a year the Town Assessor develops a Grand List of all the properties within Colchester, the Grand List for 10/1/11 was used for this study. By using the Assessor's data along with the parcel map and on-line parcel information, a current use for each parcel was determined. Each parcel was then categorized by current use and acreage. Table 5 is a summary of all the parcels on the Assessor's database. According to that database, Colchester is currently divided into 6,386 parcels totaling 29,399 acres. According to GIS calculations, the total area within the town borders is 31,561 acres. The variance appears primarily to be attributed to state roads not on the Assessor database.

Table 5
Town of Colchester
Summary of Current Land Use

Current Use Category	Number of Lots	Total Acres	Average Acres
Residential Use			
Condos and mobile homes	570	296.8	
Less than or equal to 1 acre	1,511	860.0	0.6
Greater than 1 acre less than 2 acres	1,690	2,466.9	1.5
Greater than 2 acres less than 5 acres	953	2,962.0	3.1
Greater than 5 acres less than 20 acres	392	3,521.0	9.0
Greater than 20 acres	95	4,425.2	46.6
	5,211	14,531.9	
Commercial Use			
Less than or equal to 5 acres	181	225.0	1.2
Greater than 5 acres less than 10 acres	14	102.0	7.3
Industrial & Public Utility	27	102.0	3.8
Greater than 10 acres	14	378.7	27.1
Primarily undeveloped, zoned residential	6	496.3	82.7
	242	1,304.0	
State/Municipal/Institution/Other			
State of Connecticut	53	3,532.4	66.6
Colchester	93	1,180.7	12.7
Religious Org / Cemetery	16	85.4	5.3
Land Trust	4	61.5	15.4
City of Norwich	10	1,145.5	114.6
Other Non-Profit	12	24.1	2.0
	188	6,029.6	
Undeveloped Parcels			
Residential < .15	49	5.0	
Residential < 2	328	342.1	1.0
Residential > 2 ac < 4ac	84	233.9	2.8
Residential > 4 ac	132	2,080.7	15.8
Commercial and Industrial	44	227.9	5.2
Agriculture and forest (may incl. res.)	108	4,643.9	43.0
	745	7,533.5	
Total per Assessor Database	6,386	29,399.0	

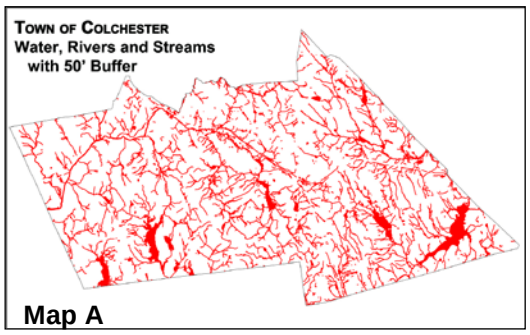
SITE LIMITATIONS

The next step was to analyze the town's soils for conditions that would restrict development. In Colchester, the town's regulations prohibit building on wetland soils, or steep slopes, and inland wetlands review is required for any development proposed within 100' of a stream or waterbody and within 75' any wetland soils.

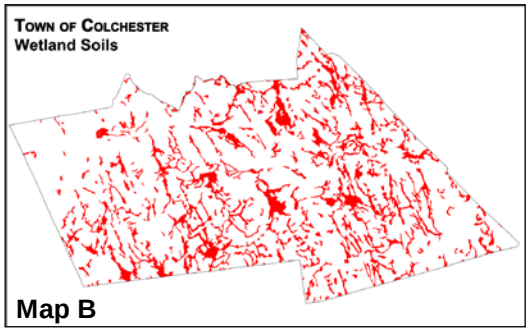
By analyzing Colchester's GIS information, the site limitations for building can be determined. The USGS Soil Survey data defines soils by various categories including water, hydric or wetland soils, and also by the degree of slope.

You can't build in water. Map A shows in red the amount and locations of soils classed as lakes, ponds, rivers and streams with a 50' buffer used for this analysis. Regulations stipulate that you cannot build in wetland soils, the USGS Soil Survey refers to these as Hydric Soils and they are shown in Map B. The USGS Soil Survey classifies soil type by slope as well; Map C shows steep slope that are 15% or greater. Map D summarizes the town-wide site development limitations.

