

CAPITAL IMPROVEMENT PLAN 2015

Executive Summary

The Capital Improvement Plan (CIP) Cost Analysis Report was prepared by the CIP Committee for the Ashland Board of Selectmen and the Budget Committee. The report addresses the capital improvements needed by each town department, provides an analysis of different funding options, and makes recommendations based on cost considerations.

The report contains recommendation for 2015 and a more detailed breakdown by department. The capital improvements required by each department require different funding strategies for several reasons:

- Purchasing options vary
- Existing capital reserves
- Age, condition, and life expectancy of equipment, roads, and buildings
- Availability of grants.

In general, the most cost-effective approach for funding capital improvements is through accumulating capital reserves so that money is available for improvements when they are needed. Using capital reserves accomplishes the following:

- Limits or does away with interest charges and fees
- Places the town in a better bargaining position
- Allows departments to make purchases at the optimal time
- Places the town in a better position for state and federal matching grants
- Reduces yearly payments and long-term debt
- Helps reduce and stabilize the tax rate over time
- Lessens the financial impact of emergencies

Since the town only has limited capital reserves for fire equipment and roads and will need to spend at least \$4,570,385 (includes existing reserves but not grants) on capital improvements over the next 10 years, the CIP committee recommends that the town fund these improvements by combining leases and bonds while building reserves. Taking out leases and bonds will reduce yearly costs during the first few years and allow the town to build reserves for future purchases.

The committee recognizes that building capital reserves presents a significant challenge to the town because reserves are created and funded by voter approval of warrant articles. Historically, the town has supported only limited use of capital reserves. The complexity of the current financial situation and the approaches to cost-effective long-term planning will require significant voter education.

Finally, the CIP is a work in progress. The committee is in its second year of operation, and has made progress in understanding the needs of each department and developing analytical tools to evaluate the town's capital improvement needs. However, the CIP is only as reliable as the accuracy of the data we receive and the assumptions we make about long-term interest rates and inflation.

The accuracy of the data we received varied. Some estimates were based on study by committees (Fire Department), some on quotes from vendors (Police Department, Town, Parks & Recreation, DPW), and some on past history (DPW). In all cases, the departments should provide the town with updated figures for the budget and warrant articles. We further recommend that the town obtain an engineering study of the road project to ensure that the cost estimates are accurate. The CIP committee can provide updated financial information on the impact of decisions by the Board of Selectmen, the Budget Committee, and voters.

Recommendations for 2015

Overview

This section provides an overview of the Capital Improvement Plan (CIP) for 2015. The goal of the CIP Committee is to fund all or a significant portion of capital improvements through capital reserves. Funding improvements through capital reserves is the most cost-effective approach for purchasing capital improvements because it results in the lowest yearly and total costs. Since the town currently has limited reserves (approximately \$350,000) and large capital needs over the next 10 years (\$4,570,385), the committee's general strategy involves initial borrowing (leases and bonds) to cover the costs of improvements while building reserves to cover future costs. The approaches for funding improvements for each department are covered in more detail later in the report.

Capital Improvement Costs

A summary of capital improvement costs for 2015 through 2024 is provided in Table 1

Summary of Capital Expenses 2015-2024											
Dept.	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	TOTAL
Police	\$45,650	\$45,650	\$59,188	\$71,893	\$57,147	\$57,147	\$43,608	\$30,903	\$30,903	\$30,903	\$472,992
Fire	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$111,279	\$1,112,795
DPW	\$101,918	\$169,070	\$175,255	\$186,368	\$168,481	\$106,563	\$39,412	\$33,226	\$22,113	\$0	\$1,002,407
Roads	\$185,000	\$205,808	\$205,808	\$205,808	\$205,808	\$205,808	\$205,808	\$205,808	\$205,808	\$150,726	\$1,982,192
Total	\$443,847	\$531,807	\$551,531	\$575,349	\$542,716	\$480,798	\$400,108	\$381,217	\$370,104	\$292,908	\$4,570,385

Table 1. Summary of Capital Costs

Recommended Warrant Articles

The committee estimates that the total cost of capital improvements over the next 10 years will be at least \$4,570,385. The total amount needed for 2015 is \$443,847. The recommendations for warrant articles for capital expenses are presented in Table 2.

