Appendix I
Impact Fee Studies

PREPARED FOR:
TOWN OF WILLISTON, VERMONT AND CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION (CCRPC)

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The Town of Williston, Vermont

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ACS	American Community Survey
CCRPC	Chittenden County Regional Planning Commission
CLA	Common Level of Appraisal
ITE	Institute of Transportation Engineers
PMT	Person miles traveled
TDM	Transportation demand management
VMT	Vehicle miles traveled
TAZ	Traffic Analysis Zone
CIP	Capital Improvement Program

1.0 INTRODUCTION

This impact fee study report summarizes the need for future infrastructure and identifies a fair, rational connection for new development to pay for the additional demands placed on that infrastructure.

Vermont statute (24 V.S.A., Chapter 131) authorizes municipalities to levy impact fees on new development as a means of allocating the cost of new capital facilities to the development that will benefit from those facilities. This can include fees to offset the costs of facilities built in the past with excess capacity for anticipated future development; it can also include facilities planned to be built to accommodate future development. The costs of such infrastructure shall only include the portion associated with new capacity to accommodate the future development's demand.

This impact fee study report outlines the future growth anticipated for the Town of Williston and documents the basis for implementing a transportation impact fee to pay for additional capacity associated with the increased demand for transportation mobility while conforming to the conditions imposed by 24 V.S.A., Chapter 131.

1.1 LEGAL BACKGROUND

Basic impact fee standards according to the American Planning Association

- The imposition of a fee must be rationally linked (the "rational nexus") to an impact created by a particular development and the demonstrated need for related capital improvements pursuant to a capital improvement plan and program.
- Some benefit must accrue to the development as a result of the payment of a fee.
- The amount of the fee must be a proportionate fair share of the costs of the improvements made necessary by the development and must not exceed the cost of the improvements.
- A fee cannot be imposed to address existing deficiencies except where they are exacerbated by new development.
- Funds received under such a program must be segregated from the general fund and used solely for the purposes for which the fee is established.
- The fees collected must be encumbered or expended within a reasonable timeframe to ensure that needed improvements are implemented.
- The fee assessed cannot exceed the cost of the improvements, and credits must be given for outside funding sources (such as federal and state grants, developer initiated improvements for impacts related to new development, etc.) and local tax payments which fund capital improvements, for example.

- The fee cannot be used to cover normal operation and maintenance or personnel costs, but must be used for capital improvements, or under some linkage programs, affordable housing, job training, child care, etc.

Typical management activities

- The fee established for specific capital improvements should be reviewed at least every two years to determine whether an adjustment is required, and similarly the capital improvement plan and budget should be reviewed at least every 5 to 8 years.
- Provisions must be included in the ordinance to permit refunds for projects that are not constructed, since no benefit will have manifested.
- Impact fee payments are typically required to be made as a condition of approval of the development, either at the time the building or occupancy permit is issued.

Vermont's impact fee statute does not preclude the use of funds for administrative duties associated with the management of the impact fee program. Nationally, it is common practice to collect and expend impact fees to cover time and expenses associated with the creation, management, and other administration of the impact fee program. These funds often cover the salary portion of the impact fee administrator, staff time in the preparation and review of impact fee studies, consultant or staff time preparing impact fee needs reports and ordinance support.

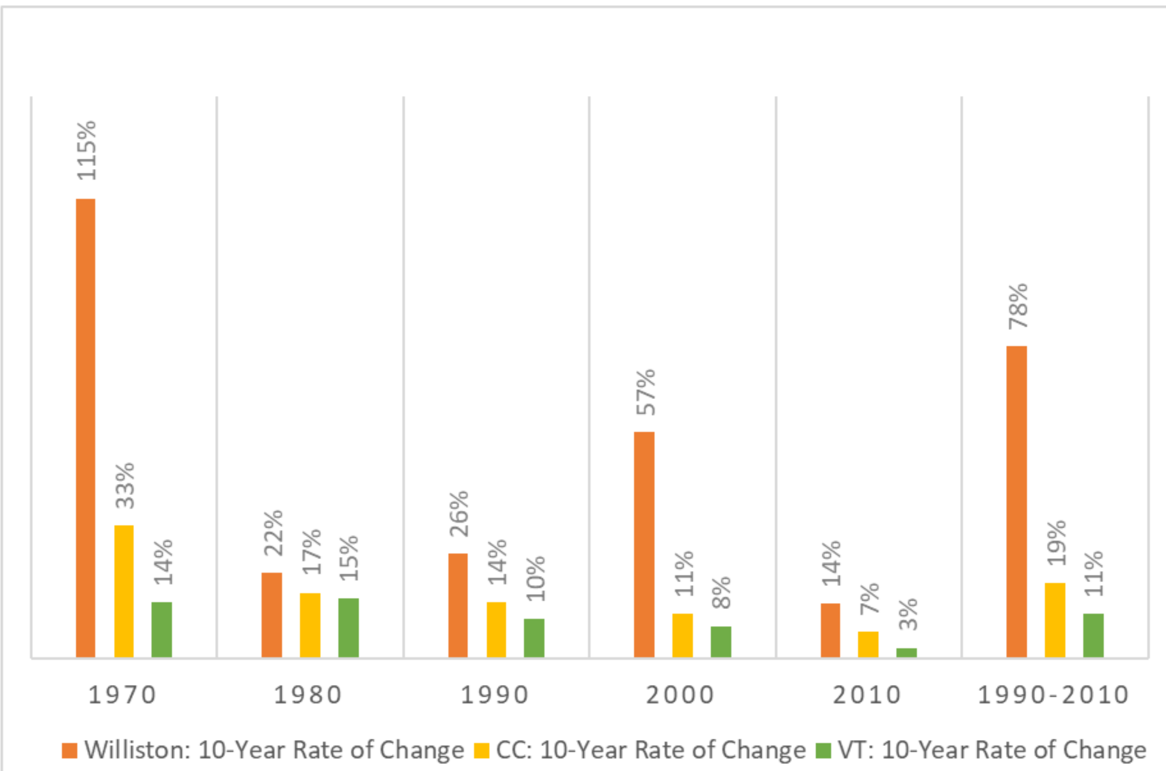
2.0 GROWTH AND DEVELOPMENT

2.1 POPULATION

The Town of Williston has 9,341 persons as of the 2017 American Community Survey (5-year estimates) making it the 6th most populous community within Chittenden County.

The Town has seen consistent demand for housing, originally as a bedroom community for the larger employment centers in Burlington, South Burlington, and Essex. However, since the 1990s, Williston diversified its land use to become a major commercial destination in the Taft Corners area. The population continued to grow at rates far higher than those experienced within Vermont and Chittenden County. Figure 1 shows the 10-year growth rates for Williston, Chittenden County, and Vermont.

FIGURE 1: HISTORICAL POPULATION GROWTH RATES



source: Williston Town Plan

2.2 HOUSEHOLDS

The Town of Williston has traditionally assessed residential impact fees at a household unit. The American Community Survey estimates that as of 2017, there are 3,897 households.

The majority of the households, 78%, are owner occupied with an average of 2.42 persons per household. The remaining 22% of households are renter occupied with 2.21 persons per household[1].

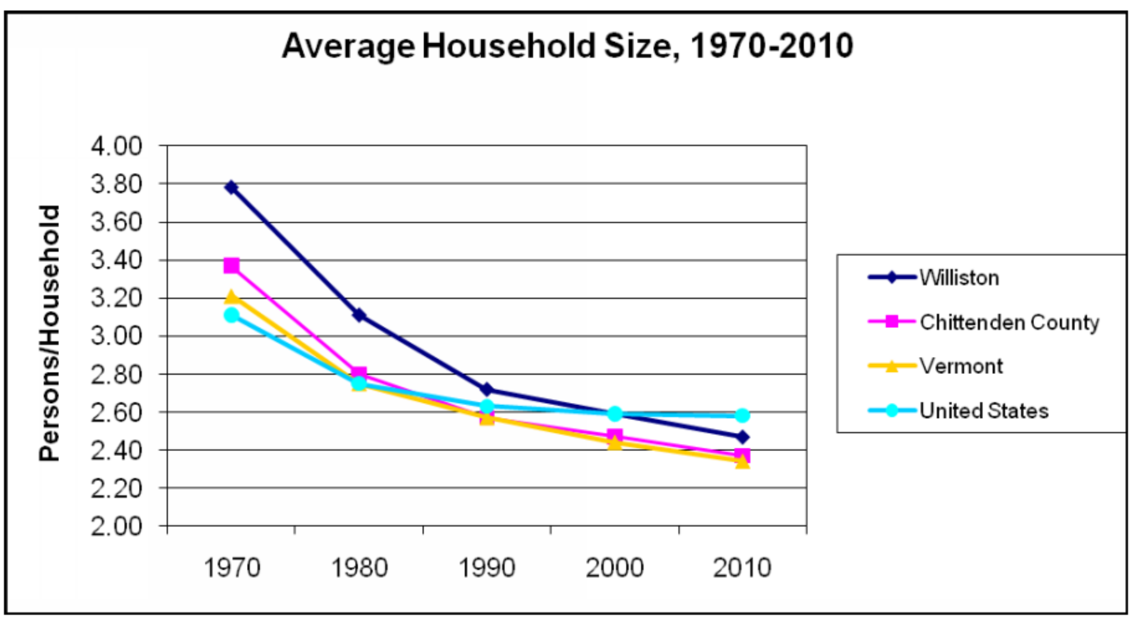
There have been attempts nationally to reduce the effect that transportation impact fees may have on housing costs, and especially, “affordable housing.” Changing the assessment on the square footage of the home or on the number of bedrooms provides a stronger relationship to the number of occupants and the quantity of travel consumed.

Nationally, over the past half century the average size (number of persons) of the household has dropped from 3.67 persons per household in 1940 to 2.53 in 2016 as shown in Figure 2.

FIGURE 2: AVERAGE HOUSEHOLD SIZE (1940–2016)

source: US Census Data

Williston is no different. According to the Town Plan, the average size of the household has come down in-line with national trends.



source: US Census Data–Williston Town Plan (Figure 2.G)

[1] 2015 American Community Survey 5-year estimates

The 2017 breakdown of households and the number bedrooms is shown in Table 1.

TABLE 1: BEDROOMS BY HOUSEHOLD UNIT (5-YEAR ACS)

HOUSEHOLD BEDROOM COUNT	COUNT	PERCENT
No bedroom	0	0%
1 bedroom	362	9%
2 bedrooms	1,121	29%
3 bedrooms	1,286	33%
4 bedrooms	986	25%
5 or more bedrooms	142	4%
Total housing units	**3,897**	**100%**

2.3 EMPLOYMENT

The Town of Williston is a significant destination for commercial and industrial activity. As of 2015 there were 13,154 persons employed within the Town. Of these, 92.7% live outside of Williston and commute in. 960 live and work in Williston. The 2017 5-year ACS summarizes the jobs within Williston.

TABLE 2: DISTRIBUTION OF EMPLOYMENT SECTORS IN WILLISTON

NAICS DESCRIPTION	% OF WORKERS IN TOWN OF WILLISTON
Accommodation and Food Services	5%
Administrative, Support, Waste Management, Remediation	7%
Agriculture, Forestry, Fishing and Hunting	0%
Arts, Entertainment, and Recreation	1%
Construction	14%
Educational Services	3%
Finance and Insurance	5%
Health Care and Social Assistance	7%
Information	2%
Manufacturing	8%
Other Services (except Public Administration)	3%
Professional, Scientific, and Technical Services	13%
Public Administration	3%
Real Estate and Rental and Leasing	1%
Retail Trade	15%
Transportation and Warehousing	4%
Utilities	0%
Wholesale Trade	7%

Employed individuals within Williston contribute to the demand for travel to, from, and within Williston. During the workday various activities are carried out to support the commercial activities but also there are recreation and health trips that are also generated. Employees require a multimodal transportation infrastructure.

3.0 TRANSPORTATION

3.1 OVERVIEW

The Town of Williston is expected to continue to experience a population growth and land use development at pace exceeding both Vermont and Chittenden County averages. The Exit 12 Growth Center is the hub of the commercial activity and is becoming increasingly diverse in land use, particularly east of VT2A with a large residential area being constructed over the past decade. The Town's Comprehensive Plan articulates a vision with several land use and transportation goals to manage and facilitate the growth to meet the needs of the community.

The Town's Plan states a vision to:

- Concentrate and limit high intensity development to areas within the Town's designated Growth Center in and around Taft Corners.
- Permit the flexibility and intensity of use necessary to foster creation of a design-conscious, mixed use, pedestrian-friendly commercial center around Taft Corners.
- Encourage and support the use of mass transit and non-motorized modes of transportation through mixed use development policies and transportation facilities planning.

The Town plans to achieve this vision by:

- Working with Developers to Build Grid Streets.
- Working with VTrans on Other Circulation Improvements.
- Developing a Master Transportation Plan comprised of a Major Road Plan, Sidewalks, paths and Trail Network, a Public Transportation Plan, and Connectivity between networks and land use.

Impact fees are an important tool that the Town can leverage by assessing fees on new land use development that would generate additional traffic and transportation demands placing a burden on the existing facilities and would benefit from additional transportation capacity.

3.2 IMPACT FEE BASIS

It is understood that future development generates additional new local demand for travel that begins and/or ends within the Town. Additional growth in population throughout the county and state generates additional demand for travel, although those trips begins and ends outside of the Town; and therefore, not directly associated with future development in the Town. These trips are considered “through trips”.

The impact fee analysis focuses on local traffic generated by anticipated future development. The basic unit of analysis is the Peak Hour Trip End, which is either the origin or the destination of a trip. Any given trip has two trip ends—an origin and a destination. Any trip that either begins or ends within the Town is considered to be a local trip.

The impact fee will also be assessed on a trip, regardless of mode. The Vermont State Legislature under Act 34 of 2011 identified the “complete street” principles that defined transportation capacity consistently regardless of travel mode. The projects in Table 6 add multimodal capacity – offering residents, employees, patrons a variety of modal travel options.

The PM peak hour is the analysis hour in which the fee is assessed on the number of peak hour vehicle trips. The PM peak hour is the typical design hour[2] in the Town of Williston. It is noted that specific developments may generate a significant number of vehicle trips outside the design hour. Some uses (a church, for example) may have different peak hours of traffic generation. Cumulatively however, the highest traffic volume at most locations in Williston is during the PM peak design hour, as defined here.

Traffic impact fees are not assessed on trips that occur outside of the PM peak design hour. Limiting the period of assessment to the PM peak hour creates a common hour of analysis and provides the rational nexus required to assess impact fees. By assessing a fee during a particular hour of analysis the fee also acts as a transportation demand management (TDM) technique. This can encourage the development of land uses that generate travel demand outside of the peak hours to more efficient use of the existing transportation infrastructure by using available capacity at other times of the day. This same principle goes for shifting modes. As congestion may rise for one mode of travel, some users will shift modes to utilize spare capacity.

[2] Design Hour is defined as the 30th highest hour of volume during the year.

4.0 FUTURE TRAVEL DEMAND

4.1 OVERVIEW

The Town of Williston is anticipated to continue to receive a higher share of the county growth than other towns and communities within Chittenden County. The CCRPC Regional Travel Demand Model is a comprehensive tool to forecast the number of trips and traffic to be generated by future growth and land use development within Willison and the County. The tool was used to estimate the amount of traffic growth likely by 2030. The future year 2040 was forecast only after the initial base impact fees were calculated and after considering the feasibility of constructing the projects identified for impact fee funding.