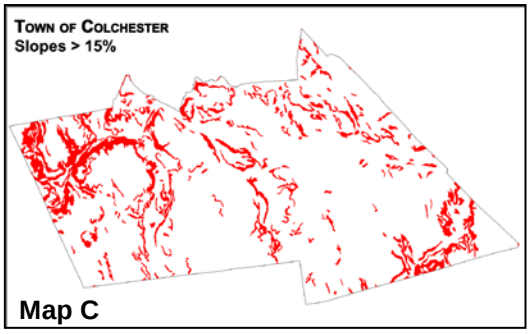
Of the 31,561 acres in Colchester, there is a town-wide average site limitation of 38.4% that will limit future development. Much of Colchester was developed long before these regulations were in place, so some of these 'unbuildable' areas have actually been built upon. See Table 6 for the site limitations in acres.



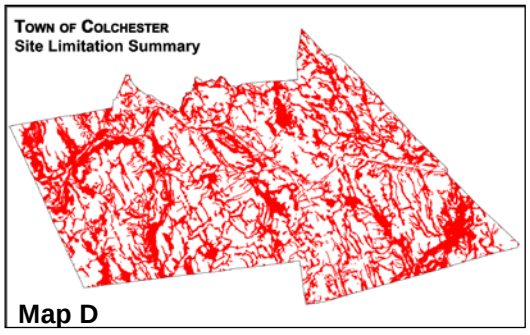
Map A



Map B



Map C



Map D

Table 6
Town of Colchester
Site Limitations Town-wide

Total Acres		31,561
Site limitation (in acres):		
Slopes > 15%	4,092	
Water, Streams and Rivers plus 50' as a buffer	981	
Wetlands plus 37.5' as buffer	7,052	
Total Acres with limitations		12,125
average site limitations town-wide		38.4%

Source: GIS soil data layer by classification as of 12/11/12

PARCELS WITH POTENTIAL FUTURE DEVELOPMENT

Currently the primary land use in Colchester is residential; this build-out analysis will focus on the potential for additional residential development in the town. This step in the analysis involves reviewing parcels and codes on the Assessor's database (see Table 5) to determine, based on lot size, which have a potential to be developed. The resulting list was then categorized by current use and parcel size.

Table 7 summarizes the land, by category, which was considered potentially developable. These 1,134 parcels totaling 15,605 acres (49% of the town) were then be used in the build-out calculations.

Undeveloped parcels. There are 319 undeveloped residential lots that might not meet the proposed minimum lot size, but would be considered 'lots of record' and potentially could be developed. 84 undeveloped parcels, between 2 and 4 acres, could potentially be developed but assumed too small for subdivision. There are 132 parcels greater than 4 acres that total 2,081 acres. In addition, there are 6 parcels currently used for outdoor activities, totaling 496 acres, that could potentially be developed as they are primarily undeveloped today.

Larger parcels with existing with residences. Some parcels, currently developed with one residence, could conceivably be subdivided in the future. For this analysis, a single family home on a parcel larger than 5 acres was considered to have excess land that could potentially be subdivided and later developed.

Agricultural lands. Colchester has a significant number of parcels coded by the Assessor as having an agricultural use. Of these, 108 are undeveloped and total 4,644 acres. Another 99 parcels, totaling 3,661 acres, are coded as agricultural use and include a residence, these larger parcels could potentially be subdivided and later developed.

For this analysis, it was assumed that undeveloped parcels owned by Connecticut, Colchester, or a religious organization would never be developed.

Table 7
Town of Colchester
Parcels with Residential Development Potential

	Number of Lots	Total Acres	Average Acres
Undeveloped parcels in residential zones:			
Lot of record < 2 acres > .20	319	341	1.1
Parcels > 2 acres < 4 acres	84	234	2.8
Parcels > 4 acres	132	2,081	15.8
Primarily undeveloped	6	496	82.7
Existing Residential Use: 5 - 20 acres			
Parcels > 5 acres < 20 acres	356	3,091	8.7
Parcels > 20 acres	30	1,057	35.2
Parcels with Agricultural Use			
Undeveloped farm or forest land	108	4,644	43.0
Parcels between 5 and 20 acres with Res. Use	36	430	11.9
Parcels greater than 20 acres with Res. Use	63	3,231	51.3
	1,134	15,605	

BUILD-OUT CALCULATION

Once the potential parcels and the town-wide average site limitations have been determined, the potential residential build-out can be calculated. The build-out was calculated using the proposed 2-acre minimum parcel size, current regulations would all significantly smaller parcels and would greatly increase the build-out potential.