Recommended Warrant Articles			
Department	Lease/Bond	Cap Reserve	Total
Police Department	\$14,747	\$30,903	\$45,650
Fire Department	\$88,779	\$22,500	\$111,279
Department of Public Works	\$61,918	\$40,000	\$101,918
Highways		\$185,000	\$185,000
Total	\$165,444	\$278,403	\$443,847

Table 2. Summary of Recommended Warrant Articles

Tax Impact

The net increase to the town budget would be \$208,847, and the net tax increase would be approximately .9 mil (\$90 per \$100,000) based on the 2014 budget and tax rate. The 2014 tax rate was based on a budget that included a warrant for \$125,000 for roads, a warrant for \$50,000 for Fire Department vehicles, and a final payment of \$60,000 for the Fire Department Ladder truck for a total of \$235,000. These amounts are included in the capital improvement recommendations for the DPW and Fire Department.

Police Department

Overview

The Police Department has three vehicles (Ford Interceptor, Ford SUV, and Utility Interceptor) that need to be replaced every 5 years (100,000 -125,000 miles) for personnel safety and cost considerations. Each vehicle needs to be outfitted for police work. The cost of the vehicle and the cost of outfitting are roughly the same. Replacing vehicles every 5 years can provide savings if the outfitting can be reused in the new vehicle.

Analysis

The committee did a cost analysis of the following purchase options:

- Pay cash for all three vehicles
- 3-year lease-purchase

- 4-year lease-purchase all vehicles
- Build capital reserves
- Combine lease-purchase and build capital reserves

Paying cash and building capital reserves saves interest costs. Paying cash, however, can cause large spikes in the tax rate and make purchasing other capital equipment in the same year cost-prohibitive. Building capital reserves on a yearly basis (saving) lowers yearly and long-term costs and stabilizes the tax rate. Leasing allows the town to purchase equipment without building reserves. It stabilizes the tax rate, but there are higher yearly and long-term costs due to interest and fees.

The town currently does not have capital reserves for purchasing police vehicles and equipment. The committee determined that combining a 4-year lease-purchase while building reserves is the most cost-effective approach to reach a situation in which the town has enough money in reserve to purchase the next 3 police vehicles. A 4-year lease lowers the yearly payment on the first purchase of the vehicle enough to allow the town to build reserves for the second purchase, and the costs can be averaged over the purchase period to stabilize the impact on the tax rate as shown in Table 3.

Ford Interceptor	2015	2016	2017	2018	2019
4-Year Lease	\$14,746.55*	\$14,746.55	\$14,746.55	\$14,746.55	
Capital Reserve	\$9,468.83	\$9,468.83	\$9,468.83	\$9,468.83	\$24,215.39**
Total	\$24,215.39	\$24,215.39	\$24,215.39	\$24,215.39	\$24,215.39

* Year of 1st purchase

** Reserve accumulated for second purchase in 2020

Table 3. 4-Year Lease Combined with Capital Reserve for 1 Police Vehicle

The lease and capital reserve for each vehicle can be determined in the same manner, and the combined reserves can be adjusted to help stabilize the impact on the tax rate as shown in Table 4.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Ford Interceptor	\$14,746.55	\$14,746.55	\$14,746.55	\$14,746.55						
Ford SUV			\$13,538.61	\$13,538.61	\$13,538.61	\$13,538.61				
Utility Interceptor				\$12,705.24	\$12,705.24	\$12,705.24	\$12,705.24			
Total Cap Reserve	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903	\$30,903
Total	\$45,649.37	\$45,649.37	\$59,187.98	\$71,893.22	\$57,146.66	\$57,146.66	\$43,608.05	\$30,902.81	\$30,902.81	\$30,902.81

Table 4. 4-Year Lease Combined with Capital Reserve for 3 Police Vehicles

Recommendations

- 2015 – Purchase the Ford Interceptor with a 4-year lease, and establish a \$31,000 capital reserve per year for future purchases of police vehicles. (If budget cuts are

necessary, the committee recommends retaining the capital reserve and leasing the Ford Interceptor in 2016)

- 2017 – Purchase the Ford SUV with a 4-year lease and continue \$31,000 capital reserve
- 2018 – Purchase the Utility Interceptor with a 4-year lease, and Continue \$31,000 capital reserve
- 2016-24 - Continue \$31,000 capital reserve per year to purchase and outfit all police vehicles, and monitor outfitting costs reducing reserves when applicable

Fire Department

Overview

The Fire Department Apparatus Committee has determined after an outside technical evaluation, that Engines 1 and 2 need to be replaced. Engines 1 and 2 have significant body rot. Engine 1 has a cracked water tank and needs an engine overhaul.