4.2 OVERVIEW OF CHITTENDEN COUNTY TRANSPORTATION MODEL

In 2015 the CCRPC initiated a significant update to the regional travel demand model that included population and employment projections for each municipality for five year increments out to 2050. The CCRPC forecasts were used as the initial base that the Town amended given more recent information on land use and anticipated changes. The land use changes were entered back into the CCRPC Regional Travel Demand Model and run to generate estimates of new traffic generation, vehicle miles traveled, and percentage of growth in traffic that is through vs. local (see Section 3.0 above).

The model is a traditional four-step trip based travel demand model. The four steps are iterated to achieve an optimized routing pattern with stable travel times. The steps are defined as follows:

- Trip Generation – estimates the number of person trips produced and attracted to each Traffic Analysis Zone (TAZ). The land use inputs were established with each community by allocated future households and employees manually to the TAZs.
- Trip Distribution – connects person trips between TAZs.
- Mode Choice – splits person trips into single occupant vehicles, shared vehicle trips, transit trips, or walk/bike trips.
- Assignment – Selects the shortest route for each vehicle and transit trip traveling from one TAZ to another based on distance and travel time.

4.3 TRIP GENERATION FORECASTS

This study identified the anticipated changes to occur in Williston by 2030. The land use changes included household growth and increases in specific sectors of the economy. In total, an estimated 612 new households would be constructed by 2030 and 2,584 new employees would be based in Williston.

TABLE 3: LAND USE CHANGES ANTICIPATED IN WILLISTON BY 2030

2015 - 2030 LAND USE CHANGES		
Residential Growth		**Housing Units**
	New households	**612**
Employment Growth		**Employees**
	Accommodations	24
	Commercial	974
	Industrial	735
	Institutional	164
	Educational	15
	Retail	672
	Total Employment Growth	**2,584**

These land use changes were evaluated in the travel model in addition to all the other growth and changes in land uses within the county by 2030. The regional travel model accounts for growth in other communities within Chittenden County as well as estimated growth for trips that originate outside the county and for trips that may only pass through the county. While the model accounts for walking, biking, and transit, the trips that are outputs of the model are vehicle trips only.

The local land use growth in Williston and the growth occurring within Chittenden County and the state all increase the total vehicle miles traveled (VMT) on the roads in Williston. Table 4 shows the portion of VMT growth associated with land use (origin or destination) in Williston and total VMT using Williston's roads, excluding any VMT on the I-89 freeway. The local share of the change in VMT is 69%.

TABLE 4: LOCAL VS. TOTAL VMT CHANGE

	Local VMT (Non-Highway)			Total VMT (Non-Highway)	
	PM	Daily		PM	Daily
2015	16,471	191,043	2015	23,631	262,920
2030	18,382	213,678	2030	26,422	293,397
Change in VMT	**1911**	**22,634**		**2,792**	**30,477**

Additional adjustments are necessary to convert the travel model analysis into a multimodal forecast of total trip making in Williston. The number of vehicle trips forecast from the travel model is the net result after the model accounts for a variety of considerations. Much like a traffic study using the Institute of Transportation Engineers (ITE) Trip Generation manual has to adjust for density, site location (e.g. urban, suburban), proximity to transit, and mix of nearby uses – the travel model accounts for all these factors. Specifically, the factors: TDM and non-auto travel, internal capture (mix of complementary land uses within a travel analysis zone), and pass-by (trips that detour to a location en route to their primary destination).

These adjustments are applicable in a large part of Williston that has seen rapid growth and development as well as increase in the diversity and mix of land uses. The density, diversity, and design (the three D's) of the land uses in the highlighted areas of Williston enable individuals to travel between land uses without using major roads, are close enough to allow for walking, biking, and are the locations primarily served by transit. The effect of the three D's in this area reduces the net number of vehicle trips by 45%.

The land use changes in the area shown in Figure 3 includes 543 housing units and 2,295 new employees by 2030. The ITE trip generation for these land uses indicates that around 2,449 trips would be generated. After accounting for the three D's, the net number of new vehicle trips from the area in Figure 3 is forecast to be 1,347.

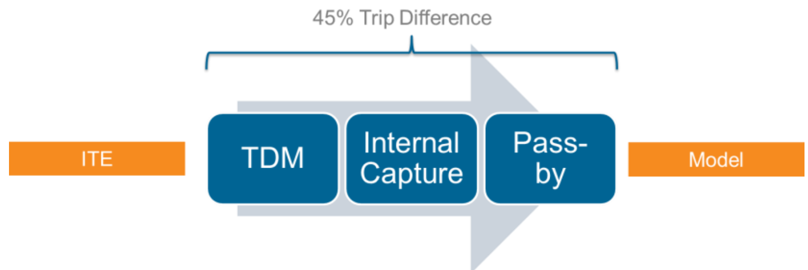
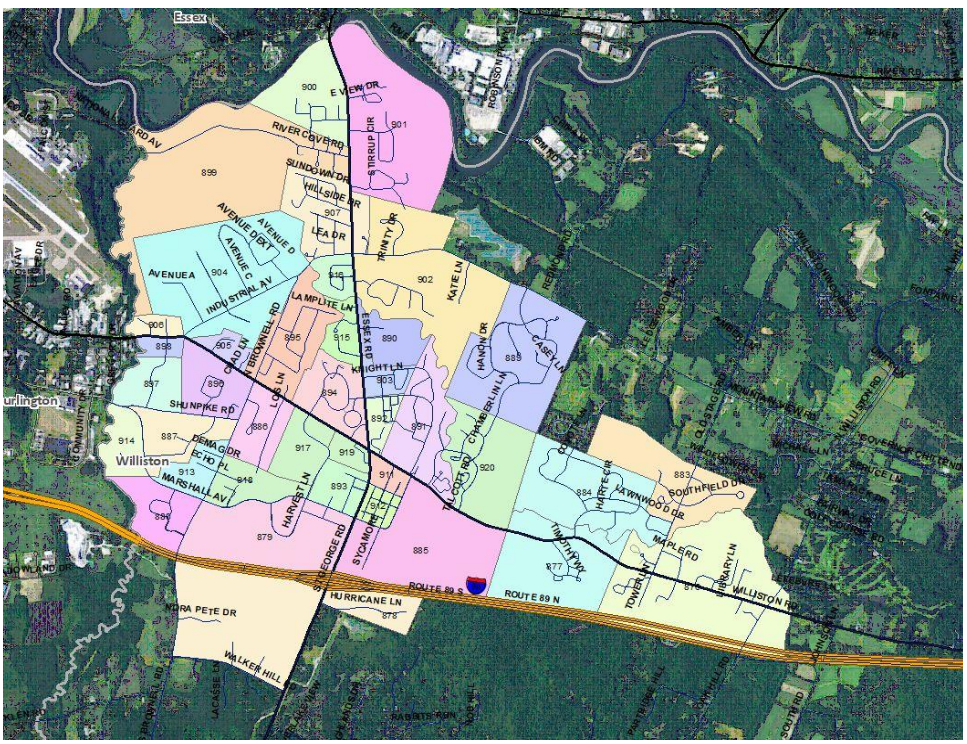


FIGURE 3: GROWTH AND DIVERSITY LAND USE ZONES IN WILLISTON

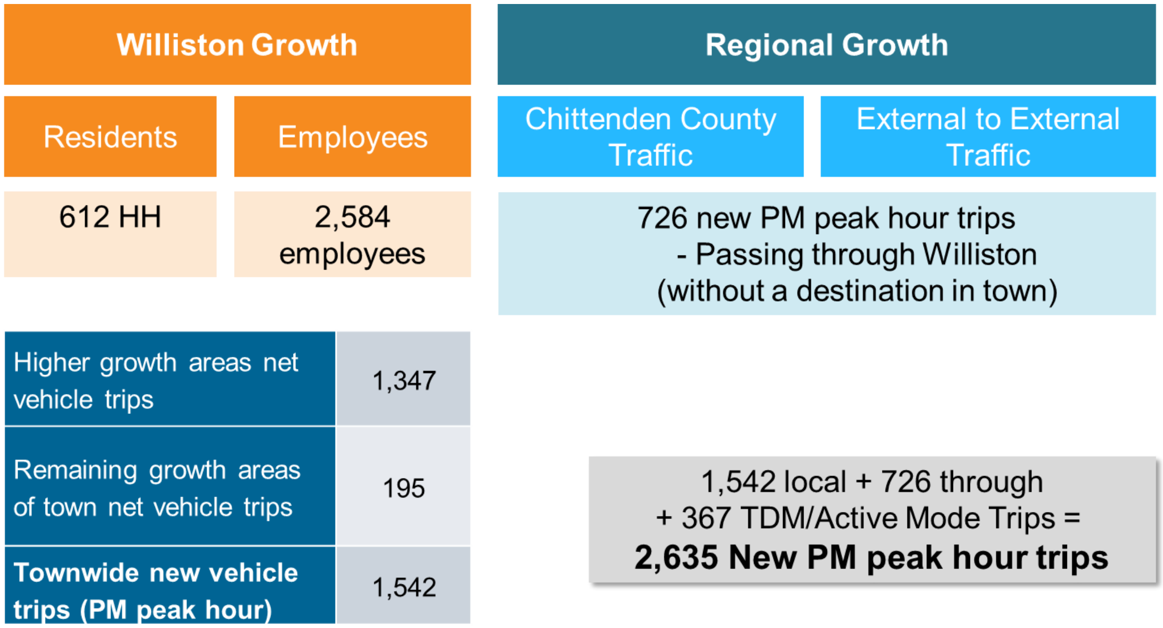


The remaining areas of Williston will experience more modest growth of 69 new housing units and 286 new employees by 2030. These land uses are expected to be located in areas that will not benefit from diversity of land uses or proximity to avoid traveling by car and therefore expected to generate 196 new peak hour vehicle trips.

By 2030, the Town is anticipated to generate an additional 1,542 new vehicle trips during the PM peak hour. The combination of vehicle trips, non-motorized trips, and trips that pass through

Williston are shown in Figure 4, resulting in 2,635 new total PM peak hour trips in Williston by 2030.

FIGURE 4: 2030 TRAFFIC GROWTH CHANGES



Estimating Growth from 2030 to 2040

The travel demand model provided forecasts for the transportation demand associated with the land use changes from 2015 to 2030. It was determined during the course of the study that the projects being pursued would benefit from extending over a longer time period – stretching to 2040. The growth forecasts developed by the CCRPC estimates that households and employment would grow by 9.8% between 2030 and 2040. The person trips for 2040 was forecast by extrapolating the growth from 2015 to 2030, resulting in an 8% increase from 2030. The difference is that not all land uses generate trips at the same quantity during the PM peak hour.

TABLE 5: LAND USE CHANGES BY 2040

	TOTAL UNITS BY 2040	CHANGE (2015 – 2040)
Households	4,913	1,050
Employment	17,389	4,146
Trips	9,806	2,845

5.0 PROJECTS

The Town has identified seven number of projects eligible for impact fee expenditures. Table 6 shows the transportation capital projects identified for local funding.

All the projects have been developed over many years through the course of several transportation studies, plans, and community conversations. There is evidence that the standard of service of transportation will deteriorate in the absence of these improvements.

TABLE 6: WILLISTON TRANSPORTATION IMPACT FEE PROJECTS

PROJECT DESCRIPTION	LOCAL PORTION OF PROJECT
Shared-Use Path along US 2 Taft Corners to Village Local portion for preliminary design and engineering.	$100,000
Marshall Avenue Shared-Use Path. The Williston segment would start where Marshall Ave and Kimball St meet, follow the south side of Marshall Ave, and end at the existing path on Marshall Ave.	$200,000
East-West Grid Street (VT-2A to Maple Tree Place). New road with bike lanes, and sidewalks that is south of the State Police Barracks then curves to the north, running along the east side of Dick's Sporting Goods.	$1,530,000
Upgrade Maple Tree Place Roundabout. Geometric changes and connect to the new East-West Grid Street.	$1,000,000
Industrial Avenue Sidewalk and Bike Lanes.	$846,800
Extension of Trader Lane to US-2	$1,750,000
Mountain View Road Bike Lanes. Local portion for preliminary design and engineering.	$100,000
Total projects	**$5,526,800**

5.1 STANDARD OF SERVICE TESTS

An impact fee fundamental tenant is that the growth and development does not pay for more than their proportion of impact, or their ‘fair share’. This can be evaluated by comparing the current standard of service to the standard of service with and without the impact fee projects.

There are two methodologies used in this test.

a) Ratio of linear miles.

b) Person miles of capacity.

Ratio Expansion of Capacity

The Town of Williston has a diverse and widespread transportation network. Excluding the I-89 Interstate, there are 164 lane miles of roads, 3.64 miles of bike lanes, and 4.6 miles of shared use paths. There is also an extensive sidewalk network.

The existing supply of transportation infrastructure within the Town of Williston is summarized in Table 7. GIS data and aerial imagery were used to calculate the supply. The existing number of households and employees were used to develop a ratio of users per mile of infrastructure.

TABLE 7: EXISTING SUPPLY OF TRANSPORTATION FACILITIES

	MILES	RATIO: HH PER MILE	RATIO: EMPLOYEES PER MILE
Vehicle miles	164.514	23.5	80
Bike lanes	3.64	1,061.5	3,638
Shared use path	4.6	840	2,879

The ratio of users per mile of infrastructure is used to calculate the supply (miles) of new vehicle lanes, bike lanes, and shared use paths by 2040. The supply necessary to maintain the current ratios (miles per unit of growth) is shown next to the supply being provided in the impact fee projects.

TABLE 8: RATIO EXPANSION OF CAPACITY

	HH CHANGE 2040 [A]	EMPLOYEE CHANGE 2040 [B]	CHANGE IN MILES DUE TO HH [C]	CHANGE IN MILES DUE TO EMPLOYMENT [D]	RATIO BASED CAPACITY EXPANSION *AVG. CHANGE IN MILES* *E =AVG [C:D]*	CAPACITY OF IMPACT FEE PROJECTS [F]
Vehicle miles	1,050	4,146	45	52	48	1.46
Bike lanes	1,050	4,146	.99	1.14	1.06	9.20
Shared use path	1,050	4,146	1.25	1.44	1.34	1.95

Table 8 shows high number of lane miles suggested by the current ratio of lane miles to unit of growth, especially compared to the number of lane miles planned in the impact fee projects (column F).

The Town of Williston is looking to provide residents and guests the opportunity to change the way travel is done rather than continue the status quo. A ratio based expansion in the number of linear miles of infrastructure retains the existing proportions and doesn't easily translate to shifting capacity from vehicle miles to bike lane miles, for example.

Person Miles of Capacity

Vermont's Complete Street legislation in 2011 (Act 34 H.198) directed that all users of the transportation system (regardless of mode) are considered in all state and municipally managed transportation projects. The recognition that all users of the system are equally valued in the development of projects provides the context for developing a mode-agnostic person miles capacity analysis of the transportation system in Williston. The existing transportation system has a capacity for nearly 157,000 person miles during the PM peak hour.

TABLE 9: PERSON MILES CAPACITY IN WILLSTON - 2015

INFRASTRUCTURE	MILES	PERSON CAPACITY[3] (TARGET V/C RATIO ~.5)	PERSON MILES CAPACITY
Vehicle Miles	164.5	900	148,063
bike lanes	3.64	800	2,912
shared use path	4.6	1,250	5,750
		Total Person Miles Capacity	**156,725**

The VMT analyzed in the regional travel demand model is converted to person miles traveled (PMT) using the data in the 2009 National Household Travel Survey data Vermont add-on for the Williston census blocks. The VMT to PMT factor is 1.38.