To be conservative, parcels that currently have a residence were limited to future development on the land in excess of 3 acres, only those remaining acres were considered potentially developable. It was also assumed that existing vacant parcels less than 4 acres would be limited to only one residence; in actuality abutting properties could be combined for additional buildings.

All parcels, except the lots of record, were reduced by 38.4% based on the town-wide average site limitations. With growth comes the need for additional infrastructure (roads, parks and municipal

Table 8
CurreTown of Colchester
Build-out Calculations: Residential

	Lots Avail	Acres Avail	Avg Acre	Ex. Res Use	Avg Acre	Less Avg Site Lim.	Less 5% for Infr.	Net Avail. Acres	Build-out Potential: If at min. lot size	Build-out Potential: If at large lot size
Undeveloped parcels in residential zones:										
Lot of record < 2 acres > .2	319	341	1.1						319	319
Parcels > 2 acres < 4 acres	84	234	2.8		2.8	1.7	1.6	134	89	49
Parcels > 4 acres	132	2,081	15.8		15.8	9.7	9.2	1,214	809	441
Other primarily undeveloped	6	496	82.7		82.7	50.9	48.4	290	193	105
Existing Residential Use: 5 - 20 acres										
Parcels > 5 acres < 20 acres	356	3,091	8.7	3	5.7	3.5	3.3	1175	783	427
Parcels > 20 acres	30	1,057	35.2	3	32.2	19.8	18.8	564	376	205
Parcels with Agricultural Use										
Undeveloped farm or forest land	108	4,644	43.0		43.0	26.5	25.2	2,722	1,815	990
Parcels 5 - 20 acres with Res.	36	430	11.9	3	8.9	5.5	5.2	187	125	68
Parcels 20+ acres with Res.	63	3,231	51.3	3	48.3	29.8	28.3	1,783	1,189	648
	1,134	15,605						Potential additional households	5,698	3,252
								Current households (2010)	5,669	5,669
								Potential total households	11,367	8,921
								Current population (2010)	15,383	15,383
								Potential population at 2.71 per household (2010 statistic)	30,805	24,176
								Potential population growth	200%	157%

buildings), for that reason the parcels were further reduced by 5%.

Table 8 summarizes the build-out analysis. Two scenarios were used to calculate build-out and are shown in the last two columns on the right. The assumption for both was that only single-family detached homes would be built; if the development included condo or apartment complexes, the population density per acre would be increased considerably.

The first build-out potential column, assumes that all future residential development will be on lots no larger than 2 acres; or on conservation subdivisions based on a 2 acre lot size. This is the manner of a traditional build-out calculation - assuming the worst-case scenario. The second build-out potential column, is more conservative and assumes that the future average residential development will be on 4 acres.

Currently there are 5,669 households in Colchester, that could grow by 157% to 200% if future development were limited to a density of one household per 2 acres as proposed.

With the housing pressures facing Eastern Connecticut in the future, a 10% growth rate per decade is likely, if so, build-out could be reached in 50-60 years. Table 9 shows the decade when full build-out would be reached based on the two scenarios and for growth rates of 5%, 10% and 15%.

Because Colchester is such a desirable community in which to live, the town recently has seen remarkable growth; the town grew at 33% between 1990 and 2000, the recession held growth to 6% from 2000 to 2010.