Analysis

The Fire Department Apparatus Committee recommended two options for replacing Engine 1, and 2.

- Option 1 - Lease 1 engine in 2015 and 1 engine in 2021 with a \$75,000 or \$125,000 down payment from capital reserve
- Option 2 - Lease 2 engines in 2015 with a down payment of \$75,000 or \$125,000 from capital reserve.

The budget impact of the two options for funding fire vehicles is shown in Table 5. Option 2 with \$125,000 down has the lowest total cost (\$887,795), the lowest yearly cost in 2020-25 and the lowest average yearly cost over 10 years (\$88,780), and stabilizes the tax rate over a 10-year period.

Table 5 also shows that putting more money down lowers the total cost of purchasing of capital equipment. The difference between purchasing Engines 1 and 2 with \$125,000 down versus \$75,000 down is \$7,277 over 10 years.

Purchasing 2 engines also saves the cost of maintaining engine 2 for 5 years. The current cost estimate to overhaul engine 2 is between \$15,000 and \$20,000. Finally, this approach allows the town to build capital reserves for an ambulance and have the 2 engines paid for in time to begin building reserves for the next purchase of a ladder truck in 2035.

Amt Down	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	Interest
	Engine 1					Engine 2						
\$75k	\$80,834	\$80,834	\$80,834	\$80,834	\$80,834	\$115,824	\$115,824	\$115,824	\$115,824	\$115,824	\$983,288	\$70,964
\$125k	\$70,056	\$70,056	\$70,056	\$70,056	\$70,056	\$115,824	\$115,824	\$115,824	\$115,824	\$115,824	\$929,398	\$67,075
	Engines 1 and 2											
\$75k	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$94,507	\$945,072	\$120,072
\$125k	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$88,779	\$887,795	\$112,795

Table 5. Cost of Options for Funding Fire Vehicles

Tax Impact

This recommendation involves a negligible effective tax increase of 0.006 mil (1/2 cent per \$100,000 of property value). In 2014 the town spent \$110,000 for fire vehicles (the final \$60,000 payment for the ladder truck and \$50,000 for capital reserve). The cost of the bond is \$88,779 and the capital reserve for the ambulance is \$22,500, a total of \$111,279.

Recommendations

- 2015 - Take out a \$775,000 10-year lease or bond to purchase 2 fire engines, establishing a capital reserve of \$22,500 for the purchase of an ambulance in 2025. Explore options to for warrant article that allows at least one engine to be purchased in 2015.
- 2025 - Purchase the ambulance and establish a capital reserve of \$100,000 a year for purchasing a ladder truck.

Department of Public Works - Roads

Overview

The most cost-effective method of keeping roads in good repair is to resurface them before they begin to deteriorate, usually between 10 and 12 years. Figure 1 taken from the Master Plan shows that there is a 40% quality-drop in roads over 12 years with an additional 40% quality drop over the next 3 years. The cost of reconstructing roads after 12 years can increase 4 to 5 times.