TABLE 10: VMT TO PMT - 2015

2015 peak hour PM VMT	23,631
VMT to PMT factor	1.38
2015 peak hour PM PMT	31,322

Converting the capacity of the existing transportation system in Williston to PMT enables a mode-agnostic analysis of future capacity and demand for mobility.

Table 11 shows the translation from existing capacity, existing capacity to demand ratio (5.0), and using that ratio to assess what future capacity is needed to meet the needs of future residents, and lastly what portion of that future demand is met by the impact fee projects.

TABLE 11: PMT SYSTEM CAPACITY AND FUTURE DEMAND

	Person miles capacity (pm pk hr)
Vehicle Miles (1 direction)	148,063
Bike lanes	2,912
Shared use path	5,750
2015 Person Miles Capacity	**156,725**
2015 Person Miles Traveled (PM pk hr)	31,322
2015 Capacity to Demand Ratio (capacity / PMT)	5.0
2040 Person Miles Traveled (PM pk hr)	37,097
2040 Capacity to Demand Ratio	5.0
New Capacity - demanded (2015-2040) (new PMT x 5)	**28,900**
Impact Fee Supplied Person Miles Capacity	**12,933**

Table 11 indicates that the standard of service test is past

[3] NACTO, TRB, HCM 6th Edition (see appendix TBD)

- There is a deterioration of the existing standard experience within the Town of Williston due to future growth and land use development. In the absence of the impact fee projects the standard (supply to demand) ratio falls from 5.0 to 4.22.
- The fee projects funded by impact fees levied on future growth and land use development does not improve conditions above what is experienced today. Adding the new capacity to the existing capacity would result in a slight deterioration of overall standards of service (supply to demand) ratio of 5.0 to 4.57.

6.0 BASE IMPACT FEE

Base impact fees are the raw, unadjusted fees which are later discounted for credits and other incentives. The fee will be charged on a PM peak hour per trip basis. This is consistent with the current ordinance in Williston. The trip basis is consistent with the Vermont Agency of Transportation's Statewide impact fee enabling legislation, per Act 145 of 2014-Transportation Impact Fees (10 VSA Sections 6101-6111).

The base fee is described by the following equation:

Impact Fee = (Cost per PM Peak Hour Trip) x (New PM Peak Hour trips) – (Applicable Credits)

The base impact fee is calculated as the cost of projects divided by the number of new trips during the PM peak hour as shown in Table 12.

TABLE 12: COST PER PM PEAK HOUR TRIP

Cost of Impact Fee Projects (Table 6)	$5,526,800
Number of new PM Peak Hour Trips (Table 5)	2,845
Cost per PM Peak Hour Trip	**$1,943**

6.1 CREDITS

Credits are adjustments to the base impact fee that a land use would be assessed. Within the Town of Williston two credits are possible; infrastructure credit and revenue credits.

Infrastructure Credits

Any land use development that physically constructs any project identified in Table 6 is eligible for a reduction in impact fees, up to the total amount of the impact fee liability. If the cost of the project exceeds the impact fee liability, the Town has the latitude to allow that credit to offset future impact fees imposed on the entity that constructed the infrastructure project. The credit is also applicable even if the project was a condition of the land use development during the review process. This reduces the perception of double payments and incentivizes development in areas identified for transportation infrastructure.

Revenue Credits

Revenue credits discount the base impact fee to reduce the chance that a land use development in the Town would be funding the same capital improvement through two different funds. This frequently occurs when a land to be developed pays property taxes (prior to the development of the land and after the development), when a portion of which goes to fund the capital project that the impact fee contributed toward. In this case, it is necessary to offset the impact fee by a credit value to eliminate the double payment toward the same capacity. The credits equal the discounted present value of the stream of tax payments used for those expenditures.

The Town of Williston's impact fee is based on the total number of new PM peak hour trips that will consume transportation capacity. Not all new trips are associated with changes in land use development – roughly 32% of the new trips are associated with trips that neither originate nor are destinated for points in Williston. Therefore, $1,768,576, or 32% of the cost of the impact fee projects will be borne by other, non-impact fee funds – namely the property tax. This equates to $84,218 annually to be raised by the property tax.

The stream of tax payments is broken into two parts – that which occurs before the land use development occurs (called **past tax payments**), and that which occurs after the development comes onto the grand list (called **future tax payments**). The past tax payment determines the amount of tax payments on the raw land made prior to the payment of the impact fee. The future tax payment accounts for the stream of future tax payments made on the new development after the impact fee was paid.

Residential Development

Past Tax Payments

The predevelopment tax payments for any given residential development. For example, a dwelling constructed in 2022 includes tax payments made in years 2019 through 2021. This stream of payments is converted to the net present value in the year of construction, using a discount rate of 5%. Table 13 summarizes the value of predevelopment credits for a housing unit

TABLE 13: RESIDENTIAL REVENUE CREDIT FOR PREDEVELOPMENT TAX PAYMENTS

FISCAL YEAR	ANNUAL EXPENSE	TAX RATE NEEDED	TAX ON SINGLE FAMILY UNIT	TAX ON MULTI-FAMILY UNIT
2019	$0	0.000000	$0.00	$0.00
2020	$84,218	0.003968	$1.98	$0.99
2021	$84,218	0.003890	$1.95	$0.97
2022	$84,218	0.003814	$1.91	$0.95
2023	$84,218	0.003739	$1.87	$0.93
2024	$84,218	0.003666	$1.83	$0.92
2025	$84,218	0.003594	$1.80	$0.90
2026	$84,218	0.003523	$1.76	$0.88
2027	$84,218	0.003454	$1.73	$0.86
2028	$84,218	0.003387	$1.69	$0.85
2029	$84,218	0.003320	$1.66	$0.83
2030	$84,218	0.003255	$1.63	$0.81
2031	$84,218	0.003191	$1.60	$0.80

2032	$84,218	0.003129	$1.56	$0.78
2033	$84,218	0.003067	$1.53	$0.77
2034	$84,218	0.003007	$1.50	$0.75
2035	$84,218	0.002948	$1.47	$0.74
2036	$84,218	0.002890	$1.45	$0.72
2037	$84,218	0.002890	$1.45	$0.72
2038	$84,218	0.002834	$1.42	$0.71
2039	$84,218	0.002778	$1.39	$0.69
2040	$84,218	0.002724	$1.36	$0.68

Once the dwelling is constructed, it pays annual taxes on its new value as a dwelling (building and land). A review of the Town's Grand List data revealed that average assessed value of new single family detached dwellings is $400,000. New multiple family dwellings, the average assessed value is $250,000. The Town's Common Level of Appraisal (CLA) is nearly 1.0[4] and therefore the current assessed value is very close to market value.

Table 14 identifies the annual payments for future years from when the dwelling comes onto the grand list through the end of the programmed expenditures (2040). The credit for the tax payment is the current value of the future stream of tax payments, assuming a discount rate of 5%.

[4] ftp://ftp.act60.tax.state.vt.us/EQ%20STUDY%202018%20CERTIFIED/Williston/

TABLE 14: RESIDENTIAL REVENUE CREDIT FOR FUTURE DEVELOPMENT TAX PAYMENTS

FISCAL YEAR	ANNUAL EXPENSE	TAX RATE NEEDED	TAX ON	TAX ON
2019	$0	0.000000	$0.00	$0.00
2020	$84,218	0.003968	$15.87	$9.92
2021	$84,218	0.003890	$15.56	$9.73
2022	$84,218	0.003814	$15.26	$9.53
2023	$84,218	0.003739	$14.96	$9.35
2024	$84,218	0.003666	$14.66	$9.16
2025	$84,218	0.003594	$14.38	$8.98
2026	$84,218	0.003523	$14.09	$8.81
2027	$84,218	0.003454	$13.82	$8.64
2028	$84,218	0.003387	$13.55	$8.47
2029	$84,218	0.003320	$13.28	$8.30
2030	$84,218	0.003255	$13.02	$8.14
2031	$84,218	0.003191	$12.77	$7.98
2032	$84,218	0.003129	$12.52	$7.82
2033	$84,218	0.003067	$12.27	$7.67
2034	$84,218	0.003007	$12.03	$7.52
2035	$84,218	0.002948	$11.79	$7.37
2036	$84,218	0.002890	$11.56	$7.23
2037	$84,218	0.002834	$11.34	$7.08
2038	$84,218	0.002778	$11.11	$6.95
2039	$84,218	0.002724	$10.90	$6.81
2040	$84,218	0.002670	$10.68	$6.68

The net fee charged per unit comprises the base impact fee minus the predevelopment credit and the post development credit. RSG used the following assumptions to develop the residential revenue credit analysis:

- Average value of empty residential land per acre = $100,000. Assessed with the input from town assessor by looking at an array of land values for smaller sites planned for development as well as more rural and larger sites that could be subdivided in the future. The higher value provides a protection to the Town by creating a larger credit which should avoid any chance of double counting the impact fee revenue.

- Average annual growth of the grand list is 2%. Derived from a long-run average.
- 2019 Town Grand list value is $2,040,000,000. Taxable value is $20,000,000 (tax rate on every $100 of value).

Nonresidential Development

The value of impact fee credits for the nonresidential development is split into two categories: predevelopment and post development. Given the variety of nonresidential construction types, locations, and overall variation in the value that nonresidential land uses have within the grand list, the credit mechanism is based not on an average property value, but based on a unit of $1,000 property value. The predevelopment credit is to be calculated on the assessed value of the land upon which the development has occurred or will occur. This requires some judgment in terms of how a fractional use of a parcel is defined for the value of the nonresidential development. For instance, a five-acre parcel could be 20% for each one-acre subdivision; or, due to concentration within the five acres, the limited development footprint may be closer to 40%.

TABLE 15: NONRESIDENTIAL REVENUE CREDIT FOR PREDEVELOPMENT TAX PAYMENTS

FISCAL YEAR	ANNUAL EXPENSE	TAX RATE NEEDED	TAX ON $1,000 OF VALUE	CREDITS PER $1,000 OF ASSESSED VALUE
2019	$0	0.000000	$0.00	**$0.00**
2020	$84,218	0.004047	$0.04	**$0.00**
2021	$84,218	0.003968	$0.04	**$0.04**
2022	$84,218	0.003890	$0.04	**$0.09**
2023	$84,218	0.003814	$0.04	**$0.13**
2024	$84,218	0.003739	$0.04	**$0.18**
2025	$84,218	0.003666	$0.04	**$0.23**
2026	$84,218	0.003594	$0.04	**$0.28**
2027	$84,218	0.003523	$0.04	**$0.33**
2028	$84,218	0.003454	$0.03	**$0.39**
2029	$84,218	0.003387	$0.03	**$0.45**
2030	$84,218	0.003320	$0.03	**$0.51**
2031	$84,218	0.003255	$0.03	**$0.57**
2032	$84,218	0.003191	$0.03	**$0.64**
2033	$84,218	0.003129	$0.03	**$0.71**
2034	$84,218	0.003067	$0.03	**$0.78**
2035	$84,218	0.003007	$0.03	**$0.85**
2036	$84,218	0.002948	$0.03	**$0.93**

2037	$84,218	0.002890	$0.03	**$1.01**
2038	$84,218	0.002834	$0.03	**$1.10**
2039	$84,218	0.002778	$0.03	**$1.19**
2040	$84,218	0.002724	$0.03	**$1.28**

The post development credit is calculated based on the development value of the *structure*, which also uses $1,000 units of value. The credit is developed as a value per $1,000 of development value. The development value is often included in local development permits and State Act 250 applications. Table 16 assists in the estimation of development property assessment values based on different construction methods, building types, and uses. RSG created the table using an online subscription to RSMeans Square Foot Cost Estimator, which is available for the Burlington Vermont metropolitan area based on 2017 Q2 data. The estimates include general contractor and architectural fees, basic site work elements, and structural building elements. Four generalized types and typical forms of construction often found here in Vermont are included in this analysis.

TABLE 16: 2017 CONSTRUCTION VALUES FOR NONRESIDENTIAL USES BY CONSTRUCTION TYPE (VALUE PER SQUARE FOOT)

Construction Type	Reinforced Concrete or Steel Frame	Masonry or Concrete Bearing Wall	Wood Frame	PreFABRICATED Steel
Accommodation (hotels, shared and group housing)	$187	$181.50	$145.50	$179.50
Commercial (office, professional)	$216.50	$203.50	$171.50	$174
Industrial/factory/warehouse	$136	$124	--	$99
Educational (K–12)	$183	$184.50	--	$154.50
Retail	$145	$156	$110	$119

TABLE 17: RESIDENTIAL REVENUE CREDIT FOR FUTURE DEVELOPMENT TAX PAYMENTS

FISCAL YEAR	ANNUAL EXPENSE	TAX RATE NEEDED	TAX ON $1,000 OF VALUE	CREDITS PER $1,000 OF ASSESSED VALUE
2019	$0	0.000000	$0.00	**$0.00**
2020	$84,218	0.004047	$0.04	**$0.43**
2021	$84,218	0.003968	$0.04	**$0.41**
2022	$84,218	0.003890	$0.04	**$0.39**
2023	$84,218	0.003814	$0.04	**$0.37**
2024	$84,218	0.003739	$0.04	**$0.36**
2025	$84,218	0.003666	$0.04	**$0.34**
2026	$84,218	0.003594	$0.04	**$0.32**
2027	$84,218	0.003523	$0.04	**$0.30**
2028	$84,218	0.003454	$0.03	**$0.28**
2029	$84,218	0.003387	$0.03	**$0.27**
2030	$84,218	0.003320	$0.03	**$0.25**
2031	$84,218	0.003255	$0.03	**$0.23**
2032	$84,218	0.003191	$0.03	**$0.21**
2033	$84,218	0.003129	$0.03	**$0.19**
2034	$84,218	0.003067	$0.03	**$0.17**
2035	$84,218	0.003007	$0.03	**$0.14**
2036	$84,218	0.002948	$0.03	**$0.12**

2037	$84,218	0.002890	$0.03	**$0.10**
2038	$84,218	0.002834	$0.03	**$0.08**
2039	$84,218	0.002778	$0.03	**$0.05**
2040	$84,218	0.002724	$0.03	**$0.03**

6.2 FEE PER RESIDENTIAL UNIT

Table 12 summarizes the base cost per PM peak hour trip at $1,943. Non-residential and residential land use can be assessed on the trip basis determined by a traffic impact study or other trip generation studies.

To simplify the administration of the impact fees the trip generation for the residential uses can be summarized by the following table.

TABLE 18: BASE FEE PER RESIDENTIAL UNIT

LAND USE (ITE LAND USE CODE: #)	COST PER TRIP	ITE TRIP GENERATION 10TH EDITION DURING PM PEAK HOUR	BASE FEE PER UNIT
Single family detached (ITE LUC: 210)	$1,943	1.00	$1,943
Multifamily attached (ITE LUC: 221)	$1,943	0.52	$1,010

The net impact fee is the base impact fee (Table 18) minus any revenue credits for new residential development is shown below in Table 19.

