THE ECONOMIC AND FISCAL CONTRIBUTION OF FARM AND OPEN LAND IN STERLING, MASSACHUSETTS

Summer 2009

ACKNOWLEDGMENTS

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Rick Hermonot and Jon Jaffe, Farm Business consultants with First Pioneer Farm Credit completed the economic survey and analysis of agricultural land in the study. Carl Mailler, on behalf of American Farmland Trust, completed the Cost of Community Services study.

Thanks also are due to the following public officials and town employees for contributing their time and assistance: Terri Ackerman, Administrator; Gary Chamberland, Chief, Police Department; Donna Couture, Accountant; Melissa French, Planning Board; David Hurlburt, Fire Department; Matt Maro, Conservation Commission; Evelyn McNamara, Assessor; and William Tuttle, Department of Public Works and all the other people who assisted in the process of conducting this research.

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American Farmland Trust
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American Farmland Trust (AFT) is a private, nonprofit conservation organization founded in 1980 to protect our nation's strategic agricultural resources. AFT works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment.

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EXECUTIVE SUMMARY

At the request of the town and the Massachusetts Department of Agricultural Resources (MDAR), a fiscal and economic study of agricultural and open lands was undertaken in Sterling, Massachusetts. American Farmland Trust (AFT) completed a Cost of Community Services (COCS) study to determine the fiscal contributions of residential, commercial, industrial, and farm and open land in the town. First Pioneer Farm Credit surveyed local farmers to investigate the economic contributions of farms to the local economy. The project included three components:

1) The cost of providing necessary community services to various ownership entities/use types in the town, and the adequacy of offsetting financial contributions from those sectors to the town for those services.
2) The direct economic impact on the town from agricultural enterprises.
3) The potential economic gain or loss to Sterling from conversion of the identified existing agricultural/open land and enterprises to alternative uses.

Findings from COCS Study

The results of this COCS study are consistent with others conducted by AFT, universities and other organizations across the country since the mid-1980s: namely, that although residential development pays a substantial portion of fiscal revenue, it does not generate enough income for the services it requires. A municipality with a mix of commercial and industrial as well as farm and open land is more likely to achieve a fiscal balance.

For each $1 of revenue received from residential properties in fiscal year 2008, Sterling spent $1.09 providing services to those lands. For each $1 from commercial land, the town spent 24 cents; for each $1 from industrial land, the town spent 29 cents; and for each $1 received from farm and open land, the town spent 34 cents providing services.

Commercial, industrial, farm and open land help keep down Sterling's tax rates. Residential land uses created a deficit of $1.5 million; the other three categories generated surpluses: $927,222 from commercial, $705,662 from industrial, and $530,501 from farm and open land. While residential land use contributes the largest amount of revenue, its net fiscal impact is negative.

Summary of COCS Findings

	Actual	Residential	Commercial	Industrial	Farm, Open
Revenue	$ 21,221,466	$ 18,192,240	$ 1,222,821	$ 996,869	$ 809,535
Percentage		85.7%	5.7%	4.70%	3.8%
Expenditure	$ 20,612,727	$ 19,746,887	$ 295,599	$ 291,207	$ 279,034
Percentage		95.8%	1.43%	1.41%	1.35%
Revenue minus Expenditure		$ (1,554,646)	$ 927,222	$ 705,662	$ 530,501
Revenue/Expenditure		$1.00/$1.09	$1.00/0.24	$1.00/0.29	$1.00/0.34

Findings from Survey Regarding the Economic Contribution of Agriculture

From a mailing to the landowners and farmers of the 50 agricultural operations in Sterling, First Pioneer Farm Credit analyzed the 30 surveys (60 percent) returned to determine the economic contribution of farmland. The respondents represented 1,329 acres of cropland and pasture out of a total of 2,216 acres in Sterling (per 2005 Massachusetts Audubon Statistics) or 60 percent of the agricultural land in Sterling. The survey found that:

- The 30 respondents reported gross sales from their farms totaling $7,004,900. Of this revenue, $1,338,200 was spent with local vendors and $2,275,135 was paid in wages to employees.
- The average age of the primary owner of the agricultural businesses in Sterling is 59 years. Forty percent of respondents indicated they have a successor, and 57 percent indicated they expected to remain in business for more than 20 years.
- Fifty percent of respondents plan to expand or diversify their farm business in the future.

Based on survey responses and extrapolating the per acre revenue over all of the agricultural acres in Sterling, First Pioneer Farm Credit calculated the total economic impact of agriculture on the Town of Sterling to be $19.7 million.

This was calculated using three components:

- The direct agricultural revenue generated in town based on the survey results extrapolated over all the agricultural acres in Sterling.
- The economic ripple effect using an economic multiplier of 1.6, which brings into the equation the economic ripple effect of some of the direct revenue generated subsequently being re-spent within the local area. The methodology behind the economic multiplier is discussed in more detail later on page 21 of this report.
- The fiscal impact to the town's annual operating budget (opportunity cost) that would result if the town's open space were converted to residential development. This process applies the results of the COCS study to future potential residential development, which is based on the Sterling build-out analysis completed as a part of the Sterling Open Space and Recreation Plan in March 2006.

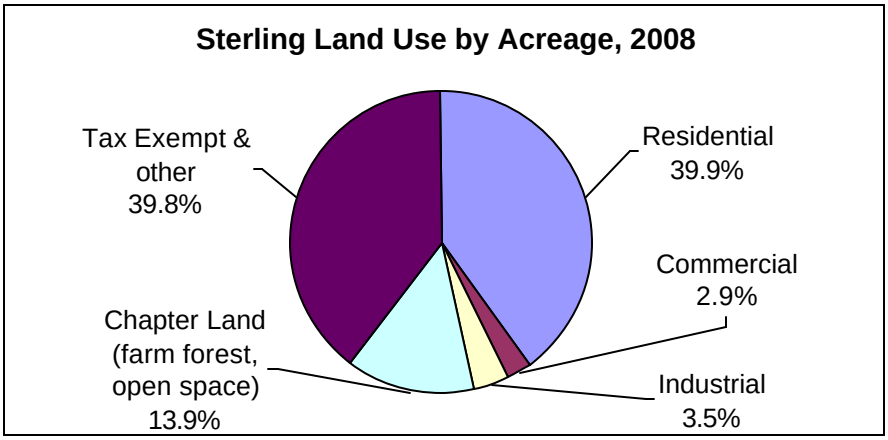
Gross Revenue Generated per Acre	$4,851/acre
Total Agricultural Acres in Sterling	2,216 acres
Total Revenue Generated	$10,749,816
Economic Multiplier	X 1.6
Total	$17,199,706
Opportunity Cost (based on COCS)	$ 2,540,769
Total Economic Impact	$19,740,475

INTRODUCTION

Background

Sterling is a small, mainly residential community set in the foothills of Mount Wachusett in central Massachusetts. At various times in its history, clocks, hats, cider, pottery and other goods have been manufactured in Sterling, but until recently it has been mostly a farming community of rolling hills, pastures and some spectacular views of Mount Wachusett. Sterling is 12 miles north of Worcester and 41 miles west of Boston. The town has a total area of 31.61square miles, of which 30.53 square miles is land.[1]

Between 1990 and 2007, Sterling's population increased from 6,481 to 7,847[2] people, an increase of 21 percent. According to Town Assessor's records, residential properties (8,064 acres) account for 40 percent of the town's acreage in 2008. There were 589 acres of commercial (3 percent), 714 acres of industrial (4 percent) and 2,810 acres of Chapter Lands (farm, forest, recreation) or 13 percent of the town's properties. A large portion of the town is in tax-exempt properties with 8,053 acres or 40 percent of the town.