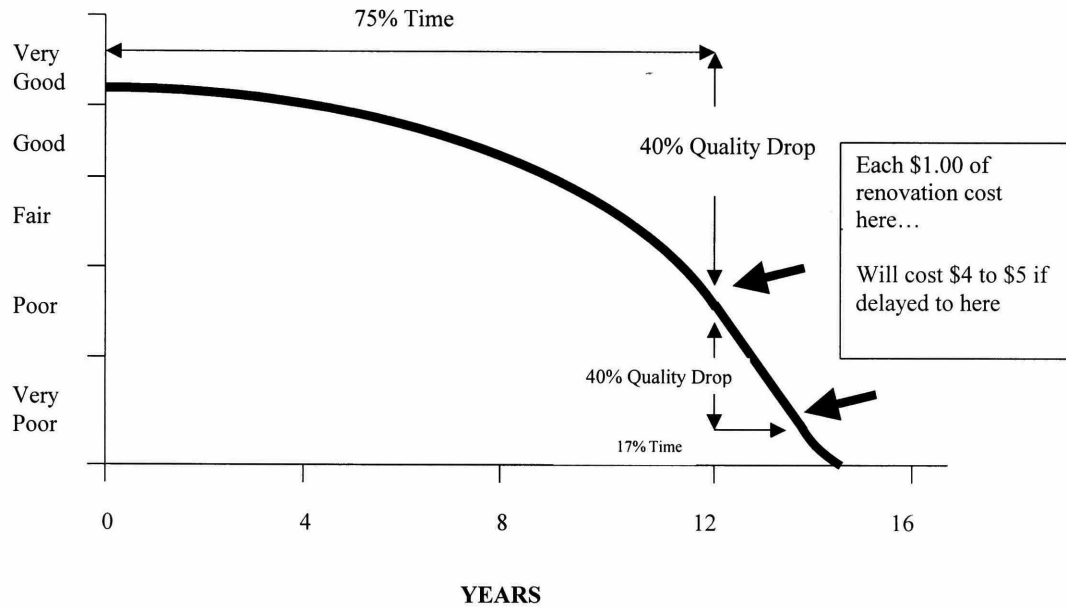


Figure 1. Paved Road Service Life

Our current situation is that we have a number of roads that have not been resurfaced within the 12-year period and require significant reconstruction. The estimated cost for major road reconstruction over the next 5 years is \$1,804,843 with an additional \$440,660 over the next 10 years for a total cost of \$2,245,503. It should be noted that these estimates are not based on engineering studies. Table 6 shows the plan and costs for reconstructing and repairing roads.

Year	Street	Cost
2015	Sidewalks	\$60,000
2016	Thomson Street, Smith Hill Road	\$732,021
2017	Mechanic Street, Mill Pond Lane, Avery St., Mountain View, Libby Lane	\$161,137
2018	River Street	\$478,341
2019	Hillside Avenue	\$92,742
2020	Partridge Road, Peppercorn Road, Valley Road	\$280,602
2021		\$0
2022		\$0
2023	Howe Street	\$114,467
2024	Hicks Hill Road	\$326,193
Total		\$2,245,503

Table 6. Road Reconstruction and Resurfacing Costs

Analysis

The CIP committee considered the following options for funding road reconstruction.

- Capital Reserve of \$300,000 for 5-years
- 5-year bond
- 10-year bond

Table 7 compares the cost of each option. The figures assume using \$300,000 from capital reserve to offset costs in 2015 and 16.

Option	CR Down	Initial Cost	Initial Cost - CR	Payment	Final Cost	Interest	Tax Impact
Capital Reserve	\$300,000	\$1,804,843	\$1,504,843	\$300,969	\$1,504,843	\$0	\$77.87
5-yr Bond	\$300,000	\$1,804,843	\$1,504,843	\$316,478	\$1,582,392	\$77,548	\$84.73
10-yr Bond	\$300,000	\$1,804,843	\$1,504,843	\$171,853	\$1,718,527	\$213,684	\$42.74

Table 7. Cost of Funding Options for Roads

The most cost-effective option for funding road improvements over the next 6 years is by building capital reserves. The advantage of taking out a 5-year bond is that the bond will not be needed until 2016, which would allow the town to build additional capital reserves to reduce the cost of the bond. The 10-year bond has a significantly lower yearly payment and impact on the yearly tax rate; however, it costs \$213,684 more than the capital reserve.

Tax Impact

Building capital reserves for roads would effectively increase the tax rate by 0.43 mil. Since the town put \$125,000 in a capital reserve for roads in the 2014 budget, the effective increase to the budget would be about \$176,000 per year over 5 years.

Recommendations

Because of the high cost of reconstructing so many roads and because the estimates have been based on previous history, the CIP Committee recommends getting an engineering evaluation of Thompson Street and Smith Hill Road as a minimum before deciding how to fund this project. The town should also have a complete plan for roads before deciding how to fund the remaining projects.