Table 9
Town of Colchester
Projected Decade Build-out Could Be Reached
at various growth rates

If at min. lot size / 200% population growth

	5%	10%	15%
2010	15,383	15,383	15,383
2020	16,152	16,921	17,690
2030	16,960	18,613	20,344
2040	17,808	20,474	23,396
2050	18,698	22,521	26,905
2060	19,633	24,773	30,805
2070	20,615	27,250	
2080	21,646	29,975	
2090	22,728	30,805	
2100	25,057		
/			
2151	30,805		

If at larger lot size / 157% population growth

	5%	10%	15%
2010	15,383	15,383	15,383
2020	16,152	16,921	17,690
2030	16,960	18,613	20,344
2040	17,808	20,474	23,396
2050	18,698	22,521	24,176
2060	19,633	24,176	
2070	20,615		
2080	21,646		
2090	22,728		
2100	23,864		
2110	24,176		

FUTURE FISCAL IMPACT: A 20-YEAR PROJECTION

Any land use changes today, will have a fiscal impact on Colchester in the future. Developing a parcel increases the Grand List and increases tax revenues. Because this developed parcel now has a greater demand for town services, town expenses will also increase. For example, if a large parcel were to become a factory employing 50 people with many truck deliveries, perhaps the town would have an added expense of upgrading and maintaining nearby town roads. Many future expenses are incremental – one more house would not mean the need for an addition to the elementary school, but perhaps 30 or 50 more houses would increase the student population to a point that a building expansion would be necessary.

METHODOLOGY

The assumptions that were used for this study are based on information received from Colchester and other fiscal forecasting studies. The basis for the analysis was Colchester's 2012-2013 fiscal year budget, projected to fiscal year 2022-2023.

ASSUMPTIONS

Projections are based on assumptions.

To isolate the effect of change in land use from the effect of inflation and other budget increases, the following assumptions were made for the calculations:

- State aid to Colchester would remain the same
- State reimbursement rate (%) for education would remain the same
- Colchester's Mill Rate was fixed at 28.8, the current rate
- There would be 0 % inflation
- All town and Board of Education salaries would remain the same
- All 2012 debt would be paid within 20 years

Assuming a 10% per decade population growth, in 20 years:

- Taxes would increase by the growth in the Grand List
- Revenue from town services and fees would increase at the rate of growth
- Certain expenses would increase at the rate of growth (i.e. library, public works)
- Certain expenses would increase at less than the rate of growth because population increase would have limited affect (i.e. legal counsel, elections)
- Certain expenses would increase at a higher rate that the rate of growth because population increase would have a greater affect (i.e. public safety)

Assumptions made regarding Colchester education system

- In 20 years, Colchester Elementary School would be 50 students above capacity
- In 20 years, Jack Jackter Intermediate School will near capacity
- William Johnston Middle School would have capacity

- Bacon Academy is over capacity today and is utilizing temporary classroom buildings
- School population would increase at a rate of 1.2 per new household.

PROJECTIONS

If Colchester were to grow at 10% per decade, by 2032 (20 years from today) land use would shift as undeveloped land was developed. This growth is projected to result in an increase in the grand list of over $151 million and an additional $4.2 million in local taxes at today's Mill Rate. The intergovernmental revenues would increase by almost $3 million. The total revenue on Colchester's Fiscal Year 2032-2033 budget would be projected at $7.2 higher than today.

However, the demand for services from an increased population and additional school children would cost an additional $11.5 million in expenditures, and create a short fall of $4.2 million. A 3.6 Mill Rate increase would be needed to balance the budget.

Because all other variables were calculated at a zero change, the Mill Rate increase of 12.4% would only be the result of the town's population growth.

COMPARISON TO OTHER TOWNS

Findings in similar studies across the country have found that growth over time increased the cost of services greater than the accompanying revenue, requiring a Mill Rate increase to balance the budget.

To offset the fiscal impact of growth, many towns have adopted an aggressive agricultural land and open space acquisition, either by out-right purchase of open space or the purchase of development rights. The funding source is usually through a partnership among the town, local and regional land trusts, non-profits, state and federal agencies.

For example, the Town of Pomfret, CT in 2007 purchased the development rights to the MacDaniel farm for $600,000. Over a 30 year time period, the net cost (price, interest and cost of services less the tax revenue still generated) was projected to be $706,471. However, if that land were developed into single-family residences, the 30 years net expense (taxes paid on above-median assessed homes less the cost to provide services to the residents) was projected at $2,495,909 over that same time period. By purchasing the development rights to the MacDaniel farm, the town saved $1,789,438 in budget short-fall over that 30 year period. As a bonus, they were able to maintain a working farm that is part of the local economy and the rural landscape that is enjoyed by all.