Project Overview

Communities in Massachusetts are facing difficult fiscal conditions. In general, revenues are not keeping pace with the rising cost of public services. At the same time, towns and cities are constrained by Proposition 2½ limits on property tax increases. In this atmosphere, communities are forced to either find new sources of revenues or cut back services—or both. Assessors are under pressure to obtain more property tax revenue and fairly distribute any increases to all property classes. Chapter lands, valued at current use, may be viewed by the public and assessors as being undervalued and not providing their fair share of taxes.

American Farmland Trust (AFT) and First Pioneer Farm Credit undertook a study to understand the fiscal and economic benefits of agriculture in Sterling, Massachusetts. The project included three components:

[1] US Bureau of the Census
[2] Town Web site, 2006 Census

- A COCS study, to determine the cost of providing necessary community services to various ownership entities/use types in Sterling, and the adequacy of offsetting financial contributions from those sectors to the town for those services;
- A survey of farmland owners and operators, to determine the economic impact on the town from local agricultural enterprises; and
- An analysis of the potential economic gain or loss to the town from conversion of the identified existing agricultural/open land and enterprises to alternative uses, based on data collected through the COCS study and landowner survey.

Municipal budgets are the cumulative product of many local decisions such as past land use decisions and the range and type of services provided. They are also affected by state and national factors ranging from macro economic policies to environmental regulations and education mandates. To illustrate how this broader context affects community budgets, AFT reviewed available data to provide an overview of factors that affected the budget and, for example, to show which department expenditures have shown the greatest increase. All values were adjusted to 2007 dollars for comparison. Some of the factors reviewed were population changes; trends in municipal revenue such as the proportion of revenue from property taxes, fees, and state funds; and changes and trends in municipal expenditures by departments such as school costs, general funds, and special funds.

When state funding is reduced during periods of economic downturns, property taxes become an even more significant source of municipal revenue. Through a COCS study, AFT analyzed the community property tax base to show the proportion of property taxes provided by different land uses. The actual tax dollars generated from these properties were evaluated and compared with other land use classifications.

First Pioneer Farm Credit surveyed landowners and operators about their agricultural businesses and farmland use. The intent of the survey was to gather information on how farmland is being used and to assess the economic impact of agricultural activity within the community. In addition to calculating direct gross revenues, First Pioneer Farm Credit calculated the impact, or multiplier effect, of the local turnover of these funds. The multiplier effect on funds spent in the local economy includes jobs created with those funds at local support industries, such as fuel suppliers and equipment dealerships. The conclusion based on the results of the farmer survey in Sterling is that agriculture in Sterling generates $10.7 million in gross revenue per year. With a multiplier of 1.6 applied to this revenue (to account for the economic ripple effect of some of those funds being re-spent locally), the direct economic impact from agriculture in Sterling is estimated to be $17.2 million per year.

Finally, First Pioneer Farm Credit determined the fiscal impact on the town if the agricultural land in Sterling were fully developed. Using build-out estimates completed by the town and the COCS study findings for residential and agricultural property, we calculated the fiscal impact (opportunity cost) to be $2.5 million per year.

This resulted in our final conclusion that the annual economic and fiscal impact of agriculture on the town of Sterling is $19.7 million per year.

COST OF COMMUNITY SERVICES (COCS) STUDY

Overview

A COCS study is a case study analysis of the net fiscal impacts of existing land uses on local budgets. It provides a snapshot in time of costs versus revenues based on current land use. COCS studies are based on actual budgets in a recent and discrete fiscal period. They are based on real numbers, making them different from traditional fiscal impact analyses, which are predictive and speculative. COCS studies show what services taxpayers receive from their local government and how local government revenues and expenditures relate to land use.

At the request of the town and the Massachusetts Department of Agricultural Resources (MDAR), AFT conducted this COCS study to determine the fiscal impact of existing land uses in Sterling. The goal was to provide reliable financial data to help officials make informed planning decisions and to evaluate strategies to maintain a balance of land uses in the future. The process of conducting a COCS study is relatively straightforward. Local budgetary information is allocated to major land use categories. The study relies on budget and financial records and in-depth interviews with local government officials and budget managers to understand how revenues were generated and how appropriations were spent during a recent year.

Communities like Sterling need reliable information to help them see the full picture of their land uses. COCS studies are an inexpensive way to evaluate the net contribution of working and open lands. They can help local leaders address notions such as "natural resources must be converted to other uses to ensure fiscal stability" or that "farmland is an interim land use just waiting around for development."

AFT developed the COCS approach to investigate three common claims:

1. Open lands—including working agricultural and forest lands—are an interim land use that should be developed to their "highest and best use";
2. Agricultural land gets an "unfair" tax break when it is assessed at its actual use value for agriculture instead of at its potential use value for development; and
3. Residential development will lower property taxes by increasing the tax base.

While it is true that an acre with a new house generates more total revenue than an acre of farmland, this tells us little about a community's fiscal balance. In areas where farming and forestry are important industries, it is especially relevant to consider the fiscal contributions of privately owned natural resource lands. Farm, forest and open lands generate less revenue than residential, commercial or industrial properties, but they require little public expenditure due to their modest demands for infrastructure and public services. COCS studies determine the *net* fiscal impact of land uses in the present by comparing total revenues to total expenditures to ascertain the overall contribution of different land uses.

Recent Fiscal Trends

AFT reviewed fiscal data for the period from 2000 to 2007 to get a sense of recent fiscal trends.[3] Total general fund expenditures increased 26 percent (from $13.5 million to $17 million). The largest growth in expenditures was for education with an increase of $1.9 million (29 percent). General government expenditures also grew by $161,169 or 30 percent. These and other general fund expenditures are shown in Table 1.

Table 1. General Fund Expenditures, 2000 to 2007

	General Government	Police and Other Public Safety	Education	Public Works	Total General Fund **
2000*	$ 541,312	$ 1,078,050	$ 6,865,009	$ 1,237,822	$ 13,546,031
2007	$ 702,481	$ 1,647,216	$ 8,829,455	$ 1,417,879	$ 17,006,092
$ Change	$ 161,169	$ 569,166	$ 1,964,446	$ 180,057	$ 3,460,061
% Change	30%	53%	29%	15%	26%

* Adjusted for inflation to 2007 dollars.
** In addition to the categories shown, includes human services, culture and recreation, debt service, fixed costs, intergovernmental and other.
Source: Mass. Department of Revenue, Division of Local Services, Municipal Databank

General fund revenues increased during this time, with a 41 percent growth in property taxes. State revenues declined by $79,166 or 8 percent. Some of Sterling's general fund revenues from 2000 to 2007 are shown in Table 2.

Table 2. Revenues, 2000 to 2007

Fiscal Year	Property Taxes (Net of Refunds)	Charges for Services	Licenses, Permits & Fees	State Revenues	Total General Fund Revenues & Other Financing Sources**
2000*	$10,260,529	$ 595,068	$ 148,845	$ 999,601	$ 13,798,961
2007	$14,429,603	$ 140,670	$ 216,693	$ 920,435	$ 18,350,874
Difference	$ 4,169,074	$ (454,398)	$ 67,848	$ (79,166)	$ 4,551,913
% Change	41%	-76%	46%	-8%	33%

* Adjusted for inflation to 2007 dollars.
** The total includes other sources of revenue such as fines & forfeitures and miscellaneous revenue.
Source: Mass. Department of Revenue, Division of Local Services, Municipal Databank

[3] Massachusetts Department of Revenue, Division of Local Services, Municipal Databank

The COCS Study Approach in the Town of Sterling, Massachusetts

AFT contacted public officials and department heads to set up interviews, to understand local issues related to budgets, and to define land use categories.

The Sterling Assessor provided the entire database of property values for the town. The total assessed value of real property was just over $1.2 billion in fiscal year 2008. Residential land was the largest category in assessed value, representing 80 percent of the total value of the town. Interestingly, the second largest category of land by value was tax-exempt property representing about 10 percent of the town.