TABLE 19: NET RESIDENTIAL IMPACT FEES FOR TRANSPORTATION CAPITAL EXPENSES

FISCAL YEAR	SINGLE FAMILY DWELLINGS				MULTIPLE FAMILY DWELLINGS			
	Base Fee	Credit for Past taxes	Credit for Future taxes	Net Fee per Unit	Base Fee	Credit for Past taxes	Credit for Future taxes	Net Fee per Unit
2019	$1,943.00	$0.00	$165.73	**$1,777.27**	$1,010.00	$0.00	$103.58	**$906.42**
2020	$1,943.00	$0.00	$174.02	**$1,768.98**	$1,010.00	$0.00	$108.76	**$901.24**
2021	$1,943.00	$2.08	$166.85	**$1,774.07**	$1,010.00	$1.04	$104.28	**$904.68**
2022	$1,943.00	$4.23	$159.63	**$1,779.14**	$1,010.00	$2.11	$99.77	**$908.12**
2023	$1,943.00	$6.44	$152.36	**$1,784.20**	$1,010.00	$3.22	$95.22	**$911.55**
2024	$1,943.00	$8.73	$145.02	**$1,789.25**	$1,010.00	$4.36	$90.64	**$915.00**
2025	$1,943.00	$11.09	$137.61	**$1,794.30**	$1,010.00	$5.54	$86.00	**$918.45**
2026	$1,943.00	$13.53	$130.11	**$1,799.36**	$1,010.00	$6.77	$81.32	**$921.92**
2027	$1,943.00	$16.06	$122.52	**$1,804.42**	$1,010.00	$8.03	$76.58	**$925.39**
2028	$1,943.00	$18.67	$114.83	**$1,809.50**	$1,010.00	$9.34	$71.77	**$928.89**
2029	$1,943.00	$21.39	$107.03	**$1,814.59**	$1,010.00	$10.69	$66.89	**$932.42**
2030	$1,943.00	$24.20	$99.10	**$1,819.71**	$1,010.00	$12.10	$61.94	**$935.97**
2031	$1,943.00	$27.12	$91.03	**$1,824.85**	$1,010.00	$13.56	$56.89	**$939.55**
2032	$1,943.00	$30.15	$82.82	**$1,830.04**	$1,010.00	$15.07	$51.76	**$943.17**

2033	$1,943.00	$33.30	$74.44	**$1,835.26**	$1,010.00	$16.65	$46.53	**$946.82**
2034	$1,943.00	$36.57	$65.89	**$1,840.53**	$1,010.00	$18.29	$41.18	**$950.53**
2035	$1,943.00	$39.98	$57.16	**$1,845.86**	$1,010.00	$19.99	$35.73	**$954.28**
2036	$1,943.00	$43.53	$48.23	**$1,851.25**	$1,010.00	$21.76	$30.14	**$958.10**
2037	$1,943.00	$47.22	$39.07	**$1,856.70**	$1,010.00	$23.61	$24.42	**$961.97**
2038	$1,943.00	$51.10	$29.69	**$1,862.21**	$1,010.00	$25.55	$18.56	**$965.89**
2039	$1,943.00	$55.14	$20.06	**$1,867.79**	$1,010.00	$27.57	$12.54	**$969.89**
2040	$1,943.00	$59.36	$10.17	**$1,873.47**	$1,010.00	$29.68	$6.36	**$973.96**

6.3 NON-RESIDENTIAL FEES

The non-residential land uses do not have the benefit of a summary document like this given the variety of construction methods and post-construction values.

The steps for non-residential impact fees are:

1. Calculate the number of new trips generated during the PM peak hour.
2. Multiply the number of trips by the cost per trip $1,943 (Table 12) to obtain the base impact fee.
3. Determine pre-development revenue credits based on the year of development and value of the property (Table 15).
4. Use Table 16 to multiply the nonresidential value by the future tax credit for occupancy year.
5. Determine the post-development revenue credits based on the year of development and value of the development (Table 17).
6. Calculate the final impact fee using Step 2 and subtract Step 3 and Step 4.

APPENDIX A. CAPACITY OF INFRASTRUCTURE

PERSON MILES CAPACITY PER MILE

TYPE OF FACILITY	PERSON CAPACITY[5] (TARGET V/C RATIO ~.5)
Bicycle Boulevard/cycle track	1,400
Sharrows	150
Bike Lanes	800
Buffered Bike Lanes	1,200
Paved Shoulder	200
Protected Bike Lane	1,320
Shared Use Path	1,250
Road lane (1 lanes)	900
Sidewalk (5 feet wide)	880
Sidewalk (10 feet wide)	1,760

[5] NACTO, TRB, HCM 6th Edition

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RECREATION IMPACT FEE ANALYSIS

TOWN OF WILLISTON, VERMONT

Draft 3

Prepared By

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July 30, 2012

RECREATION IMPACT FEE ANALYSIS

TOWN OF WILLISTON, VERMONT

I. INTRODUCTION

The Town of Williston has, for many years, supported an active recreation program. As the Town's population has grown over the past two decades, so too have grown both the number of recreation facilities provided and the number of programs offered. Recreation facilities provided by the Town include parks and playgrounds, multi-use paths, primitive trails, and passive recreation/conserved lands. The Town's Recreation Committee undertakes a regular assessment of the Town's facilities in order to determine their adequacy and to identify additional facilities needed in coming years.

The Town wishes to update its recreation impact fee program to ensure that it effectively allocates a fair share of the costs of providing the recreation facilities to anticipated new residential development which will demand and make use of those facilities, in accordance with the authority set forth in 24 V.S.A., Chapter 131.

Since recreation facilities are used primarily by residents of the Town, the major impetus for adding additional facilities is to accommodate the needs of the residents of anticipated future residential development. Thus, the recreation impact fees will be levied against each new dwelling unit built in the coming years. At the same time, it is recognized that the current array of recreation facilities does not fully meet the needs of the Town's current residents. Thus, some of the planned recreation facilities are intended to meet unmet demand of current residents. The cost of meeting these current unmet needs must be borne by the Town without reliance on impact fee revenues. Impact fee revenues may only be used to add new capacity to serve anticipated future residents.

II. ANTICIPATED POPULATION AND HOUSING GROWTH

In 1990, Williston's population was 4,887 (U.S. Census Reports). By 2000, that had increased to 7,650. In the next decade the rate of growth slowed, and by 2010 the Town's population was 8,698. Using the growth assumptions described below, Williston's population is expected to increase to 10,348 by the year 2025. This growth will obviously generate increased demands on the Town's recreation facilities. Since it is practicable to levy recreation impact fees on each dwelling unit that is constructed, and since it appears that multiple family dwellings contain, on average, fewer persons than do single family dwellings, it is reasonable that the impact fees be based on estimates of the average occupancy for each type of dwelling.

In the early 1990s, the Williston School District conducted annual surveys of all residents in the Town. These surveys acquired data on the number of students, non-students, and various other characteristics for each dwelling. The most complete of these surveys, for 1993, allowed examination of average occupancy for single and multiple family dwellings. Each single family dwelling (including mobile homes) contained, on average, 1.79 adults and 0.79 children, for a total of 2.58 persons per dwelling. Similarly, each multiple family dwelling (including condos and duplexes) contained, on average, 1.67 adults and 0.38 children, for an average of 2.05 persons per dwelling.

A review of the 2010 census data suggest that these ratios have changed very little (less than one percent), and may have actually increased slightly over the past fifteen years. This analysis will assume that the 1993 ratios are unchanged, and that the overall average occupancy rate is 2.47 persons per dwelling.

Between 2000 and 2010, the Town's population increased by 1,048 persons, an average annual increase of 104.8 persons. With an average of 2.47 persons per dwelling, this represents an increase of just over 42 new dwellings each year. Since the last part of the decade was characterized by a severe recession, it seems reasonable to expect the Town to grow at a slightly higher rate during the coming years. A conversation with the Director of Planning and Zoning suggests that review of the Town's growth management commitments yields an expectation of 45 dwellings per year. At an average occupancy of 2.47 persons per unit, this corresponds to an annual increment of 111 persons. For the purposes of this analysis, future population growth is assumed to be, on average, 110 persons and 45 new dwellings per year. These expectations are shown in Table 1.

TABLE 1.
ASSUMED POPULATION AND HOUSING GROWTH

Year	Population Growth	Housing Growth	Total Population	Total Dwellings
2010	na	na	8,698	3,514
2012	220	90	8,918	3,604
2015	330	135	9,248	3,739
2020	550	225	9,798	3,964
2022	220	90	10,018	4,054
2025	330	135	10,348	4,189

Over the next ten years, from 2012 to 2022, the Town will see an increase of 450 dwelling units housing 1,100 new residents.

III. CALCULATING RECREATION IMPACT FEES

The general formula for computing the Recreation Impact Fee per dwelling unit is:

> **The cost to the Town for recreation facilities per person, multiplied by The number of persons living in each new dwelling unit, minus Credits for past and future tax payments that were used for annual recreation expenditures.**

Estimates of the number of persons living in each dwelling were presented in the previous section. This section will focus on developing estimates of the per-person-cost to the Town for providing recreation facilities. Four categories of facilities will be examined: 1) parks and playgrounds; 2) multi-use paths; 3) primitive trails; and 4) passive recreation/conservation land. The analysis will look at both existing and planned facilities.

A. Parks and Playgrounds:

The Town of Williston currently provides the following developed park and playground facilities.

- Rossignol Park. This 9 acre facility contains 2 tennis courts, a basket ball court, a ball field and a play area with swing set.
- Brennan Park. This 5 acre park contains a ball field, 2 T-ball fields, a toddler playground and community gardens.
- WCS/Community Park. This large facility includes 21 acres and contains 4 multi-use fields, 3 soccer fields, 1 baseball field, 1 little league ball field, 2 soft ball fields, 2 horseshoe pits, a multi-use skating rink with warming hut, and a multi-age playground.
- Allen Brook Community Park. This is a new facility with only 8 of 21 acres developed so far. Phase I included a playground, swings, fitness trail and 2 multi-use fields. Additional phases will be developed in the future.
- Lake Iroquios Park. This facility was redeveloped in 1993 and is shared by the four surrounding towns. Williston's share amounts to 1.0 acres of the 2.2 acre facility. The facility includes a playground, swimming beech, snack bar and changing building.

Altogether, these facilities provide a total of 44 acres of developed recreation land. Using the previously presented estimate of the Town's 2012 population of 8,918 persons, the current facilities represent a service ratio of 4.93 developed acres per 1,000 persons.

In past years the Town has adopted a service standard of 6.5 acres per 1,000 persons[1]. This is no longer specified in the Town's Comprehensive Plan, but it is referenced in the periodic needs assessment analysis undertaken by Williston's Recreation Director and Recreation Committee. That needs assessment addresses needs of individual facilities (ball fields, soccer fields, etc.) as well as over-all developed land. This was used as the basis for planning the new Allen Brook Park.

The planned Allen Brook Park will contain 27 acres, of which 8 are already developed. When the park is built out, the total developed recreation land in Williston will be 57 acres. The park will be built out in phases, extending through 2025. A careful analysis of the Recreation Department's needs analysis, the phased build-out of the park, the population expectations presented above, plus the planned addition of a picnic site and pavilion and skating rink at Rossignol Park, indicates that the new facilities will satisfy virtually all of the Town's expected recreation needs through the year 2025. These needs will be met with a total of 63 acres of developed recreation land serving 10,348 persons, a service ratio of 6.09 acre per 1,000 persons. This is an empirical indicator of the desired service ratio in the Town of Williston.

[1] See the 2000 Comprehensive Plan and the 2001 Recreation Impact Fee Analysis. The ratio of 6.5 acres per 1,000 persons falls at the lower end of the range suggested for community and neighborhood parks (6.0 to 10.0 acres per 1,000) suggested by the National Recreation and Park Association.

If the Town maintains the desired service ratio of 6.5 acres per 1,000 persons, a deficiency of 4.26 acres will remain after Allen Brook Park is built-out. If the Town agrees to a slightly lower desired service ratio of 6.0 acres per 1,000 persons, the build-out of Allen Brook Park will meet the Town's needs until sometime after 2025.

Assuming the lower service ratio (6.0 acres per 1,000 persons), the Town's current (2012) population of 8,918 persons would require a total of 53.5 acres. At present the Town provides only 44 acres. Thus, 9.5 of the 19 acres added by the build-out of Allen Brook park would be needed to bring the current population up to the desired service level. The remaining 9.5 acres will be used to accommodate anticipated future residents. This suggests that impact fee revenues may be used to fund up to 50 percent of future expenditures on new recreation facilities.

With this as the desired service ratio (6.0 acres per 1,000 persons), the next step is to consider the cost per acre of developed recreation land. The Town has worked with the design engineers and landscape architects to develop preliminary estimates of the cost of developing Allen Brook Park. For the entire build-out of the Allen Brook Park, the estimated total construction cost is $2,169,500. This includes all facilities, site preparation, roads, paths and trails, utilities, restrooms, etc. In addition, the cost of the improvements to Rosignol Park ($100,000 for ice rink, picnic area and shelter), should be included, bringing the total cost to $2,269,500. The entire park comprises 27 developed acres. Thus, development costs per acre are $80,455.55 per acre.

At a service ratio of 6.0 developed acres per 1,000 persons, this amounts to $504.33 per person.

By multiplying this cost-per-person figure by the average occupancy ratios for single family and multiple family dwellings, base impact fees for developed recreation lands for the two types of dwellings can be computed.

> **Single Family Dwellings: $504.33 per-person times 2.58 person per dwelling = $1,301.17 per dwelling.**
>
> **<u>$504.33 x 2.58 = $1,301.17</u>**
>
> **Multiple Family Dwellings: $504.33 per-person times 2.05 person per dwelling = $1,033.87 per dwelling.**
>
> **<u>$504.33 x 2.05 = $1,033.87</u>**

B. <u>Multi-Use Paths</u>

The Town of Williston has undertaken a multi-year program to construct a comprehensive network of multi-use paths that connect population centers, activity centers, business centers, and to adjacent towns. This network will serve in conjunction with the Towns network of primitive trails and concrete sidewalks.

In 2004 the Town residents authorized the sale of up to $2,600,000 to support the construction of multi-use paths. To date approximately half of that money has been spent. For the most part, the bond funds are used as matching funds for grants used to build various sections of the multi-use path network. As of the beginning of 2012, the Town had increased it's total to 11.87 miles of multi-use paths. The most recent completion was the 0.54 mile section leading to the Winooski River, which completed the path along Route 2A from Industrial Avenue to the Winooski river.

Over the next decade the Town expects continue work to complete the planned network of multi-use paths. Anticipated segments include:

- A 0.45 mile segment along Route 2A between Beaudry Lane and Meadow Lane.
- A .05 mile segment along Route 2A between Beaudry Lane and Knight Lane. Together, these two segments will complete the path along Route 2A from Taft Corners to Industrial Avenue.
- A 0.35 mile segment along Old Stage Road from Wildflower to Mountain View This will complete the path along Old Stage Road from Route 2 to Mountain View Road.
- A 2.25 mile segment along Mountain View road between Route 2A and Old Stage Road. This will probably be constructed in two or more parts.
- A 0.75 mile segment along Marshall Avenue to the South Burlington Border.

Altogether, these five planned segments total 3.85 miles, which will bring the Town's total to 15.72 miles of multi-use path. The only priority segments not included in the above list are additional inter-town connectors to South Burlington and Richmond. These are both fairly long segments and may be constructed in parts over several years.

The Town has estimated that, upon completion, approximately 70 percent of path users will be recreational users and the remainder will be commuters. Thus, for purposes of the recreation impact fee analysis, only 70 percent of the network costs should be considered in the analysis below.

The most realistic estimate of costs for constructing these multi-use paths is based on the work done in 2011 along Route 2A. A total of 0.54 miles of path were constructed at a total cost of $1,022,305.90. This amounts to $1,893,159.10 per mile. Of this total cost, 80% was covered by grant funds while Town funds covered the remaining 20%, or $378,631.81 per mile. It is expected that this match rate will continue into the future.