Data were sorted by Massachusetts property type classifications grouped with the following codes:

- Mixed Use Properties (0)
- Residential (1)
- Open Space (2)
- Commercial (3)
- Industrial (4)
- Personal Property (5) (primarily machinery, power lines, pipelines, etc.)
- Chapter Lands (6,7,8) (Forest, Agricultural, Recreation)
- Tax-Exempt Property (9)

Table 3. Land Use and Assessed Value, 2008

Land Use	Assessed Value	Percent of Total
Residential	$ 958,848,400	80.2%
Commercial	$ 46,246,900	3.9%
Industrial	$ 60,204,600	5.0%
Chapter Lands	$ 1,690,600	0.1%
Tax-Exempt	$ 128,275,500	10.7%
Total	$ 1,195,266,000	100.0%

Source: Sterling Assessor's Office, January 2009

From these property classifications, four land use categories were defined for the COCS study as follows:

- ***Residential*** – property used for dwellings, *including farmhouses*, mobile homes, and rental units.
- ***Commercial*** – property actively used for business purposes other than agricultural or forestry, including retail and wholesale production.
- ***Industrial*** – property actively used for industrial manufacturing and processing and utilities.
- ***Farm and Open*** – property used as agricultural land, Chapter Lands, vacant parcels and vacant residential, commercial and industrial acreage at least 5 acres or larger.

Tax-exempt properties such as educational, public service (municipal, charitable, etc.), and town and state land are not included in any of the four land use categories, since the properties do not generate any tax revenue.

Step One: Collect Data and Conduct Interviews

Interviews were held with Sterling department heads in February 2009 to review revenues and expenditures for the fiscal year 2008 (July 1, 2007, to June 30, 2008).

The following reports and sources provided information used in the study:

- Town of Sterling Annual Report, 2007
- Budget/Expense Comparison for the Year Ended June 30, 2008
- Statement of Revenue, Expenditures and Change in Fund Balances, Special Revenue Funds for the Year Ended June 30, 2008
- Statement of Revenue, Expenditures and Change in Fund Balances, Capitol Project Funds for the Year Ended June 30, 2008
- Statement of Revenue, Expenditures and Changes in Fund Balances Trust Funds – Principal and Trust Funds – Expendable for the Year Ended June 30, 2008
- Statement of Revenue, Expenditures and Change in Fund Balances, Agency Funds for the Year Ended June 30, 2008
- Town of Sterling Schedule of Outstanding Debt as of June 30, 2008
- Massachusetts Department of Revenue, Tax Rate Capitulation of Sterling, Fiscal Year 2008
- Sterling Department of Public Works Profit and Loss Budget vs. Actual, July through December 2008
- Planning Board Special Revenue Funds as of June 30, 2008
- Annual Report for 2007 Sterling Fire Department & Fire Department Ambulance

Step Two: Allocate Revenues and Expenditures by Land Use

Officials were asked to provide records showing how revenue was generated by land use and to what extent each land use was served by expenditures. This step involved allocating all fiscal year 2008 revenues and expenditures to the land use categories based on information gathered from reports and interviews. Appendix A of this report shows the allocation of all revenues and expenditures by land use for services provided to Sterling residents.

Revenues

All revenues from fiscal year 2008 were included in the study. For the COCS study, local line item revenue dollars were allocated to the land use that produced them. Revenues were compiled and reviewed with the Town Accountant including the general fund and special operating funds. General fund revenues include tax collections, fees, fines, licenses and permits, and state revenue. Special revenue funds include MA highway fund, revolving funds for departments such as conservation, planning and recreation, gifts and donations and state and federal grants. Individual grants are usually dedicated to a specific purpose, such as library service, Council on Aging or community policing. Revenues were categorized according to the land use intended for that particular item.

Property Taxes

Real estate taxes collected for fiscal year 2008 were almost $7.6 million and represent the largest source (49 percent) of the total revenue for town services. The town had a single tax rate for all properties. The breakdown of assessed property values by land use classes was available from the Assessor's office. The property categories and assessed values had to be attributed to the four land use categories used for this study. Table 4 shows how land is classified for assessment purposes in Sterling and how all or a portion of the taxable value of these classes was moved to fit the defined land use categories of this study. The land use contribution of tax revenues resulted in the following:

- 85 percent from residential properties
- 4 percent from commercial properties
- 6 percent from industrial properties
- 5 percent from farm, and open properties

Table 4. Calculation of Property Tax Contribution Percentage From Assessed Property Values, FY 2008

Assessor's Categories		Cost of Community Services Categories			
Land Use	Total Value	Residential	Commercial	Industrial	Farm, Open
Residential	$ 958,848,400	$ 912,895,600	$ -	$ -	$ 45,952,800
Commercial	$ 46,246,900	$ -	$ 46,246,900	$ -	$ -
Industrial	$ 60,204,600	$ -	$ -	$ 60,204,600	$ -
Chapter lands	$ 1,690,600	$ -	$ -	$ -	$ 1,690,600
Total Assessed	$ 1,066,990,500	$ 912,895,600	$ 46,246,900	$ 60,204,600	$ 47,643,400
	COCS Percent	85.56%	4.33%	5.64%	4.47%

Other Local Revenues

Permits, fees and licenses were allocated by land use. Marriage licenses, for example, are generated as residential revenue. Departmental revenues were assigned to different land use categories based on department records. State and federal government grants were allocated according to the type of program or land use that received the income, because the revenue was provided to pay for specific services. For example, all federal and state funding for education was counted as residential revenue. The complete list of revenues and their breakdown by land use category can be seen in Appendix A.

Expenditures

Department heads were interviewed to determine how expenditures should be allocated to the four land use categories. Department heads gave an overview of their services and identified any reports (dispatch records, permit summaries, organizational charts) and other secondary sources of information. In the interviews AFT explained what land uses were included in each of the COCS study classifications. Officials were asked which land use was served by each expenditure.

Several service expenditures were clearly residential, such as council on aging, schools, libraries and recreation services. Public health inspection expenditures were assigned to

commercial property. State and federal grants for library, library technology and cultural council were also allocated as residential expenditures. A gift or donation spent on the MCI trailer (communications) was allocated as a commercial expenditure. The allocation of debt service funds for retirement of principal and interest on long-term debts was based on a review of payments for town projects. For the most part, department expenditures were allocated to more than one land use and were divided based on department records.

Use of "Fallback" and "Administrative" Percentages
Even after extensive record searches, in a few cases it was not possible to attribute specific line items to the land use categories. For example, some salaries for public officials and expenditures for public buildings serve the communities in a general capacity. In this situation, either a fallback (default) percentage or a general administrative breakdown was applied.

The land use fallback was calculated based on the percentage of **appraised** value, represented by real property. The rounded fallback percentages were as follows: 86 percent residential, 4 percent commercial, 6 percent industrial, and 4 percent farm and open. The fallback number was used to allocate revenue line items for highways, emergency management and some town hall items.

Lastly, some departments such as the town administrator and accounting and finance provide services to all the other departments in town. For these departments, an administrative percentage was applied to expenditure line items. The administrative percentages were: 95.8 percent residential, 1.43 percent commercial, 1.41 percent industrial, and 1.35 percent farm and open land.

Step Three: Analyze Data and Calculate Ratios
The final step of the COCS study was to analyze the data gathered and evaluate the actual budgets on a spreadsheet. The dollar amount for each line item of the budget was allocated among the four land use categories. The amounts were entered for each line item, and total revenues and total expenditures were summed for the four land use categories.

The total net surplus was calculated by comparing total revenues to total expenditures in each category. The budget allocations are included as Appendix A. This information is also presented as ratios to show the actual expenditure for every dollar raised (see Table 5, Summary of COCS Findings, page 13). The findings were checked for accuracy and were shared with Sterling for its review and comments, which were incorporated into the final report (or will be when the draft is complete).

COCS study findings
The COCS study in Sterling found that:

- 85.7 percent of fiscal revenue in fiscal year 2008 was generated by residential land, 5.7 percent was generated by commercial land, 4.7 percent by industrial land, and 3.8 percent by farm and open land.

- 95.8 percent of expenditures were used to provide services for residential land compared with 1.43 percent for commercial land, 1.41 percent for industrial land, and 1.35 percent for farm and open land.

In other words:

- For each $1 of revenue received from residential properties in fiscal year 2008, Sterling spent $1.09 providing services to those lands.
- For each $1 from commercial land the town spent 24 cents,
- For each $1 from industrial land, the town spent 29 cents providing services; and
- For each $1 received from farm and open land, the town spent 34 cents.

Residential land uses created a deficit of $1.6 million, while the other three categories generated surpluses: $927,222 from commercial, $705,662 from industrial, and $530,501 from farm and open land. While residential land use contributes the largest amount of revenue, its net fiscal impact is negative.

Table 5. Summary of COCS Findings

	Actual	Residential	Commercial	Industrial	Farm, Open
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Revenue/Expenditure		$1.00/$1.09	$1.00/0.24	$1.00/0.29	$1.00/0.34

THE ECONOMIC IMPACT OF AGRICULTURE IN STERLING

Introduction

First Pioneer Farm Credit was employed by the Sterling Agricultural Commission to conduct a study on the economic impact of agriculture on the Town of Sterling, Massachusetts. Rick Hermonot and Jon Jaffe, Farm Business Consultants with First Pioneer Farm Credit, completed this study, the findings of which are summarized in this report.

The purpose of this study is to provide unbiased analysis of the inventory of agricultural activity in Sterling and draw conclusions about the economic impact to the community. This information is to be used to develop educational materials to aid in the understanding of agriculture in Sterling by its residents, potential residents, realtors, legislators, town managers, etc.

To conduct this study, we gathered assessment and land inventory information from the Sterling Town Hall (including the 2006 Sterling Open Space and Recreation Plan) and, lastly, conducted a survey of the farmland owners and farm operators in Sterling. We received a strong response (respondents representing 60 percent of farmland acreage) from the survey with assistance from the Agricultural Commission to conduct follow-up phone calls to encourage participation by farmers and landowners. The results of the survey are summarized in this report. To protect the confidentiality of the individual respondents, only summary results are included. Individual farm/landowner responses have been retained in our work file.

In conducting this study, we recognized three primary areas that the agricultural activity impacts the community:

1. Agriculture supports factors that impact quality of life in the community such as preservation of open space. However, this study was focused on economic impact and does not specifically address these factors.
2. Economic impact driven by the creation of jobs and the generation of revenues that are reinvested into the local economy.
3. Fiscal impact to the tax base in Sterling and the annual Town Budget.

The latter two factors are addressed in detail in this report.

Methodology

There were three steps to our methodology for calculating the economic impact of agriculture in Sterling:

1. Survey farmers and landowners to determine the nature and scope of farming activities.
2. Quantify the direct economic value of the agricultural enterprises based on the results of the survey and apply an appropriate “economic multiplier” to arrive at a direct economic impact from agriculture to the town of Sterling.

3. Use the results of the COCS study conducted by American Farmland Trust for the town of Sterling to calculate an opportunity cost that exists to the town if existing farmland were converted to residential use.

A survey was designed and mailed to all farmland owners and farmers in Sterling. The intent of the survey was to gather information on how farmland is being used in Sterling (what crop), by whom (owner or tenant) and to connect the scope of agricultural activity with its scope of economic impact in the community. A copy of the survey is attached as Appendix B. Economic questions included amount of gross revenue generated, number of employees hired, gross wages paid, dollars reinvested with local vendors, capital purchases, etc.

The direct economic impact derived from the farmer survey is summarized in this report. We then combined the data from the COCS study to quantify the annual opportunity cost impact to the town budget if the existing farmland were converted to residential use. The potential number of residential units that could result from the development of the remaining open space was projected using a build-out study included in the March 2006 Sterling Open Space and Recreation Plan.

Total inventory of agricultural acreage in Sterling was needed to extrapolate the data in the survey. Total inventory of agricultural acres (including cropland and pasture) in Sterling was found from two sources:

Source	Data as of:	Acres in Ag Prodcution:
Sterling Open Space & Recreation Plan -	1999	2,817 acres
Massachusetts Audubon Database -	2005	2,216 acres

We decided to rely on the Massachusetts Audubon inventory of 2,216 acres since it was completed more recently.

Description of the Community

Sterling is a rural-residential community in central Massachusetts, in Worcester County, located about 12 miles north of Worcester. The town consists of 31.6 square miles and as of the 2000 census had a population of 7,257 people. Population has grown to 7,847 people in 2007.

The town includes portions of the 3,000-acre Wachusett State Park and the 4,300-acre Leominster State Park, which contribute to 40 percent of the town's land area being tax exempt.

The following is a breakdown of land use classifications in the town of Sterling according to information collected in the Sterling Assessor's records:

Land Use Classification	Acres	Percent
Residential	8,064	40%
Commercial	589	3%
Industrial	714	4%
Chapter Land (farm forest, open space)	2,810	13%
Tax Exempt & other	8,053	40%
Total Acreage	20,230	100%

Survey

The survey was mailed to 50 farmland owners and farmers; there were 30 respondents or 60 percent of the surveys mailed. A table of the summary results follows:

Number of Respondents	30
Farmers	3%
Landowners	10%
Both	87%
Total Acreage	1,989 acres
Tillable Land	723 acres
Woodland	763 acres
Farmstead	44 acres
Pasture/Other	459 acres
Owner Operated Farmland	83%
Land Rented to Other Farmers	17%
Average Land Rental Rate	$28/acre
Landowners Harvesting Timber	17%
Acres Harvested in Past 10 years	138 acres
Average Timber Sales per Acre	$1,087
Farms with Easements	27%
Acres in Production	1,328 acres
Forage Crops	62%
Cash Crops	16%
Pasture/Other	22%
Gross Farm Revenue	$7,004,900
Average Per Farm	$233,497
Average Per Producing Acre	$4,851
Funds Spent with Local Vendors	$1,338,200
Average Per Farm	$44,607
Average Per Producing Acre	$927

Capital Purchases by Sterling Farms	$360,324
Average Per Farm	$12,011
Average Per Producing Acre	$250
Gross Wages Paid	$2,275,135
Average Per Farm	$75,838
Average Per Producing Acre	$1,576
Average Per Employee	$6,208
People Employed by Agriculture in	366
Owners	45
Unpaid Family Help	16
Full-Time Employees	23
Part-Time Employees	32
Seasonal Employees	250
How is Product Marketed?	
Farm-stand or Retail on Farm	30%
Cooperatives	0%
Pick-Your-Own	10%
Direct to Restaurants	10%
Wholesale	27%
Farmer's Markets	17%
CSA (Community Supported	3%
Retail on Farm	53%
Direct to Stores	7%
Other	10%
Average Age of Owner	59
Farms with Next Generation Successor	40%
How Long Do You Plan to Farm?	
Under 5 years	7%
5 to 10 years	23%
10 to 20 years	10%
Over 20 years	57%
Did not answer	3%
Farms Planning to Expand/Diversify	50%
Diversify	37%
Expand	43%
Value Added	27%
Livestock Numbers	
Horses Owned	31

Horses Boarded	12
Horse Stalls	35
Dairy Cattle	0
Beef Cattle	46
Sheep	120
Goats	70
Other	161

Inventory and Scope of Agriculture
The number one use of agricultural land in Sterling is forage crops, which includes primarily hay. The number two use of agricultural land in Sterling is orchard. These predominant uses are consistent with the type of land found in Sterling. As a town located in the foothills of Mount Wachusett, much of the land base is best suited to these uses.