Using this basic estimate, the planned 4.3 miles of new path is expected to cost the Town $1,628,116.80.

However, since only 70 percent of the cost is to be charged against recreation, the recreation cost per mile becomes $265,042.27.

The final steps in this analysis are to convert the construction cost estimate into cost-per-person, costs-per-dwelling, and ultimately into base impact fees.

For over two decades Williston has been working to concentrate development within its designated growth are—i.e. the sewer service area—which makes up approximately one fourth of the Town's land area. The multi-use path network was designed to provide connections between significant activity centers within the sewer service area, and connections between that area and surrounding towns and Williston's evolving network of primitive paths and country parks. The planned multi-use path system, when complete, should meet the Town's needs until it decides to expand its growth area

It is not expected that the Town's sewer service area will be built-out by the end of the study period for this analysis (2025). Review of the Town's residential phasing commitments and sewer allocations, along with a review of build-out studies conducted by . the Planning and Zoning staff, suggest that, at build-out of the sewer service area, the entire town would house approximately 11,000 persons[2]. If that is true, the effective service ratio (of the segments now planned) would be 15.72 miles/11,000 persons, equals 1.479 miles per 1,000 persons. At the average cost of $265042.27 per mile, this works out to $392.00 per person.

By multiplying this cost per person figure by the average occupancy ratios for single family and multiple family dwellings, base multi-use path impact fees for the two types of dwellings can be computed.

> **Single Family Dwellings: $392.00 per person times 2.58 person per dwelling = $1,011.36 per dwelling.**

<u>$392.00 = x 2.58 = $1,011.36</u>

> **Multiple Family Dwellings: $392.00 per person times 2.05 person per dwelling = $803.60 per dwelling.**

<u>$392.00 x 2.05 = $803.60</u>

At the beginning of the work funded by the bonds, Williston (2003 population of 8,300) provided approximately 0.5 miles of multi-use paths per 1,000 persons. To bring that population up to the anticipated standard of 1.479 miles per 1,000 persons would require 12.28 miles of paths, or 75 percent of the entire planned increment of 15.72 miles. Thus, 75 percent of the expenditures on multi-use paths would not be eligible for funding from impact fee revenues. Impact fee revenues can cover up to 25 percent of the expenditures.

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[2] The most recent Growth and Development Report indicates that a total of 676 new dwelling units are currently allocated for construction inside the sewer service area. A recent build-out potential analysis conducted by the Town's planning staff indicates a total capacity for this area of 1,059 additional units, substantially more than area currently allocated. The difference lies in development outside of the growth area but within the sewer service area. During the time that it takes to reach full build-out of the sewer service area, an additional 187 new dwellings would be constructed outside of the sewer service area. Summing the additions (1,059 + 187) plus the 3,226 units already existing, yields a total of 4,472 dwelling units at build-out. Using the current average population per dwelling, this is equivalent to a total town population of 11,046 persons

C. Primitive Paths

The Town of Williston currently maintains just over 12 miles of unpaved primitive trails which are used primarily for recreational activities such as hiking or cross-country skiing. In addition, the Town has obtained over sixteen easements for primitive trails through private properties. The Trails Committee has identified the following as priorities for primitive trail development: Those in and around the Village; from Five Tree Hill to Route 2-A; Along the Allen Brook paralleling South Road; Along the ridge line between Route 2-A and Bradley Lane; And on Town property on Brownell Mountain. Scheduling, costs, and funding for these expansions have not yet been established. Thus, costs for these facilities will not be included in this recreation Impact Fee Analysis.

D. Passive Recreation/Conservation Land

Over the years Williston has acquired a number of parcels of conserved land, some of which are classed as country parks and/or contain primitive paths. Town voters approve annual appropriations to the Conservation Fund for this purpose. In general, purchases from this fund reflect opportunities that come up, and are often made in concert with the Vermont Land Trust. There is no planned schedule of such acquisitions. Thus, this category of recreation facilities will not be included in this Impact Fee Analysis.

E. Total Base Recreation Impact Fees

Based on the above, the total base recreation impact fee will be the sum of the base impact fees for developed recreation land and facilities, plus the base impact fees for multi-use paths. These are presented in Table 2, below.

TABLE 2.
TOTAL BASE RECREATION IMPACT FEES PER DWELLING UNIT

	Recreation Land And Facilities	Multi- Use Paths	**Total Impact Fee**
Single Family Dwelling	$1,301.17	$1,011.36	**$2,312.53**
Multi-Family Dwelling	$1,033.87	$ 803.60	**$1,837.47**

IV. CREDITS FOR TAXES USED TO PAY FOR RECREATION FACILITIES

The planned recreation facilities will be funded by annual appropriations of general revenues, and the multi-use path facilities will be funded by revenues from the approved $2,600,000 bond. Thus, the Town's annual expenditures for the recreation facilities and paths will be the sum of the annual recreation facility appropriations plus the annual debt service for the path bonds[3].

[3] It is assumed that the debt service for the bond money already borrowed will continue through full maturation, and that the remaining $1,000,000 will be borrowed in 2014, at 5%, over 20 years, with payments through 2034.

While impact fee revenues will be used to offset some of these annual expenditures, impact fee revenues will need to be supplemented by tax revenues.

It is likely that some of the taxes paid by new dwellings (which have also paid the impact fees) will be used for the recreation expenditures. To avoid double payment by the occupants of those dwellings, credits against the basic impact fee must be computed which represent the present value of the stream of tax payments from both the new dwelling and the previously undeveloped land, used for the recreation expenditures. Estimating these credits involves several steps.

The undeveloped land on which new residential development occurs will have been assessed property taxes, some of which may have been used for the annual recreation expenditures (starting with the date of the first bond payment). These payments will be called <u>past</u> land tax payments. It is necessary to estimate the current value of the stream of past land tax payments used for these annual recreation expenditures, up to the point where the new dwelling enters the grand list.

Once the new dwelling is constructed, it will continue to make tax payments, some of which will be used for the annual recreation expenditures. It is necessary to estimate the present value of the stream of the new dwelling's future tax payments that will be used for these annual recreation expenditures, throughout the bond repayment period. These will be called <u>future</u> residential tax payments.

Thus, for any development, there will be two potential credits against the basic impact fees:

- The credit for <u>past</u> land tax payments used to fund past annual Recreation expenditures not covered by impact fee revenues, and

- The credit for <u>future</u> residential tax payments used to fund the future annual Recreation expenditures not covered by impact fee revenues.

The value of these credits depends on the value of the land prior to development, the value of the residential development, the annual expenditures for recreation facilities, the date when the development enters the Town's grand list, and the total grand list.

A. <u>Value of Land and Dwellings</u>

In general, residential development takes the form of either single family detached dwellings or attached multiple family dwellings. Within each of these categories, the values of the individual dwelling units fluctuate around an average that can be used for estimating the credits for future tax payments. Similarly, the value of the land used for residential development fluctuates around an average that can be used for estimating the credits for past tax payments.

For this analysis, the following values will be assumed:

- Single family detached dwellings will have an average assessed value of $326,000 (at the current assessment ratio of 94.04%, this is the equivalent of a market value of

$346,600), and the land prior to development will have an average value of $32,600 per dwelling.[4]

- Multiple dwellings (apartments or town houses) will have an average assessed value of $241,400 (reflecting a market value of $256,700), and the land prior to development will have a value of $24,000 per unit[5];

B. Annual Recreation Expenditures

Annual recreation expenditures were tabulated for each year for developed park and recreation facilities and for multi-use paths.

1. Developed park and playground facilities.

Based on information in the Town's Capital Budget and Program, plus discussions with the Recreation Director, the above described build-out of Allen Brook Park was determined, along with anticipated costs. Table 3, below, shows the schedule of expenditures for the assumed build-out expenditures for Allen Brook Park and the modest improvements to Rossignol Park.

TABLE 3.
ANTICIPATED ANNUAL EXPENDITURES FOR PARK FACILITIES

Allen Brook Park	Phase I	2011	$410,000
	Phase II-A	2015	$126,500
	Phase II-B,C	2017	$456,000
	Phase III	2020	$426,000
	Phase IV-A	2023	$300,000
	Phase IV-B	2025	$200,000
Rossignol Park	Phase I	2015	$50, 000
	Phase II	2018	$50,000

2. Multi-Use paths

As described above, the anticipated construction of the multi use path network was determined. The expenditures are based on the schedule of bond repayments Table 4 (on

[4] Based on a review of the 2011 grand list, the average assessed value was $325,808. This was adjusted to represent 2011 fair market value of $346,457. The values were rounded upward to reflect 2012. Raw land was assumed to be approximately 10 percent of the total assessed value, or $32,600 per unit

[5] Based on a review of the 2011 grand list, the average assessed value was $241,384. This was adjusted to represent 2011 fair market value of $256,682. The values were rounded upward to reflect 2012. Again, raw land was assumed to be approximately 10 percent of the total assessed value, or $24,000 per unit.

the following page) presents the annual debt service payments for the bonds used to fund the multi-use path expansions. This includes the original bond of $1.6 million plus the remaining authorized bond of $1.0 million assumed to be sold in 2014 with payments extending through 2014.

Some, but not all, of these bond expenditures will be offset by impact fee revenues. The credits must be based on Town expenditures net of impact fee offsets. As noted above, up to 50 percent of expenditures on park and recreation facilities, and up to 58 percent of expenditures on multi-use paths are eligible for impact fee funding. In fact, available impact fee revenues will be based on actual new dwellings constructed. It is anticipated that, on average, 45 new dwellings will be constructed each year. Of these, 60 percent (27 units) should be single family detached units while 40 percent (18 units) should be multiple family units. Assuming actual impact fees averaging $1,900 for each single family dwelling and $1,500 for each multiple family dwelling, Impact fee revenues should average $78,300 per year.

TABLE 4.
ANTICIPATED MULTI-USE PATH BOND PAYMENTS

Path Bond Payments			
Year	First Bond	Second Bond	Total Bond payments
2005	$23,263	$000	$23,263
2006	$143,928	$000	$14,3928
2007	$140,220	$000	$140,220
2008	$138,952	$000	$138,952
2009	$136,312	$000	$136,312
2010	$133,552	$000	$133,552
2011	$130,696	$000	$130,696
2012	$127,736	$000	$127,736
2013	$124,688	$000	$124,688
2014	$121,560	$50,000	$171,560
2015	$118,352	$97,500	$215,852
2016	$115,000	$95,000	$210,000
2017	$111,752	$92,500	$204,252
2018	$108,368	$90,000	$198,368
2019	$104,444	$87,500	$192,444
2020	$101,480	$85,000	$186,480
2021	$97,976	$82,500	$180,476
2022	$94,440	$80,000	$174,440
2023	$90,872	$77,500	$168,372
2024	$87,280	$75,000	$162,280
2025	$88,654	$72,500	$161,154
2026	$000	$70,000	$70,000
2027	$000	$67,500	$67,500
2028	$000	$65,000	$65,000
2029	$000	$62,500	$62,500
2030	$000	$60,000	$60,000
2031	$000	$57,500	$57,500
2032	$000	$55,000	$55,000
2033	$000	$52,500	$52,500
2034	$000	$50,000	$50,000

Table 5. combines Tables 3 and 4, and also includes the amount of each annual expenditure which is assumed to be offset by impact fee revenues, as described above.

TABLE 5.
ESTIMATED ANNUAL RECREATION EXPENDITURES NET OF IMPACT FEE REVENUES

Year	Bond payments	Park Expenditures	Totals	Impact Fees	Net Expenditures
2005	$23,263	$0	$23,263	$15,710	$7,553
2006	$143,928	$0	$143,928	$15,710	$128,218
2007	$140,220	$0	$140,220	$15,710	$124,510
2008	$138,952	$0	$138,952	$15,710	$123,242
2009	$136,312	$0	$136,312	$15,710	$120,602
2010	$133,552	$0	$133,552	$15,710	$117,842
2011	$130,696	$410,000	$540,696	$15,710	$524,986
2012	$127,736	$0	$127,736	$15,710	$112,026
2013	$124,688	$0	$124,688	$78,300	$46,388
2014	$171,560	$0	$171,560	$78,300	$93,260
2015	$215,852	$176,500	$392,352	$78,300	$314,052
2016	$210,000	$0	$210,000	$78,300	$131,700
2017	$204,252	$456,000	$660,252	$78,300	$581,952
2018	$198,368	$50,000	$248,368	$78,300	$170,068
2019	$192,444	$0	$192,444	$78,300	$114,144
2020	$186,480	$0	$186,480	$78,300	$108,180
2021	$180,476	$0	$180,476	$78,300	$102,176
2022	$174,440	$0	$174,440	$78,300	$96,140
2023	$168,372	$300,000	$468,372	$78,300	$390,072
2024	$162,280	$0	$162,280	$78,300	$83,980
2025	$161,154	$200,000	$361,154	$78,300	$282,854
2026	$70,000	$0	$70,000	$78,300	$0
2027	$67,500	$0	$67,500	$78,300	$0
2028	$65,000	$0	$65,000	$78,300	$0
2029	$62,500	$0	$62,500	$78,300	$0
2030	$60,000	$0	$60,000	$78,300	$0
2031	$57,500	$0	$57,500	$78,300	$0
2032	$55,000	$0	$55,000	$78,300	$0
2033	$52,500	$0	$52,500	$78,300	$0
2034	$50,000	$0	$50,000	$78,300	$0

Based on the information in Tables 3, 4, and 5, plus the grand list assumptions noted above, it is possible to compute the estimated credits needed to offset both past land tax payments and future tax payments.

C. Grand List

The Town's Grand List and anticipated growth is based on a review of annual reports submitted to the State Division of Property Valuation and Review for the period 2007 through 2011. In The Grand List totaled $16,204,729 in 2011. In 2007, the Grand List was $12,090,184. This represents an average growth of just under $1,030,000 per year. With the esing to the recession, it is reasonable to assume a slightly higher growth rate of $1,040,000 per year. It is assumed that this growth rate will stay constant.

D. Credits for Past Land Tax Payments

The procedure for estimating credits for past tax payments includes several steps. Net annual recreation and bond expenditures from Table 5. are divided by the estimated grand list for the appropriate year to generate effective tax rates needed to cover the debt service payments each year. The effective tax rate was multiplied by the assumed value of the land used for a single-family or multi-family dwelling to estimate the tax paid on that land for each year. This analysis is shown on the first four columns of Table 6.

The last two columns of Table 6 show the credits, computed as the present value of the stream of tax payments for each year prior to the year that the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the credit would represent the present value of the stream of tax payments made from 2005 and 2012, (assuming a discount rate of 5.00 percent). The credit (from the 2012 row of the next to last column of Table 6) would be $29.035 If a single-family dwelling entered the grand list in the year 2018, the stream would include the payments made in 2005 through 2018, and the credit (from the 2018 row of the next to last column of Table 6) would be $49.72.

TABLE 6.
IMPACT FEE CREDITS FOR PAST TAX PAYMENTS USED TO OFFSET ANNUAL RECREATION AND PATH EXPENDITURES

Single family land value = $32,600
Multi-family land value = $24,000

DWELLING YEAR	ANNUAL EXPENDITURE*	TAX RATE NEEDED	TAX ON		**ESTIMATED CREDITS**	
			Single family land	Multi family land	**For single family land**	**For multi family land**
2012	112,026	$0.00687	$2.24	$1.65	**$29.35**	**$21.60**
2013	46,388	$0.00283	$0.92	$0.68	**$33.16**	**$24.42**
2014	93,260	$0.00565	$1.84	$1.36	**$35.79**	**$26.35**
2015	314,052	$0.01890	$6.16	$4.53	**$39.51**	**$29.09**
2016	131,700	$0.00787	$2.57	$1.89	**$47.96**	**$35.31**
2017	581,952	$0.03458	$11.27	$8.30	**$53.05**	**$39.05**
2018	170,068	$0.01004	$3.27	$2.41	**$67.54**	**$49.72**
2019	114,144	$0.00670	$2.18	$1.61	**$74.35**	**$54.74**
2020	108,180	$0.00631	$2.06	$1.51	**$80.36**	**$59.16**
2021	102,176	$0.00593	$1.93	$1.42	**$86.54**	**$63.71**
2022	96,140	$0.00554	$1.81	$1.33	**$92.90**	**$68.39**
2023	390,072	$0.02235	$7.29	$5.36	**$99.44**	**$73.21**
2024	83,980	$0.00478	$1.56	$1.15	**$112.06**	**$82.50**
2025	282,854	$0.01602	$5.22	$3.84	**$119.30**	**$87.83**

E. Credits for Future Residential Tax Payments

The procedure for estimating credits for future tax payments is similar. The net annual recreation expenditures from Table 5 are divided by the grand list for each year to produce an effective tax rate needed to cover the bond payments that year. This effective tax rate was multiplied by the assumed value for single family or multi-family dwellings to estimate the tax on those dwellings needed to support the school bond expenditures. Again, this is shown on the first four columns of Table 7.

The last two columns of Table 7 show the credits, computed as the present value of the stream of tax payments for each year after the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the stream would include the payments made in 2012 through 2034 (the last year of the bond period), adjusted by the assumed discount rate of 5.00 percent. The credit (from the 2012 row of the next to last column of Table 7) would be $21.33. If a single-family dwelling entered the grand list in the year 2018, the stream would include only those payments made in the years 2018 through 2034, and the credit (from the 2012 row of the next to last column of Table 7) would be $116.79.

TABLE 7.
IMPACT FEE CREDITS FOR FUTURE TAX PAYMENTS USED TO OFFSET ANNUAL RECREATION AND PATH EXPENDITURES

Single family unit value = $326,000
Multi-family unit value = $256,700

			TAX ON		**ESTIMATED**	**CREDITS**
DWELLING YEAR	ANNUAL EXPENDITURE	TAX RATE NEEDED	Single Family Dwelling	Multiple family Dwelling	**For single family unit**	**For multi family unit**
2012	112,026	$0.00687	$22.39	$17.63	**$21.33**	**$16.79**
2013	46,388	$0.00283	$9.21	$7.26	**$8.78**	**$6.91**
2014	93,260	$0.00565	$18.41	$14.49	**$17.53**	**$13.80**
2015	314,052	$0.01890	$61.60	$48.50	**$58.67**	**$46.19**
2016	131,700	$0.00787	$25.67	$20.21	**$24.45**	**$19.25**
2017	581,952	$0.03458	$112.73	$88.77	**$107.37**	**$84.54**
2018	170,068	$0.01004	$32.74	$25.78	**$31.18**	**$24.55**
2019	114,144	$0.00670	$21.84	$17.20	**$20.80**	**$16.38**
2020	108,180	$0.00631	$20.57	$16.20	**$19.60**	**$15.43**
2021	102,176	$0.00593	$19.32	$15.21	**$18.40**	**$14.49**
2022	96,140	$0.00554	$18.07	$14.23	**$17.21**	**$13.55**
2023	390,072	$0.02235	$72.86	$57.37	**$69.39**	**$54.64**
2024	83,980	$0.00478	$15.59	$12.28	**$14.85**	**$11.69**
2025	282,854	$0.01602	$52.21	$41.11	**$49.73**	**$39.16**

Note that while the analysis covers the entire period from 2005 to 2035, in the interests of brevity, Tables 6. and 7. show only the credits for the period 2012 through 2025.

The fees change from year to year, depending on the calculated credits. The Town has adopted the practice of shifting the fees at the start of each fiscal year—July 1 of each year. Thus, if a zoning permit is issued for a dwelling on April 15 of (say) fiscal year 2012-2013, the appropriate fee will be found in the 2012 row of the tables. If the permit is issued on August 1 of the same fiscal year, the appropriate fee will be found in the 2013 row of the tables.

F. Net Impact Fees

Table 8. combines the results of tables 6 and 7, showing the base impact fees for each type of dwelling, the credits for past and future tax payments, and the net fees. In general, Table 8 should be the only one necessary to calculate the fee for any given dwelling. Thus, for a single family dwelling entering the grand list in 2015, the net fee would be $2,261.86 a multiple family dwelling entering the grand list in 2017, the net fee would be $1,713.87.

TABLE 8.
NET RECREATION IMPACT FEES

DWELLING YEAR	SINGLE FAMILY DWELLINGS				MULTI FAMILY DWELLINGS			
	base Imp. Fee	Table 5 Credit	Table 6 Credit	**Net Fee**	base Imp. Fee	Table 5 Credit	Table 6 Credit	**Net Fee**
2012	$2,312.53	$29.35	$21.33	**$2,261.86**	$1,837.47	$21.60	$16.79	**$1,799.07**
2013	$2,312.53	$33.16	$8.78	**$2,270.59**	$1,837.47	$24.42	$6.91	**$1,806.14**
2014	$2,312.53	$35.79	$17.53	**$2,259.21**	$1,837.47	$26.35	$13.80	**$1,797.32**
2015	$2,312.53	$39.51	$58.67	**$2,214.35**	$1,837.47	$29.09	$46.19	**$1,762.19**
2016	$2,312.53	$47.96	$24.45	**$2,240.13**	$1,837.47	$35.31	$19.25	**$1,782.91**
2017	$2,312.53	$53.05	$107.37	**$2,152.12**	$1,837.47	$39.05	$84.54	**$1,713.87**
2018	$2,312.53	$67.54	$31.18	**$2,213.81**	$1,837.47	$49.72	$24.55	**$1,763.19**
2019	$2,312.53	$74.35	$20.80	**$2,217.37**	$1,837.47	$54.74	$16.38	**$1,766.35**
2020	$2,312.53	$80.36	$19.60	**$2,212.57**	$1,837.47	$59.16	$15.43	**$1,762.88**
2021	$2,312.53	$86.54	$18.40	**$2,207.59**	$1,837.47	$63.71	$14.49	**$1,759.27**
2022	$2,312.53	$92.90	$17.21	**$2,202.43**	$1,837.47	$68.39	$13.55	**$1,755.53**
2023	$2,312.53	$99.44	$69.39	**$2,143.70**	$1,837.47	$73.21	$54.64	**$1,709.62**
2024	$2,312.53	$112.06	$14.85	**$2,185.62**	$1,837.47	$82.50	$11.69	**$1,743.28**
2025	$2,312.53	$119.30	$49.73	**$2,143.50**	$1,837.47	$87.83	$39.16	**$1,710.48**

Conclusion

The figures in Table 8 represent the largest impact fees that the Town can justify. It can, however, choose to levy impact fees less than shown in Table 8, but the ratio between the fee for single family dwellings and multiple family dwellings should be retained.

Possible simplifications:

- The net fees could be rounded downward to the nearest dollar, or ten dollars, or hundred dollars.
- The lowest net fee shown in Table 8 (the fees for 2025) could simply be adopted for all years. This avoids the complication of having the fee change each year, but comes at the cost of under charging development in every year except 2025.
- The Town could chose to discount these fees and levy lower fees. If this is done, it is recommended that the discount rate (e.g. 75%, 50%, or whatever is chosen) be the same for both single family and multiple family dwellings.

SCHOOL IMPACT FEE ANALYSIS

TOWN OF WILLISTON, VERMONT

Draft 1

Prepared By

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June 1, 2012

SCHOOL IMPACT FEE ANALYSIS

TOWN OF WILLISTON, VERMONT

I. INTRODUCTION

Like virtually all Vermont towns, the Town of Williston provides education services for its resident school age children. The facilities used to provide these services have evolved over the years, as the Town decided to provide its own kindergarten through grade eight facilities and participate in the Champlain Valley Union High School District (CVU) which provides grades nine through twelve. .

The Town wishes to update its school impact fee program to ensure that it effectively allocates a fair share of the costs of providing the educational facilities to anticipated new residential development which will demand and make use of those facilities, in accordance with the authority set forth in 24 V.S.A., Chapter 131.

Since education facilities are used primarily by residents of the Town, the major impetus, over the years, for adding additional facilities is to accommodate the needs of the residents of anticipated future residential development. Thus, the school impact fees will be levied against each new dwelling unit built in the coming years. Impact fee revenues may only be used to offset the costs of creating additional capacity in order to serve anticipated future residents.

II. ANTICIPATED HOUSING GROWTH, POPULATION GROWTH, AND SCHOOL ENROLLMENT GROWTH

In 1990, Williston's population was 4,887 (U.S. Census Reports). By 2000, that had increased to 7,650. In the next decade the rate of growth slowed, and by 2010 the Town's population was 8,698. Williston's population is expected to increase to 10,348 by the year 2025.

Between 2000 and 2010, the Town's population increased by 1,048 persons, an average annual increase of 104.8 persons. With an average of 2.47 persons per dwelling, this represents an increase of just over 42 new dwellings each year. Since the last part of the decade was characterized by a severe recession, it seems reasonable to expect the Town to grow at a slightly higher rate during the coming years. A conversation with the Director of Planning and Zoning suggests that a review of the Town's growth management commitments yields an expectation of 45 dwellings per year. At an average occupancy of 2.47 persons per unit, this corresponds to an annual increment of 111 persons. For the purposes of this analysis, future population growth is assumed to be, on average, 110 persons and 45 new dwellings per year. These expectations are shown in Table 1.

TABLE 1.
ASSUMED POPULATION AND HOUSING GROWTH

Year	Population Growth	Housing Growth	Total Population	Total Dwellings
2010	na	na	8,698	3,514
2012	220	90	8,918	3,604
2015	330	135	9,248	3,739
2020	550	225	9,798	3,964
2022	220	90	10,018	4,054
2025	330	135	10,348	4,189

Over the next thirteen years, from 2012 to 2025, the Town will see an increase of 585 dwelling units housing 1,430 new residents.

It is expected that continued growth will generate increased demands on the Town's school facilities. Since it is practicable to levy school impact fees on each dwelling unit that is constructed, and since it appears that multiple family dwellings contain, on average, fewer school age children than do single family dwellings, it is reasonable that the impact fees be based on estimates of the average number of expected school age children for each type of dwelling.

In the early 1990s, the Williston School District conducted annual surveys of all dwellings in the Town. These surveys acquired data on the number of students, non-students, and various other characteristics for each dwelling. The most complete of these, for 1993, allowed examination of average occupancy for single and multiple family dwellings. Each single family dwelling (including mobile homes) contained, on average, 1.79 adults and 0.79 children, for a total of 2.58 persons per dwelling. Similarly, each multiple family dwelling (including condos and duplexes) contained, on average, 1.67 adults and 0.38 children, for an average of 2.05 persons per dwelling.

It was further found that each single family dwelling generated, on average, demand for 0.46 student spaces in the K-8 school system. Similarly, each multi-le family dwelling generated, on average, demand for 0.16 student spaces in the K-8 school system. Since high school (grades nine through twelve) demand is for only four grade levels while the K-8 demand is for nine grade levels, it is assumed that high school generation rates will be 44.4 percent of the K-8 generation rates. Further, it has been found that only 90 percent of students that graduate from the eighth grade in Williston go on to enroll in CVU. Thus, the generation rates for student spaces at CVU should be 39.96 percent ((0 percent of 44.4 percent) of the K-8 generation rates. This yields high school generation rates of 0.1838 spaces per single family dwelling and 0,0639 spaces per multiple family dwelling unit.

A review of the 2010 census data suggest that these ratios have changed very little (less than one percent), and may have actually increased slightly over the past fifteen years[1]. The remainder of this analysis will assume that the 1993 ratios are unchanged.

[1] A review of U.S. Census data from 1970 through 2010 revealed the following. Population per occupied dwelling has been falling at a decreasing rate, from 3.42 in 1970 to 2.47 in 2010. At the same time, the number of children from ages five to 19 per occupied dwelling dropped from well over 1.0 in 1970 to o.56 in 1990, and has hovered

III. CALCULATING SCHOOL IMPACT FEES

The general formula for calculating school impact fees per dwelling unit is:

> **The cost to the Town for each student space, multiplied by the demand for student spaces generated by each dwelling unit, minus any credits for past and future tax payments that were used to construct the student spaces.**

The calculation of overall costs per dwelling units will be undertaken for K-8 facilities and 9-12 facilities separately, and then summed to generate an aggregate base fee. Credits will also be calculated for each facility and the net fees combined to produce a net school impact fee. The estimated numbers of student spaces demanded by each type of dwelling unit were presented in the previous section.

A. Cost Analysis for K-8 Student Spaces

Since the most recent addition to the Town's K-8 school capacity was the construction of the Allen Brook School, which opened in 1997, and since the overall school capacity has not yet been reached, it is reasonable to base the cost per K-8 student space on the costs of constructing the Allen Brook School[2].

The total cost of the Allen Brook School facility was $5,100,000. The State contributed 23 percent in aid to capital construction, leaving a cost to the Town of $3,940,000. The school construction was funded by a bond issue in the amount of $3,940,000, with a term of twenty years, and an interest rate that varied between 3.55 percent and 5.95 percent. The total cost, including interest, is $6,245,229[3]. Since the school was designed with a capacity of 400 student spaces, the cost per student space is $15,613.07.

For the purposes of this analysis, the total cost to the Town for each additional K-8 student space is assumed to be $15,613.07.

The demand for K-8 student spaces, as shown above, is as follows:

- **Each single family dwelling will generate demand for 0.46 K-8 spaces**
- **Each multiple family dwelling unit will generate demand for 0.16 K-8 spaces**

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between 0.52 and 0.59 from 1990 to 2010. Similarly, the number of persons aged 5 through 19 as a percentage of total population dropped from 31.5 % in 1070 to 20.3 % in 1990, and has hovered between 20.3 % and 22.5 % from 1990 to 2010. The actual number of persons aged 5 through 19 has almost doubled from 1990 to 2010.

[2] Based on information from the Chittenden Central Supervisory District, total K-8 enrollment in the Williston School District was 1,113 in December of 2011. This was down slightly from 1,171 in December of 2005. Since the Town's total K-8 capacity was initially estimated at 1250, there is just under 140 spaces of currently unused capacity. At the Town's estimated growth rate, the capacity of 1,250 would not be reached until 2017. In addition, since new classrooms are not likely to be added until enrollment is somewhat above capacity, it is reasonable to expect that the current facilities will be satisfactory until at least 2022.

[3] Bond repayment schedule provided by the Chittenden South Supervisory District.

With these two pieces of information, it is possible to compute base K-8 impact fees for single family and multiple family dwellings:

- **For single family dwellings, the basic K-8 impact fee is equal to the cost per student space ($15,613.07) multiplied by the demand ratio for K-8 student spaces (0.46 spaces per dwelling). This equals a base K-8 fee of $7,182.01 per single family dwelling.**

<u>$15,613.07 x 0.46 = $7,182.01</u>

- **For multiple family dwellings, the basic K-8 impact fee is equal to the cost per student space ($15,613.07) multiplied by the demand ratio for K-8 student spaces (0.16 spaces per dwelling). This equals a base K-8 fee of $2,498.09 per multiple family dwelling.**

<u>$15,613.07 x 0.16 = $2,498.09</u>

Since the bond for the Allen Brook School will be fully paid off in 2015, it is assumed that the base impact fee for K-8 school facilities will terminate at that time.