Twenty seven percent of the farms responding or a total of 683 acres were reported to be protected with permanent agricultural preservation restrictions. This is slightly above the typical level of protected agricultural land for Massachusetts communities. According to Massachusetts Audubon statistics, 20.6 percent of the agricultural land in Worcester County is protected.

Survey respondents reported the following use of their land in Sterling:

	Acres	Percent of Ag Land
Tillable Land	723	36%
Woodland	763	38%
Farmstead	44	2%
Pasture/Other	457	24%
TOTAL	1,989	100%

We also asked questions relative to the status of the farm owners in Sterling. This provides insight into the future of agriculture in town. The following are some observations relative to this information:

- Average age of primary owner – The average farmer in Sterling is 59 years old. This is common to agriculture in the region and highlights the importance of succession planning to ensure a healthy future for agriculture in the community. Transfer costs can be very high (gift and estate taxes plus professional fees associated with the process). Often transfer taxes can force the liquidation of the farm real estate, especially if a proactive plan is not in place. Management succession planning is also critical to ensure that the next generation manager/owner is well prepared as a leader for the business.
- Succession – Forty percent of the farms have identified a next generation successor for their farm. This is good news. While we do not have comparable information for farms in Massachusetts overall, our observation from working with farm families is that this statistic would be lower on a state or regional basis. A critical component of selecting a successor is to develop management mentoring and assets transfer planning that addresses potential estate tax consequences.

- How long do the farms plan to stay in business? – Fifty-seven percent of the respondents stated that they plan to be in business for more than 20 years. This is also good news, and our experience indicates this to be higher than we typically see in the region. One concern noted in the survey data, however is the fact that several respondents that indicated no successor still indicated they plan to be in business more than 20 years, even if their age did not support that fact. This points out that there is a need for a focus on succession planning, possibly through tthe use of professional assistance in the form of seminars and individual consulting on this topic.
- Do farms plan to expand or diversify in the future? – Fifty percent of the respondents indicated that they plan to diversify. Seventy percent of the long-term farms (more than 20 years) plan to expand or diversify in the future. This highlights the fact that the long-term farms need to be proactive in adapting to economic trends to remain viable. If the community is open to such transition (i.e., to value added/retail/diversification, etc.), it will offer a better environment for a healthy future for agriculture. For example, highly restrictive zoning that limits opportunity for farm businesses to develop retail stores at their farms could reduce the long-term viability of agriculture in the town.

Concerns of farmers in Sterling were consistent with what we hear from farm owners throughout the region. The following are their concerns that may impact their long-term viability ranked by priority:

1. Hiring Help – Competition from non-farm businesses makes it very difficult for farms to compete in the workforce. Farm workers often must work in hot, wet, cold or dirty conditions making it more difficult to find quality employees on many farms.
2. Marketing – Marketing is frequently cited as a concern for farmers looking to sell their farm's production to consumers. Many farms are located in rural locations without convenient access for consumers.
3. Regulations – Zoning restrictions and other land use regulations can interfere with farm business plans. The most notable are zoning regulations that limit the ability to retail from the farm.
4. Trespassing & Vandalism – This is often caused when residential encroachment occurs around farms. With more people living in close proximity to farmland, there are more frequent incidences of vandalism of crops or equipment, which is often located in dark and unsecure areas.

What Support Could the Agricultural Commission Provide Farmers?
The concerns of farmers in Sterling were consistent with the concerns expressed by farm owners throughout the region. The results of this survey can be very instrumental in forming a strategy for farmer support by the Agricultural Commission. Opportunities for the Agricultural Commission to support agriculture in Sterling include, but are not limited to, the following:

1. Hiring Help – This is a difficult reality. Offering seminars to help farm owners be better recruiters of workers can be beneficial. Also, Agricultural commissions

sponsoring farm open houses can generate interest in local farms and the employment opportunities they offer.

2. Regulations – The Agricultural Commission can work with the zoning boards to communicate concerns and help ensure that zoning regulations do not severely hamper the financial viability of the farms in town. Often this amounts to an education process that helps zoning officials understand the challenges facing farmers. Often, the goals of preserving open space through keeping farms viable is a shared objective and the Agricultural Commission can help bring these interests together.
3. Marketing – Marketing assistance by the Agricultural Commission could come in the form of something as simple as providing Web links from the town Web site to farmers' Web sites that are retailing products or creating a farmer's market in Sterling where farmer's can sell directly to consumers. The opportunity to create a more local farmers'market may prove beneficial to Sterling farmers.
4. Trespassing & Vandalism – Again, sponsoring farm open houses in the town can go along way to help control this problem. Often would-be vandals think twice about "doing donuts in a farmer's corn field" if they tour the farm and develop an appreciation for the work that goes into growing the crop. The positive impact on neighbor relations can be beneficial to Sterling's agriculture in many ways.

Economic Impact Assessment

The completion of an economic impact assessment of agriculture to the town of Sterling considered both the:

1. Direct gross revenues that are generated on the farms in Sterling and
2. The opportunity cost associated with losing agriculture to residential development.

The following is a discussion of these two factors.

Direct Gross Revenues
Direct gross revenues are those generated on the farms in Sterling. Some of these revenues are paid out to local workers and to area vendors. Results of the survey indicated that of the $7,004,900 of estimated gross revenues generated on Sterling's farms,56 percent of this is put directly back into the local economy in the form of wages ($2,275,135), funds spent with local vendors ($1,338,200) and capital purchases ($360,324).

The $7,004,900 was produced from the survey respondents' 1,444 acres (this acreage includes 220 acres outside of Sterling). This equates to $4,851 per acre. We then applied the $4,851 per acre to the 2,216 total crop acres in Sterling to arrive at a total estimated gross revenue from all the farms/farmland in Sterling of $10,749,816 per year.

The local economy benefits further from the dollars paid to workers and local vendors, since some of those funds are turned over multiple times locally. The portion of each turnover that remains in the local economy creates a multiplier effect or "ripple effect" of Sterling's agricultural revenues that are initially injected into the local economy.

When looking at a multiplier effect on a state or regional basis, more substantial multipliers can be expected. Other economic impact studies done for agriculture have used economic multipliers of 1.6 to 2.2. As a multiplier effect is focused on a smaller area, such as just the town of Sterling, much more potential "dollar leakage" occurs, reducing the appropriate multiplier effect.

Because of the focus of the economic impact analysis on the immediate area around Sterling, the low end of this multiplier range was used to measure a more local impact. This low-end multiplier (1.6) is further supported by the fact that 56 percent of the gross revenue generated by the farms in Sterling was reported to be reinvested with local vendors and employees. This sets an implied multiplier of at least 1.56. When we consider that a percentage of those funds are again reinvested in the local community the implied multiplier increases to over 1.6. Therefore a multiplier of 1.6 is considered realistically conservative.

A multiplier of 1.6 means that for every dollar created in the local economy, another 60 cents is re-invested into that local economy by employees spending their paycheck locally and local vendors spending their receipts locally.

Based on the farm data reported in the survey, the following is a summary of the direct annual economic impact of the total agricultural activities in Sterling:

Gross Revenue Generated	$10,749,816
Times multiplier	X 1.6
Equals Total	$17,199,706

Opportunity Costs

The second economic impact component is the opportunity cost associated with losing agriculture to residential development. Most of the agricultural land in Sterling is zoned for residential use. A build-out capacity analysis was completed as a part of the Sterling Open Space and Recreation Plan in 2006. Using projections from this analysis, we looked at the cost to the community if the agricultural land were lost to residential development.