B. <u>Cost Analysis for 9-12 Student Spaces</u>

The Champlain Valley Union High School underwent a significant addition in 2005/6. At that time, the capacity of the existing CVU facility (without the temporary classrooms) was 997 students. The planned construction will bring the total capacity to 1,410 students, an addition of 413 students. The total cost of the planned CVU construction project is estimated to be $18,400,000. The State contributed approximately 23 percent in aid to capital construction, leaving a total of $14,220,000 to be funded locally. This was funded by a bond issue in the amount of $14,220,000, with a twenty year term and an interest rate ranging from 1.87 percent to 5.09 percent. The total local cost of the CVU project, including interest, will be $20,837,258[4].

A careful analysis of the proposed work and cost estimates determined that 55.55 percent are to be devoted to efforts to renovate the existing space and 44.55 percent are to be devoted to providing expanded capacity[5]. Applying the 44.55 percent figure to the total local cost of the project including interest, results in an estimated total local cost for providing expanded capacity of $9,282,998.40. This amounts to $22,476.99 per new student space.

For the purposes of this analysis, the total cost to the Town of additional high school capacity is estimated to be **$22,476.99 per new student space.**

[4] Bond repayment schedule provided by the Chittenden South Supervisory District.

[5] These figures are based on estimates provided by Pizzagali Construction. The detailed estimates were sorted according to whether or not they involved rehab of existing facilities or provided expanded capacity. Work activities that did both were pro-rated according to existing and planned capacity.

The demand for student spaces in grades nine through twelve, as shown above, is based on the following ratios: 0.1838 student spaces per single family dwelling and 0.0639 student spaces per multiple family dwelling unit.

- **Each single family dwelling will generate demand for 0.1838 grade 9-12 spaces**
- **Each multiple family dwelling unit will generate demand for 0.0639 grade 9-12 spaces**

With these two pieces of information, it is possible to compute base impact fees for grades nine through twelve, for single family and multiple family dwellings:

- **For single family dwellings, the basic impact fee is equal to the cost per grade nine through twelve student space ($22,476.99) multiplied by the demand ratio for grade 9-12 student spaces (0.1838 spaces per dwelling). This equals a base 9-12 fee of $4,312.27 per single family dwelling.**

<u>$22,476.99 x 0.1838 = $4,312.27</u>

- **For multiple family dwellings, the basic impact fee is equal to the cost per grade nine through twelve student space ($22,476.99) multiplied by the demand ratio for K-8 student spaces (0.0639 spaces per dwelling). This equals a base 9-12 fee of $1,436.28 per dwelling.**

<u>$22,476.99 x 0.0639 = $1,436.28</u>

C. <u>Combined Base Impact Fee for K-12 facilities</u>

New dwellings will be assessed a fee for student spaces in both the K-8 facilities provided by the Williston School District, and the 9-12 facilities provided by the Champlain Valley Union District. Thus, the base school impact fee will be the sum of the individual fees calculated above from 2012 through 2015. At that point the base fee for K-8 school facilities will terminate, and only the base fee for grade 9 through 12 facilities will be levied.

- **For single family dwellings, the basic school impact fee through 2015 will be:**

<u>$7,182.01 $4,312.27 = $11,494.28 per dwelling</u>

- **For multiple family dwellings, the basic school impact fee through 2015 will be:**

<u>$2,498.09 + $1,436.28 = $3,934.37 per dwelling unit</u>

Beginning in 2016, the base school impact fee will be only the fee foe Grade 9 through 12 facilities:

- **For single family dwellings, the basic school impact fee after 2015 will be:**

$7,182.01 per dwelling

- **For multiple family dwellings, the basic school impact fee after 2015 will be:**

$2,498.09 per dwelling unit

From these basic fees must be deducted credits for past and future tax payments that were or will be used to pay for the specified school expansion projects. These will be developed in the following section.

IV. CREDITS FOR TAXES USED TO PAY FOR SCHOOL FACILITIES

The construction of both Schools was funded by bonds that were, or will be, paid off in annual installments. In the case of the Allen Brook School, the bond repayment period was from 1995 through 2015. The repayment period for the CVU bond runs from 2004 to 2024. While impact fee revenues offset some of these annual bond expenditures, the impact fee revenues must be supplemented by property tax revenues.

It is likely that some of the property taxes paid by new dwellings (which have also paid the impact fees) was or will be used for the bond payment expenditures. To avoid double payment by the occupants of those dwellings, credits against the basic impact fee must be computed which represent the present value of the stream of tax payments, both from the new dwelling and from the previously undeveloped land, used for bond retirement expenditures. Estimating these credits involves several steps.

The undeveloped land on which new residential development occurs will have been assessed property taxes, some of which may have been used for the annual school bond expenditures (starting with the date of the first bond payment). These payments will be called past land tax payments. It is necessary to estimate the current value of the stream of past land tax payments used for these annual school bond expenditures, up to the point where the new dwelling enters the grand list.

Once the new dwelling is constructed, it will continue to make tax payments, some of which will be used for the annual school bond expenditures. It is necessary to estimate the present value of the stream of the new dwelling's future tax payments that will be used for these annual school bond expenditures, throughout the bond repayment period. These will be called future residential tax payments.

Thus, for any development, there will be two potential credits against the basic impact fees:

- The credit for past land tax payments used to fund past annual school bond expenditures not covered by impact fee revenues, and

- The credit for <u>future</u> residential tax payments used to fund the future annual school bond expenditures not covered by impact fee revenues.

Since the bond repayment periods for the two bonds are different, and since it is anticipated that the impact fee for K-8 school facilities will terminate at the end of the bond repayment period, it will be necessary to compute the appropriate credits for the two bond periods separately.

The value of the credits will be determined by the value of the land prior to development, the value of the new residential dwellings, the Town's total grand list, and the annual expenditures for the bond payments. The first two of these factors will be the same for both bonds, while the second will be specific to each bond. Also, as a result of the calculations, the credits will vary depending on when the new dwelling enters the Town's grand list.

A. <u>Value of Land and Dwellings</u>

In general, residential development takes the form of either single family detached dwellings or attached multi-family dwellings. Within each of these categories, the values of the individual dwelling units fluctuate around an average that can be used for estimating the credits for future tax payments. Similarly, the value of the land used for residential development fluctuates around an average that can be used for estimating the credits for past tax payments.

For this analysis (for both K-8 and 9-12 credits), the following values will be assumed:

- Single family detached dwellings will have an average assessed value of $326,000 (at the current assessment ratio of 94.04%, this is the equivalent of a market value of $346,600), and the land prior to development will have an average value of $32,600 per dwelling.[6]

- Multi-family dwellings (apartment, duplexes, or town houses) will have an average assessed value of $241,400 (reflecting a market value of $256,700), and the land prior to development will have a value of $24,000 per unit[7].

B. <u>The Town's Grand List</u>

The Town's Grand List and anticipated growth is based on a review of annual reports submitted to the State Division of Property Valuation and Review for the period 2007 through 2011. In 2011 the Grand List totaled $16,204,729. In 2007 the Grand List was $12,090,184. This represents an average growth of just under $1,030,000 per year. With the easing of the

[6] Based on a review of the 2011 grand list, the average assessed value was $325,808. This was adjusted to represent 2011 fair market value of $346,457. The values were rounded upward to reflect 2012. Raw land was assumed to be approximately 10 percent of the total assessed value, or $32,600 per unit

[7] Based on a review of the 2011 grand list, the average assessed value was $241,384. This was adjusted to represent 2011 fair market value of $256,682. The values were rounded upward to reflect 2012. Again, raw land was assumed to be approximately 10 percent of the total assessed value, or $24,000 per unit.

recession, it is reasonable to assume a slightly higher growth rate of $1,040,000 per year. It is assumed (for both K-8 and 9-12 credits) that this growth rate will stay constant

C. Annual Bond Payments Net Of Expected Impact Fee Revenues

As noted above, estimation of annual net bond payments will be done separately for each of the two bonds. The procedure includes several steps. First, annual school bond expenditures were tabulated for each year. Then, annual impact fee revenues were estimated by multiplying expected new dwellings each year by a conservative estimate of the average fee per dwelling. These were subtracted from the bond payments, leaving the net bond payments to be covered by property taxes.

1. Annual Bond payments for K-8 facilities.

The repayment schedule for the Allen Brook School bond was obtained from the Chittenden South Supervisory District. From this, a tabulation of total annual repayment expenditures was developed. Average annual impact fee revenues were estimated by multiplying the estimated number of single family and multiple family dwellings each year by a conservative estimate of the average fee[8]. Table 2, on the following page, presents this analysis. The far right column shows the annual bond payments, net of impact fee revenues, for the Allen Brook School Bond. This is the annual amount that must be covered by property tax revenues.

[8] For 1995 and 1996, it was estimated that the Town would issue permits for 40 single family units and 25 multiple family units, on average. After that, it was estimated that permits would be issued for 27 single family units and 18 multiple family units. The average fee was estimated to be $6,000 per single family unit and $1,800 per multiple family unit.

TABLE 2.
ANNUAL BOND EXPENDITURES FOR ALLEN BROOK SCHOOL, NET OF ESTIMATED IMPACT FEE REVENUES

YEAR	ABS DEBT SERVICE	ESTIMATED IMPACT FEE REVENUES	EXPENDITURES NET OF IMPACT FEE REVENUES
1995	$66,364	$0	$66,364
1996	$400,765	$306,000	$94,765
1997	$392,965	$306,000	$86,965
1998	$384,885	$194,400	$190,485
1999	$376,465	$194,400	$182,065
2000	$367,765	$194,400	$173,365
2001	$358,765	$194,400	$164,365
2002	$349,465	$194,400	$155,065
2003	$339,865	$194,400	$145,465
2004	$325,065	$194,400	$130,665
2005	$315,218	$194,400	$120,818
2006	$305,175	$194,400	$110,775
2007	$294,938	$194,400	$100,538
2008	$284,505	$194,400	$90,105
2009	$273,878	$194,400	$79,478
2010	$263,055	$194,400	$68,655
2011	$252,038	$194,400	$57,638
2012	$240,630	$194,400	$46,230
2013	$229,222	$194,400	$34,822
2014	$217,815	$194,400	$23,415
2015	$206,408	$194,400	$12,008

2. Annual Bond Payments for Grade 9-12 facilities.

This analysis is similar to that for the Allen Brook School bond. The repayment schedule for the CVU bond was obtained from the Chittenden South Supervisory District. From this, a tabulation of total annual repayment expenditures was developed. Next, an adjustment was made to reflect Williston's share of the total CVU bond payments[9]. Average annual impact fee revenues were estimated by multiplying the estimated number of single family and multiple family dwellings each year by a conservative estimate of the average fee[10]. Table 3, on the following page, presents this analysis. The far right column shows the annual bond payments, net of impact fee revenues, for the Allen Brook School Bond. This is the annual amount that must be covered by property tax revenues.

First, annual CVU bond expenditures were tabulated for each year. Second, annual impact fee revenues were estimated. Table 3, below, shows Williston's share of the estimated CVU bond payment expenditures, net of estimated impact fee revenues, for the CVU Bond. Impact fee revenues were estimated by multiplying the estimated number of dwellings constructed each year by a conservative estimate of the average impact fee per unit. These were subtracted from

[9] Williston's share is based on its share of the CVU enrollment. This was 33% in 2004, and had increased to 38% by 2012. It is assumed to hold constant from this point forward.

[10] It was estimated that the Town would issue permits for 27 single family units and 18 multiple family units. The average fee was estimated to be $3,000 per single family unit and $800 per multiple family unit.

Williston's share of the bond payments, leaving Williston's share of the CVU bond payments net of estimated impact fee revenues. These are shown in the far right hand column of Table 3.

TABLE 3.
WILLISTON'S SHARE OF ANNUAL BOND EXPENDITURES FOR CVU SCHOOL EXPANSION, NET OF ESTIMATED IMPACT FEE REVENUES

YEAR	TOTAL CVU DEBT SERVICE	WILLISTON'S SHARE	WILLISTON SHARE CVU DEBT SERVICE	ESTIMATED IMPACT FEE REVENUES	DEBT SERVICE NET OF IMPACT FEE REVENUES
2004	$226,125	33%	$74,621	$0	$74,621
2005	$1,349,266	34%	$458,750	$81,000	$377,750
2006	$1,334,680	35%	$467,138	$81,000	$386,138
2007	$1,315,726	36%	$473,661	$81,000	$392,661
2008	$1,293,496	37%	$478,594	$81,000	$397,594
2009	$1,268,692	37%	$469,416	$81,000	$388,416
2010	$1,241,978	37%	$459,532	$81,000	$378,532
2011	$1,213,468	37%	$448,983	$81,000	$367,983
2012	$1,183,360	38%	$449,677	$81,000	$368,677
2013	$1,146,692	38%	$435,743	$81,000	$354,743
2014	$1,114,218	38%	$423,403	$81,000	$342,403
2015	$950,894	38%	$361,340	$81,000	$280,340
2016	$922,450	38%	$350,531	$81,000	$269,531
2017	$893,490	38%	$339,526	$81,000	$258,526
2018	$864,014	38%	$328,325	$81,000	$247,325
2019	$834,020	38%	$316,928	$81,000	$235,928
2020	$803,512	38%	$305,335	$81,000	$224,335
2021	$767,552	38%	$291,670	$81,000	$210,670
2022	$736,384	38%	$279,826	$81,000	$198,826
2023	$704,704	38%	$267,788	$81,000	$186,788
2024	$672,576	38%	$255,579	$81,000	$174,579

D. Calculating Credits and Net Fees

Again, this calculation will be done separately for K-8 facilities and 9-12 facilities.

1. Credits and Net Fees for K-8 Facilities.

A. Credits for Past Land Tax Payments: The procedure for estimating credits for past tax payments includes several steps. Net annual bond expenditures from Table 2. are divided by the estimated grand list for the appropriate year to generate effective tax rates needed to cover the debt service payments each year. The effective tax rates were multiplied by the assumed value of the land used for a single-family or multi-family dwelling to estimate the taxes paid on that land for each year. This analysis is shown on the first four columns of Table 4. Note that these analyses cover the entire bond repayment period, but for brevity, these tables show only the years from 2012 to the end of the bond period.

TABLE 4.
IMPACT FEE CREDIT FOR PAST LAND TAX PAYMENTS USED TO OFFSET NET ANNUAL EXPENDITURES FOR ALLEN BROOK SCHOOL DEBT SERVICE

						Single family land value =$32,600
						Multi-family land value = $24,000
			TAX ON		**ESTIMATED**	**CREDITS**
DWELLING YEAR	ANNUAL EXPENDITURE*	TAX RATE NEEDED	Single Family land	Multi Family land	**Single family unit**	**For multi Family unit**
2012	46,230	$0.00181	$0.59	$0.43	**$29.18**	**$21.48**
2013	34,822	$0.00131	$0.43	$0.31	**$30.67**	**$22.48**
2014	23,415	$0.00085	$0.28	$0.20	**$31.09**	**$22.88**
2015	12,008	$0.00042	$0.14	$0.10	**$32.50**	**$23.92**
Assumed discount Rate = 5 percent						

The last two columns of Table 4 show the credits, computed as the present value of the stream of tax payments for each year prior to the year that the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the credit would represent the present value of the stream of tax payments made from 2005 and 2012[11], (assuming a discount rate of 5.00 percent). The credit (from the 2012 row of the next to last column of Table 6) would be $29.18. If a single-family dwelling entered the grand list in the year 2014, the stream would include the payments made in 2005 through 2014, and the credit (from the 2014 row of the next to last column of Table 6) would be $31.09. Since the bond payments end in 2015, it is assumed that impact fees will not be needed after that point[12].

B. Credits for Future Residential Tax Payments: The procedure for estimating credits for future tax payments is similar. The net annual debt service payments from Table 2 are divided by the grand list for each year to produce an effective tax rate needed to cover the bond payments that year. This effective tax rate was multiplied by the assumed value for new single family or multi-family dwellings to estimate the tax on those dwellings needed to support the school bond expenditures. Again, this is shown on the first four columns of Table 5.

The last two columns of Table 5 show the credits, computed as the present value of the stream of tax payments for each year after the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the stream would include the payments made in 2012 through 2015 (the last year of the bond period), adjusted by the

11 The analysis included expenditures for years 1995 through 2015. For brevity, Table 3 shows only years 2012 through 2015.

12 Since development was slower than anticipated when the school was built, less impact fee revenues were collected. Also, since the K-8 school system has not yet reached the design capacity of 1,250, an argument can be made that the impact fees should be continued until capacity is met. The revenue generated would reimburse the school district for providing excess capacity as provided 24 V.S.A., Section 5201(3).

assumed discount rate of 5.00 percent. The credit (from the 2012 row of the next to last column of Table 5) would be $5.61. If a single-family dwelling entered the grand list in the year 2014, the stream would include only those payments made in the years 2014 through 2015, and the credit (from the 2014 row of the next to last column of Table 5) would be $2.63.

TABLE 5.

IMPACT FEE CREDIT FOR FUTURE TAX PAYMENTS USED TO OFFSET NET ANNUAL EXPENDITURES FOR ALLEN BROOK SCHOOL DEBT SERVICE

						Single family unit value = $326,000 Multi-family unit value = $256,700
			TAX ON		**ESTIMATED CREDITS**	
DWELLING YEAR	ANNUAL EXPENDITURE*	TAX RATE NEEDED	Single Family Dwelling	Multiple family Dwelling	**For single family unit**	**For multi family unit**
2012	$46,230	$0.00181	$5.90	$4.64	**$5.61**	**$4.42**
2013	$34,822	$0.00131	$4.27	$3.36	**$4.06**	**$3.20**
2014	$23,415	$0.00085	$2.76	$2.17	**$2.63**	**$2.07**
2015	$12,008	$0.00042	$1.36	$1.07	**$1.30**	**$1.02**
Assumed discount Rate = 5 percent						

C. Net Impact Fees for K-8 Facilities: Table 6. combines the results of tables 4 and 5, showing the base impact fees for each type of dwelling, the credits for past and future tax payments, and the net fees. Thus, for a single family dwelling entering the grand list in 2012, the net fee for K-8 facilities would be $7,147.22. For a multiple family dwelling entering the grand list in 2014, the net fee would be $2,473.13.

TABLE 6.

NET IMPACT FEES FOR ALLEN BROOK SCHOOL (Composite of base fees and credits from Tables 2 and 3)

	SINGLE FAMILY DWELLINGS				MULTI FAMILY DWELLINGS			
DWELLING YEAR	base Imp. Fee	Table 2 Credit	Table 3 Credit	**Net Fee**	base Imp. Fee	Table 2 Credit	Table 3 Credit	**Net Fee**
2012	$7,182.01	$5.61	$29.18	**$7,147.22**	$2,498.09	$4.42	$21.48	**$2,472.19**
2013	$7,182.01	$4.06	$30.67	**$7,147.27**	$2,498.09	$3.20	$22.58	**$2,472.31**
2014	$7,182.01	$2.63	$31.09	**$7,148.29**	$2,498.09	$2.07	$22.88	**$2,473.13**
2015	$7,182.01	$1.30	$32.50	**$7,148.21**	$2,498.09	$1.02	$23.92	**$2,473.14**

2. Credits and Net Fees for 9-12 Facilities. This analysis is essentially the same as for K-8 facilities, except that the annual bond payment expenditures are those from Table 3 instead of Table 2.

A. Credits for Past Land Tax Payments: The procedure for estimating credits for past tax payments includes several steps. Net annual bond expenditures from Table 7. are divided by the estimated grand list for the appropriate year to generate effective tax rates needed to cover the debt service payments each year. The effective tax rates were multiplied by the assumed value of the land used for a single-family or multi-family dwelling to estimate the taxes paid on that land for each year. This analysis is shown on the first four columns of Table 7. Note that these analyses cover the entire bond repayment period, but for brevity, these tables show only the years from 2012 to the end of the bond period.

TABLE 7.
IMPACT FEE CREDITS FOR PAST LAND TAX PAYMENTS USED TO OFFSET NET ANNUAL EXPENDITURES FOR THE CVU BOND

Single family land value = $32,600
Multi-family land value = $24,000

DWELLING YEAR	ANNUAL EXPENDITURE*	TAX RATE NEEDED	TAX ON Single family land	Multi family land	**ESTIMATED CREDITS For single family land**	**For multi family land**
2012	368,677	$0.02275	$7.42	$5.46	**$9.87**	**$7.27**
2013	354,743	$0.02057	$6071	$4.94	**$9.12**	**$6.72**
2014	342,403	$0.01873	$6.10	$4.49	**$8.49**	**$6.25**
2015	280,340	$0.01451	$4.73	$3.48	**$7.05**	**$5.19**
2016	269,531	$0.01324	$4.31	$3.18	**$6.61**	**$4.87**
2017	258,526	$0.01208	$3.94	$2.90	**$6.22**	**$4.58**
2018	247,325	$0.01102	$3.59	$2.64	**$5.86**	**$4.31**
2019	235,928	$0.01005	$3.27	$2.41	**$5.52**	**$4.07**
2020	224,335	$0.00915	$2.98	$2.20	**$5.21**	**$3.84**
2021	210,670	$0.00824	$2.69	$1.98	**$4.90**	**$3.61**
2022	198,826	$0.00747	$2.44	$1.79	**$4.64**	**$3.42**
2023	186,788	$0.00676	$2.20	$1.62	**$4.40**	**$3.24**
2024	174,579	$0.00609	$1.98	$1.46	**$4.17**	**$3.07**

Assumed discount Rate = 5 percent

The last two columns of Table 7 show the credits, computed as the present value of the stream of tax payments for each year prior to the year that the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the credit would represent the present value of the stream of tax payments made from 2005 and 2012[13], (assuming a discount rate of 5.00 percent). The credit (from the 2012 row of the next to last column of Table 7) would be $9.87. If a single-family dwelling entered the grand list in the year 2014, the stream would include the payments made in 2005 through 2014, and the credit (from the 2014 row of the next to last column of Table 7) would be $8.49.

B. Credits for Future Residential Tax Payments: The procedure for estimating credits for future tax payments is similar. The net annual debt service payments from Table 3 are divided by the grand list for each year to produce an effective tax rate needed to cover the bond payments that year. This effective tax rate was multiplied by the assumed value for new single family or multi-family dwellings to estimate the tax on those dwellings needed to support the CVU school bond expenditures. This is shown on the first four columns of Table 8 on the following page.

TABLE 8.

IMPACT FEE CREDITS FOR FUTURE LAND TAX PAYMENTS USED TO OFFSET NET ANNUAL EXPENDITURES FOR THE CVU BOND

						Single family unit value = $326,000 Multi-family unit value = $256,700
			TAX ON		**ESTIMATED**	**CREDITS**
DWELLING YEAR	ANNUAL EXPENDITURE*	TAX RATE NEEDED	Single Family Dwelling	Multiple family Dwelling	**For single family unit**	**For multi family unit**
2012	$368,677	$0.02275	$74.17	$58.40	**$88.63**	**$69.79**
2013	$354,743	$0.02057	$67.06	$52.81	**$81.86**	**$64.46**
2014	$342,403	$0.01873	$61.05	$48.07	**$76.14**	**$59.95**
2015	$280,340	$0.01451	$47.29	$37.24	**$63.04**	**$49.64**
2016	$269,531	$0.01324	$43.15	$33.97	**$59.09**	**$46.53**
2017	$258,526	$0.01208	$39.37	$31.00	**$55.50**	**$43.70**
2018	$247,325	$0.01102	$35.92	$28.29	**$52.21**	**$41.11**
2019	$235,928	$0.01005	$32.75	$25.79	**$49.19**	**$38.73**
2020	$224,335	$0.00915	$29.82	$23.48	**$46.40**	**$36.53**
2021	$210,670	$0.00824	$26.86	$21.15	**$43.58**	**$34.32**
2022	$198,826	$0.00747	$24.36	$19.18	**$41.20**	**$32.44**
2023	$186,788	$0.00676	$22.03	$17.34	**$38.97**	**$30.69**
2024	$174,579	$0.00609	$19.84	$15.62	**$36.89**	**$29.05**
			Assumed discount Rate = 5 percent			

The last two columns of Table 8 show the credits, computed as the present value of the stream of tax payments for each year after the dwelling enters the grand list. Thus, if a single-family dwelling enters the grand list in 2012, the stream would include the payments made in 2012 through 2014 (the last year of the bond period), adjusted by the assumed discount rate of 5.00 percent. The credit (from the 2012 row of the next to last

13 The analysis included expenditures for years 1995 through 2015. For brevity, Table 3 shows only years 2012 through 2015.

column of Table 8) would be $88.63. If a single-family dwelling entered the grand list in the year 2014, the stream would include only those payments made in the years 2014 through 2024, and the credit (from the 2014 row of the next to last column of Table 8) would be $76.14.

C. Net Impact Fees for grade 9-12 Facilities: Table 9. combines the results of tables 7 and 8, showing the base impact fees for each type of dwelling, the credits for past and future tax payments, and the net fees. Thus, for a single family dwelling entering the grand list in 2012, the net fee would be $4,032.77. For a multiple family dwelling entering the grand list in 2014, the net fee would be $1,370.18.

TABLE 8.
IMPACT FEE CREDITS FOR FUTURE LAND TAX PAYMENTS USED TO OFFSET NET ANNUAL EXPENDITURES FOR THE CVU BOND

	SINGLE FAMILY DWELLINGS				MULTI FAMILY DWELLINGS			
DWELLING YEAR	base Imp. Fee	Table 3 Credit	Table 4 Credit	Net Fee	base Imp. Fee	Table 3 Credit	Table 4 Credit	Net Fee
2012	$4,131.27	$9.87	$88.63	**$4,032.77**	$1,436.28	**$7.27**	**$69.79**	**$1,359.22**
2013	$4,131.27	$9.12	$81.86	**$4,040.28**	$1,436.28	**$6.72**	**$64.46**	**$1,365.10**
2014	$4,131.27	$8.49	$76.14	**$4,046.64**	$1,436.28	**$6.25**	**$59.95**	**$1,370.18**
2015	$4,131.27	$7.05	$63.04	**$4,061.18**	$1,436.28	**$5.19**	**$49.64**	**$1,381.45**
2016	$4,131.27	$6.61	$59.09	**$4,065.57**	$1,436.28	**$4.87**	**$46.53**	**$1,384.88**
2017	$4,131.27	$6.22	$55.50	**$4,069.56**	$1,436.28	**$4.58**	**$43.70**	**$1,388.00**
2018	$4,131.27	$5.86	$52.21	**$4,073.21**	$1,436.28	**$4.31**	**$41.11**	**$1,390.86**
2019	$4,131.27	$5.52	$49.19	**$4,076.56**	$1,436.28	**$4.07**	**$38.73**	**$1,393.48**
2020	$4,131.27	$5.21	$46.40	**$4,079.66**	$1,436.28	**$3.84**	**$36.53**	**$1,395.91**
2021	$4,131.27	$4.90	$43.58	**$4,082.78**	$1,436.28	**$3.61**	**$34.32**	**$1,398.35**
2022	$4,131.27	$4.64	$41.20	**$4,085.43**	$1,436.28	**$3.42**	**$32.44**	**$1,400.42**
2023	$4,131.27	$4.40	$38.97	**$4,087.90**	$1,436.28	**$3.24**	**$30.69**	**$1,402.35**
2024	$4,131.27	$4.17	$36.89	**$4,090.21**	$1,436.28	**$3.07**	**$29.05**	**$1,404.16**

D. Combined net impact fees for K-8 and 9-12 facilities

The final step is to combine the net impact fees for K-8 facilities from Table 6 with the net impact fees for 9-12 facilities from Table 9 into a combined net impact fee for education facilities. This is shown in Table 10 on the following page. Table 10 should be the only table necessary to determine the net school impact fee for any given dwelling.

TABLE 10.
COMBINED NET IMPACT FEES FOR EDUCATION FACILITIES

(Composite of net fees for K-8 and 9-12 from Tables 5 and 8)

	Net Fees for K-8 facilities		Net Fees for 9-12 facilities		**Combined Net Impact Fees**	
Year	Single family	Multi-family	Single family	Multi-family	**Single family**	**Multi-family**
2012	$7,147.22	$2,472.19	$4,032.77	$1,359.22	**$11,179.98**	**$3,831.41**
2013	$7,147.27	$2,472.31	$4,040.28	$1,365.10	**$11,187.55**	**$3,837.41**
2014	$7,148.29	$2,473.13	$4,046.64	$1,370.08	**$11,194.94**	**$3,843.21**
2015	$7,148.21	$2,473.14	$4,061.18	$1,381.45	**$11,209.40**	**$3,854.60**
2016	$0.00	$0.00	$4,065.57	$1,384.88	**$4,065.57**	**$1,384.88**
2017	$0.00	$0.00	$4,069.56	$1,388.00	**$4,069.56**	**$1,388.00**
2018	$0.00	$0.00	$4,073.21	$1,390.86	**$4,073.21**	**$1,390.86**
2019	$0.00	$0.00	$4,076.56	$1,393.48	**$4,076.56**	**$1,393.48**
2020	$0.00	$0.00	$4,079.66	$1,395.91	**$4,079.66**	**$1,395.91**
2021	$0.00	$0.00	$4,082.78	$1,398.35	**$4,082.78**	**$1,398.35**
2022	$0.00	$0.00	$4,085.43	$1,400.42	**$4,085.43**	**$1,400.42**
2023	$0.00	$0.00	$4,087.90	$1,402.35	**$4,087.90**	**$1,402.35**
2024	$0.00	$0.00	$4,090.21	$1,404.16	**$4,090.21**	**$1,404.16**

Thus, if a single family dwelling entered the grand list in 2013, the combined net impact fee for school facilities would be $11,187.55. A single family dwelling entering the grand list in 2017 (after the K-8 fee is terminated) would be charged a total combined fee of $4,065.57.

E. Determining which row of the table is to be used: Since the net fees change from year to year (as indicated by the various rows in table 10), it is necessary to determine which row to use in establishing the fee for any proposed dwelling. When a zoning permit is issued, it is never certain just when the planned dwelling will be occupied and entered on the Town's grand list. The Town has established the practice of shifting rows on Table 10 as a part of the shift from one fiscal year to the next. This takes place on July 1 of each calendar year. Thus, if a zoning permit for a dwelling is issued on May 28, 2012 (which is in fiscal year 2011-12), the fee would be shown in the 2012 row of Table 10. If a zoning permit is issued for a new dwelling on July 15, 2012 which is in fiscal year 2012-13), the fee would be found in the 2013 row of Table 10.