Agricultural land helps to keep down Sterling's tax rates. According to the COCS study, the following relationship exists between the tax revenue generated and the cost of services provided in Sterling:

Cost of Services for each $1.00 in revenue	
Farm & Open Space Uses	$0.34
Industrial Uses	$0.29
Commercial Uses	$0.24
Residential Uses	$1.09

The COCS study concluded that all Sterling residential properties cost the town $1,554,646 more than they generated in tax revenue. The 2000 census reports 2,696 residential units in Sterling:

$1,554,646 shortage/2,696 units = $577 shortage per residential unit

The 2006 Sterling Open Space and Recreation Plan indicates a build-out capacity of an additional 3,484 residential units on Sterling's open space land:

3,484 potential units X $577 existing fiscal shortage per unit =
$2,010,268 additional cost to the town if full build-out of agricultural land were realized

This means that conversion of the agricultural land to residential development could represent an opportunity cost to the community of $2,010,268 in excess of tax revenue generated.

In addition, according to the COCS study, if the agricultural acreage were converted to residential use, the existing positive net tax revenue of $530,501 from the agricultural and open space land would be lost.

Therefore, the total opportunity cost of a full build-out of the agricultural and open space land is calculated to be $2,540,769:

Opportunity Cost (lost surplus)	$ 530,501
Opportunity Cost (excess cost)	$ 2,010,268
Total Opportunity Cost	$ 2,540,769

Economic Impact Summary

To summarize, the direct and indirect economic impact of agriculture on the town of Sterling is:

Direct Economic Impact	$17,199,706
Indirect Fiscal Impact (Opportunity Cost)	$ 2,540,769
Total Economic & Fiscal Impact	$19,740,475

CONCLUSION

The primary purpose of a COCS study is to help a community determine the net fiscal contribution of various land uses, not to recommend one type of land use over another. A secondary purpose of a COCS study is to highlight the often-overlooked fiscal contribution of farm and forest lands so these lands may be duly considered in the planning process. Because they are case studies of individual communities with different assessment, taxing and service practices, COCS studies should not be used to predict the impact of a single new development, nor to judge the value of one land use over another. Different types of industrial, commercial and residential development can have a dramatically varied economic input, so it is generally not advisable to use COCS data to determine the future size or extent of land uses in a community.

The results of this study provide reliable financial information that demonstrates the importance of agricultural and open lands to the town's fiscal and economic balance. Both the COCS study and economic analysis suggest that developing strategies to retain this land base for future agriculture is a good long-term investment for Sterling and that:

- Taxes and other revenues from residentially developed land typically do not cover all the public services residents receive.

- Farm and Open lands consistently pay more in local tax revenues than they receive in services. While industrial and commercial land uses alone can offset the economic deficit associated with residential land use, industrial and commercial land use also tends to drive residential land development. Often the end result is that all available farm, forest and open land is consumed.
- This study shows that a balance of land uses that includes agricultural lands is able to provide revenue needed to pay for the services required by residential land uses.

The economic impact analysis used a survey of farmers and landowners in Sterling to estimate the direct gross revenues generated on the farms in Sterling. Some of these revenues are paid out to local workers and to area vendors. Results of the survey indicated that of the $10.7 million of estimated gross revenues generated on Sterling's farms, 56 percent of that revenue is re-spent directly into the local economy.

In addition to the direct funds injected into the local economy, some of those funds are turned over multiple times locally. The portion of each turnover that remains in the local economy creates a multiplier effect or "ripple effect" of Sterling's agricultural revenues that are initially injected into the local economy. A multiplier of 1.6 was determined to apply to the Sterling analysis. The multiplier effect increased the direct economic impact of agriculture to $17.2 million.

The final consideration was to determine the fiscal impact on the town if the agricultural land in Sterling were fully developed. Using build-out estimates completed by the town and the COCS study results for residential and agricultural property, we calculated the fiscal impact (opportunity cost) to be $ 2.5 million.

This resulted in our final conclusion that the annual economic and fiscal impact of agriculture on the town of Sterling is $19.7 million per year.

APPENDICES

A. FY 2008 REVENUES AND EXPENDITURES

B. FARM SURVEY

APPENDICES

A. FY 2008 REVENUES AND EXPENDITURES

B. FARM SURVEY

REVENUES	Actual	Residential	Commercial	Industrial	Farm and Open
Taxes					
Personal Property Taxes	$ 368,115	$ -	$ 368,115	$ -	$ -
Real Estate Taxes	$ 13,481,364	$ 11,534,384	$ 584,327	$ 760,682	$ 601,972
Excise Taxes	$ 1,107,182	$ 989,325	$ 35,371	$ 46,047	$ 36,439
In Lieu of Taxes	$ 491,048	$ 420,131	$ 21,284	$ 27,707	$ 21,926
Penalties and Interest	$ 40,532	$ 34,678	$ 1,757	$ 2,287	$ 1,810
Total Taxes	$ 15,488,241	$ 12,978,518	$ 1,010,854	$ 836,723	$ 662,147
Investment Income	$ 147,851	$ 123,893	$ 9,650	$ 7,987	$ 6,321
Licenses, Permits and Fees					
Liquor	$ 13,650	$ -	$ 13,650	$ -	$ -
Amusement	$ 720	$ -	$ 720	$ -	$ -
Antique & 2 Dealer	$ 120	$ -	$ 120	$ -	$ -
Auto 1,2,3	$ 650	$ -	$ 650	$ -	$ -
Common Victuals	$ 1,125	$ -	$ 1,125	$ -	$ -
Public Entertainment	$ 350	$ -	$ 350	$ -	$ -
Vendor	$ 850	$ -	$ 850	$ -	$ -
Livery	$ 25	$ -	$ 25	$ -	$ -
Gravel/Earth Removal	$ 4,000	$ -	$ 4,000	$ -	$ -
Collector Warrant & RMV	$ 9,190	$ 9,190	$ -	$ -	$ -
Collector Demand Fees	$ 5,850	$ 5,850	$ -	$ -	$ -
Town Clerk Fees	$ 5,410	$ 5,410	$ -	$ -	$ -
Dog Licenses	$ 15,716	$ 15,716	$ -	$ -	$ -
Raffle & Bazaar Permit	$ 90	$ 90	$ -	$ -	$ -
Underground Storage	$ 660	$ 660	$ -	$ -	$ -
Appeals Board Permits	$ 4,800	$ 3,438	$ 635	$ 727	$ -
Police - Parking Warr & RMV	$ 87	$ 87	$ -	$ -	$ -
Police - Parking Demand Fees	$ 55	$ 55	$ -	$ -	$ -
Police - Lic. To CarryTown Share	$ 3,338	$ 3,338	$ -	$ -	$ -
Court Fines - Police	$ 76,903	$ 76,903	$ -	$ -	$ -
Police - False Alarm Fine	$ 1,483	$ 741	$ 741	$ -	$ -
Police - Parking Fines	$ 1,170	$ 1,170	$ -	$ -	$ -
Fire Dept. Permits	$ 10,815	$ 5,946	$ 3,208	$ -	$ 1,661
Building Inspection Permits	$ 95,894	$ 85,880	$ 4,351	$ 5,664	$ -
Sealer Weights & Measures	$ 285	$ -	$ 285	$ -	$ -
Board of Health	$ 30,505	$ 24,520	$ 5,985	$ -	$ -
Library Fines	$ 7,492	$ 7,492	$ -	$ -	$ -
Total Licenses, Permits & Fees	$ 291,231	$ 246,485	$ 36,695	$ 6,391	$ 1,661
Charges for Services					
Miscellaneous	$ 6,256	$ 6,256	$ -	$ -	$ -
School Maintenance Agreement	$ 23,251	$ 23,251	$ -	$ -	$ -
Cable TV Franchise	$ 1,250	$ -	$ 1,250	$ -	$ -
Assessors Photocopy	$ 649	$ 555	$ 28	$ 37	$ 29
Municipal Lien Certificate	$ 9,486	$ 9,486	$ -	$ -	$ -
Treasurer	$ 2,848	$ 2,848	$ -	$ -	$ -
Clerk - Passport	$ 7,370	$ 7,370	$ -	$ -	$ -
General By-laws	$ 50	$ 43	$ 2	$ 3	$ 2
Street Lists	$ 750	$ 642	$ 33	$ 42	$ 33
Subdivision By-laws	$ 60	$ 60	$ -	$ -	$ -
Zoning By-Law Maps	$ 345	$ 345	$ -	$ -	$ -

REVENUES	Actual	Residential	Commercial	Industrial	Farm and Open
(charges continued)					
Town Office Charges	$ 490	$ 490	$ -	$ -	$ -
Police Admin Fee - Road Details	$ 2,459	$ -	$ 2,459	$ -	$ -
Police Reports	$ 610	$ 581	$ 29	$ -	$ -
Police Charges - Fingerprints	$ 105	$ 105	$ -	$ -	$ -
Fire Dept. Reports	$ 30	$ 30	$ -	$ -	$ -
Fire Admin. Fee - Details	$ 225	$ -	$ 225	$ -	$ -
DPW - Misc. Revenue	$ 28	$ 28	$ -	$ -	$ -
Cemetary Burials	$ 11,325	$ 11,325	$ -	$ -	$ -
COA - MART Reimbursements	$ 37,256	$ 37,256	$ -	$ -	$ -
Total Charges for Services	$ 104,842	$100,670	$4,026	$82	$65
Intergovernment					
Lottery	$ 856,050	$ 732,419	$ 37,104	$ 48,302	$ 38,224
Other	$ 1,163,771	$ 1,163,771	$ -	$ -	$ -
Other Revenue					
ZBA Mitigation (Condo Sales)	$ 9,200	$ 9,200	$ -	$ -	$ -
Sale of Land	$ 171,000	$ 146,304	$ 7,412	$ 9,649	$ 7,636
Light Dept in Lieu of Tax	$ 40,000	$ 36,005	$ 2,313	$ 1,657	$ 25
	$ 220,200	$191,509	$9,725	$11,306	$7,661
Total General Fund Revenues	$ 18,272,186	$15,537,264	$1,108,053	$910,790	$716,079
SPECIAL FUNDS					
Grants					
CDBG	$ 144,037	$ 144,037	$ -	$ -	$ -
Fire Equipment	$ 142,493	$ 125,866	$ 9,836	$ 2,660	$ 4,130
Community Policing	$ 33,440	$ 30,100	$ 1,185	$ 1,203	$ 952
Bullet Proof Vests	$ 750	$ 675	$ 27	$ 27	$ 21
Highway Safety	$ 1,986	$ 1,699	$ 86	$ 112	$ 89
Communications Training	$ 1,571	$ 1,403	$ 57	$ 54	$ 57
Fire Safety - School	$ 3,850	$ 3,850	$ -	$ -	$ -
Fire Equipment	$ 680	$ 591	$ 38	$ 26	$ 25
Chapter 90	$ 1,265,009	$ 1,082,316	$ 54,830	$ 71,378	$ 56,485
City of Worcester BOH	$ 2,788	$ 2,788	$ -	$ -	$ -
Council on Aging	$ 5,921	$ 5,921	$ -	$ -	$ -
Library	$ 10,490	$ 10,490	$ -	$ -	$ -
Library Technology	$ 9,464	$ 9,464	$ -	$ -	$ -
Cultural Council	$ 4,011	$ 4,011	$ -	$ -	$ -
Total Grants	$ 1,626,489	$ 1,423,211	$ 66,058	$ 75,460	$ 61,760
Revolving Funds					
Council on Aging	$ 4,827	$ 4,827	$ -	$ -	$ -
Deputy Collector (MV Percentage)	$ 11,226	$ 11,226	$ -	$ -	$ -
Fair	$ 59,543	$ 29,772	$ -	$ -	$ 29,772
Gasoline (Light Department)	$ 35,965	$ 32,373	$ 2,080	$ 1,490	$ 23
Planning Department	$ 8,515	$ 6,099	$ 1,126	$ 1,290	$ -
Recycling	$ 52,491	$ 52,491	$ -	$ -	$ -
Old Town Hall	$ 1,595		$ 1,595	$ -	$ -
Total Revolving Funds	$ 174,162	$ 136,787	$ 4,801	$ 2,780	$ 29,794

REVENUES	Actual	Residential	Commercial	Industrial	Farm and Open
Gifts & Donations					
Fire	$ 8,996	$ 8,996	$ -	$ -	$ -
MCI Trailer	$ 38,000	$ -	$ 38,000	$ -	$ -
Council on Aging	$ 1,625	$ 1,625	$ -	$ -	$ -
Library	$ 4,486	$ 4,486	$ -	$ -	$ -
Wachusett EMS	$ 29,996	$ 29,996	$ -	$ -	$ -
Total Gifts & Donations	$ 83,103	$ 45,103	$ 38,000	$ -	$ -
Receipts Res. for Appropriation					
Ambulance	$ 267,833	$ 267,833	$ -	$ -	$ -
Cemetary Lots	$ 2,400	$ 2,400	$ -	$ -	$ -
Insurance	$ 12,810	$ 10,960	$ 555	$ 723	$ 572
	$ 283,043	$ 281,193	$ 555	$ 723	$ 572
Other Special Funds					
Wetland	$ 3,788	$ 3,409	$ 189	$ 189	$ -
Law Enforcement	$ 1,677	$ 1,584	$ 46	$ 26	$ 21
Recreation	$ 141,218	$ 141,218	$ -	$ -	$ -
Title V	$ 27,739	$ 27,739	$ -	$ -	$ -
Total Other	$ 174,422	$ 173,950	$ 236	$ 215	$ 21
Total Special Revenue	$ 2,341,219	$ 2,060,245	$ 109,649	$ 79,178	$ 92,147
Capital - Water Wells	$ 292,560	$ 279,230	$ 5,119	$ 6,901	$ 1,310
Expendable Trust Funds	$ 312,801	$ 312,801	$ -	$ -	$ -
Non Expendable Trust Funds	$ 2,700	$ 2,700	$ -	$ -	$ -
Total Revenues	**$ 21,221,466**	**$ 18,192,240**	**$ 1,222,821**	**$ 996,869**	**$ 809,535**
		85.73%	5.76%	4.70%	3.81%

EXPENDITURES	Actual	Residential	Commercial	Industrial	Farm and Open
General Government					
Moderator	$ 400	$ 383	$ 6	$ 6	$ 5
Board of Selectmen	$ 42,926	$ 41,123	$ 616	$ 606	$ 581
Town Administrator	$ 319,966	$ 306,526	$ 4,589	$ 4,520	$ 4,331
Finance Committee/Accountant	$ 73,973	$ 70,866	$ 1,061	$ 1,045	$ 1,001
Board of Assessors	$ 102,033	$ 87,297	$ 4,422	$ 5,757	$ 4,556
Treasurer/Collector	$ 198,950	$ 190,593	$ 2,853	$ 2,811	$ 2,693
Information Technology	$ 40,045	$ 38,363	$ 574	$ 566	$ 542
Town Clerk	$ 103,994	$ 90,758	$ 3,972	$ 5,171	$ 4,092
Conservation Commission	$ 15,649	$ 11,059	$ 595	$ 656	$ 3,339
Planning Board	$ 14,951	$ 11,175	$ 1,713	$ 1,976	$ 87
Zoning Board of Appeals	$ 16,150	$ 12,071	$ 1,851	$ 2,134	$ 94
Land Trust/Open Space Comm.	$ 1,748	$ -	$ -	$ -	$ 1,748
Total General Government	$ 930,785	$ 860,215	$ 22,251	$ 25,248	$ 23,071
Public Safety					
Police	$ 1,110,249	$ 999,366	$ 39,337	$ 39,939	$ 31,606
Animal Control Officer	$ 32,983	$ 25,331	$ -	$ -	$ 7,651
Communications	$ 266,267	$ 237,754	$ 9,597	$ 9,198	$ 9,718
Fire Department	$ 587,701	$ 510,976	$ 33,020	$ 22,067	$ 21,638
Ambulance	$ 275,689	$ 275,689	$ -	$ -	$ -
Inspection	$ 84,397	$ 75,583	$ 3,829	$ 4,985	$ -
Total Public Safety	$ 2,357,285	$ 2,124,700	$ 85,782	$ 76,189	$ 70,614
Education	$ 9,417,704	$ 9,417,704	$ -	$ -	$ -
Public Works					
Highway/Streets	$ 256,117	$ 219,129	$ 11,101	$ 14,451	$ 11,436
Highway/Streets, Other	$ 1,410,555	$ 1,275,445	$ 40,549	$ 52,787	$ 41,774
Street Lighting	$ 29,995	$ 28,549	$ 1,446	$ -	$ -
	$ 1,696,667	$ 1,523,122	$ 53,096	$ 67,239	$ 53,210
Human Services					
Health & Clinical Services	$ 58,122.80	$ 49,300	$ 8,823	$ -	$ -
Special Program (COA)	$ 93,810	$ 93,810	$ -	$ -	$ -
Veteran's Services	$ 10,784	$ 10,784	$ -	$ -	$ -
	$ 162,717	$ 153,894	$ 8,823	$ -	$ -
Culture and Recreation					
Library	$ 308,759	$ 308,759	$ -	$ -	$ -
Recreation	$ 78,185	$ 78,185	$ -	$ -	$ -
Historical Commission	$ 612	$ 612	$ -	$ -	$ -
Town Hall Painting	$ 14,660	$ 12,543	$ 635	$ 827	$ 655
	$ 402,216	$ 400,099	$ 635	$ 827	$ 655
Debt Service					
Retirement of Debt Principal	$ 1,401,000	$ 1,371,937	$ 12,100	$ 9,827	$ 7,136
Interest on Long Term Debt	$ 798,944	$ 774,134	$ 10,065	$ 8,373	$ 6,371
Intergovernmental Assessments	$ 67,528	$ 57,776	$ 2,927	$ 3,810	$ 3,015

EXPENDITURES	Actual	Residential	Commercial	Industrial	Farm and Open
Unemployment	$ 22,944	$ 21,980	$ 329	$ 324	$ 311
Health Insurance	$ 808,223	$ 774,273	$ 11,590	$ 11,418	$ 10,941
Other Employee Benefits	$ 40,071	$ 38,387	$ 575	$ 566	$ 542
Other Insurance	$ 107,086	$ 102,588	$ 1,536	$ 1,513	$ 1,450
Retirement	$ 279,064	$ 267,342	$ 4,002	$ 3,942	$ 3,778
	$ 1,257,387	$ 1,204,570	$ 18,032	$ 17,764	$ 17,021
Total General Fund Expenditures	**$ 18,492,232**	**$ 17,888,150**	**$ 213,713**	**$ 209,277**	**$ 181,093**
SPECIAL FUNDS					
Grants					
CDBG	$ 71,445	$ 71,445	$ -	$ -	$ -
Fire Equipment	$ 143,110	$ 124,427	$ 8,041	$ 5,373	$ 5,269
Community Policing	$ 27,673	$ 26,142	$ 761	$ 430	$ 340
Bullet Proof Vests	$ 750	$ 709	$ 21	$ 12	$ 9
Highway Safety	$ 2,973	$ 2,663	$ 135	$ 176	$ -
Fire Safety - School	$ 3,185	$ 3,185	$ -	$ -	$ -
Fire Equipment	$ 3,813	$ 3,315	$ 214	$ 143	$ 140
Chapter 90	$ 1,219,423	$ 1,043,314	$ 52,854	$ 68,806	$ 54,450
Council on Aging	$ 5,987	$ 5,987	$ -	$ -	$ -
Library	$ 5,207	$ 5,207	$ -	$ -	$ -
Library Technology	$ 4,519	$ 4,519	$ -	$ -	$ -
Cultural Council	$ 3,579	$ 3,579	$ -	$ -	$ -
Total Grants	$ 1,491,664	$ 1,294,490	$ 62,026	$ 74,939	$ 60,209
Revolving Funds					
Council on Aging	$ 1,040	$ 1,040	$ -	$ -	$ -
Deputy Collector (MV Percentage)	$ 11,226	$ 11,226	$ -	$ -	$ -
Fair	$ 73,206	$ 36,603	$ -	$ -	$ 36,603
Gasoline (Light Department)	$ 33,704	$ 30,338	$ 1,949	$ 1,396	$ 21
Planning Department	$ 3,698	$ 2,649	$ 489	$ 560	$ -
Recycling	$ 43,095	$ 43,095	$ -	$ -	$ -
Total Revolving Funds	$ 165,969	$ 124,950	$ 2,438	$ 1,956	$ 36,624
Gifts & Donations					
Police Gift	$ 1,475	$ 1,475	$ -	$ -	$ -
Fire	$ 2,910	$ 2,910	$ -	$ -	$ -
MCI Trailer	$ 13,613	$ -	$ 13,613	$ -	$ -
Library	$ 3,786	$ 3,786	$ -	$ -	$ -
Wachusett EMS	$ 1,965	$ 1,965	$ -	$ -	$ -
Total Gifts & Donations	$ 23,749	$ 10,136	$ 13,613	$ -	$ -
Receipts Res. for Appropriation					
Insurance	$ 15,130	$ 14,494	$ 217	$ 214	$ 205

EXPENDITURES	Actual	Residential	Commercial	Industrial	Farm and Open
Other Special Funds					
Wetland	$ 1,246	$ 1,121	$ 62	$ 62	$ -
Law Enforcement	$ 1,272	$ 1,272	$ -	$ -	$ -
Recreation	$ 180,761	$ 180,761	$ -	$ -	$ -
Total Other	$ 183,279	$ 183,154	$ 62	$ 62	$ -
Total Special Funds	**$ 1,879,791**	**$ 1,627,226**	**$ 78,356**	**$ 77,171**	**$ 97,038**
Capital Projects					
Butterick	$ 15,670	$ 15,670	$ -	$ -	$ -
Water Wells & Repairs	$ 201,760	$ 192,567	$ 3,530	$ 4,759	$ 903
Total Capital Projects	**$ 217,430**	**$ 208,237**	**$ 3,530**	**$ 4,759**	**$ 903**
Expendable Trust Funds	$ 23,274	$ 23,274	$ -	$ -	$ -
Total Expenditures	$ 20,612,727	$ 19,746,887	$ 295,599	$ 291,207	$ 279,034
%of total		95.80%	1.43%	1.41%	1.35%
Total minus admin	$ 18,663,950	$ 17,879,968	$ 267,652	$ 263,676	$ 252,654
	$ 1,948,777	95.80%	1.43%	1.41%	1.35%

Findings	Actual	Residential	Commercial	Industrial	Farm and Open
Total Revenue	$ 21,221,466	$ 18,192,240	$ 1,222,821	$ 996,869	$ 809,535
		85.73%	5.76%	4.70%	3.81%
Total Expenditure	$ 20,612,727	$ 19,746,887	$ 295,599	$ 291,207	$ 279,034
		95.80%	1.43%	1.41%	1.35%
Net (rev-exp)	$ 608,739	$ (1,554,646)	$ 927,222	$ 705,662	$ 530,501
Ratio (revenue/expenditure		1.09	0.24	0.29	0.34