- 2015 - The recommendation for 2015 is to fund a capital reserve for \$185,000 for complete streets (roads, ADA compliant sidewalks, and bike lanes)
- 2016 - Reevaluate funding options for Thompson Street and Smith Hill Road, develop a plan for the remaining roads, and update CIP to reflect the final plans

Department of Public Works - Equipment

Overview

The DPW equipment listed in Table 8 below is either old or worn and will need to be replaced over the next 5 years at an estimated cost of \$931,829 (not including interest)

Equipment	2015	2016	2017	2018	2019	Total
Backhoe		\$132,613				\$132,613
85 Pickup	\$35,020					\$35,020
86 Pickup			\$37,153			\$37,153
Ford 550 Plow				\$78,786		\$78,786
2005 Dump Truck	\$175,000					\$175,000
2009 Dump Truck					\$197,077	\$197,077
Loader/Plow		\$212,180				\$212,180
Mini Loader	\$49,000					\$49,000
Baler		\$15,000				\$15,000
Totals	\$259,020	\$359,793	\$37,153	\$78,786	\$197,077	\$931,829

Table 8. DPW Equipment Costs

Currently, the town does not have capital reserves to purchase DPW equipment; therefore, funding options over the next 4 to 5 years are limited to leases possibly combined with short-term capital reserves to help reduce the cost of the leases and stabilize the tax rate.

There is no long-term equipment replacement plan, so long-term costs are not included in this plan.

Analysis

All of the DPW equipment listed above is due to be replaced over the next 5 years, and four pieces are due to be replaced in 2015. The most cost-effective approach to meet these capital needs is to lease the equipment and build short-term reserve wherever possible to lower the yearly payments and total cost, and help stabilize the tax rate. Once the leases are paid for, the town can begin building reserves for future purchases.

Leasing while building limited reserves (Table 9) for some equipment saves \$27,792 over the period of the leases. Because the reserves are concentrated in 2015 between 2015 and 2018, the yearly costs are higher in those years, but they are lower after 2020, which will allow the town to build reserves for future purchases.

Equipment	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Backhoe	\$10,000	\$27,930	\$27,930	\$27,930	\$27,930	\$27,930				\$149,651
85 Pick up	\$7,977	\$7,977	\$7,977	\$7,977	\$7,977					\$39,886
86 Pickup	\$10,000	\$10,000	\$3,907	\$3,907	\$3,907	\$3,907	\$3,907			\$39,537
Ford 550 Plow	\$5,000	\$10,000	\$10,000	\$11,113	\$11,113	\$11,113	\$11,113	\$11,113		\$80,565
2005 Dump Truck	\$39,864	\$39,864	\$39,864	\$39,864	\$39,864					\$199,318
2009 Dump Truck	\$5,000	\$20,000	\$30,000	\$40,000	\$23,252	\$23,252	\$23,252	\$23,252	\$23,252	\$211,261
Loader/Plow	\$10,000	\$42,638	\$42,638	\$42,638	\$42,638	\$42,638				\$223,190
Mini Loader	\$11,162	\$11,162	\$11,162	\$11,162	\$11,162					\$55,809
Baler	\$5,000	\$2,278	\$2,898	\$2,757	\$2,789	\$2,782				\$18,503
Equip Total	\$59,003	\$131,849	\$136,376	\$147,348	\$170,632	\$111,622	\$38,273	\$34,365	\$23,252	\$1,017,721
Cap Reserve Total	\$40,000	\$40,000	\$40,000	\$40,000	\$0	\$0	\$0	\$0	\$0	\$160,000
Total Cost	\$99,003	\$171,849	\$176,376	\$187,348	\$170,632	\$111,622	\$38,273	\$34,365	\$23,252	\$1,012,721

Table 9. Funding Approach DPW Equipment

Tax Impact

The tax increase in 2015 would be approximately 0.043 mil (\$43.00 per \$100,000).

Recommendations**2015**

- Establishing a capital reserve of \$40,000 for DPW.
- Lease 1985 Pick-up Truck replacement - \$7,977
- Lease 2005 Dump Truck replacement - \$39,864
- Lease Mini-loader (skid steer and fork lift replacement) - \$11,027

2016/18 – See Table 9.

Town***Overview***

The town is currently planning the following improvements to the Town Hall:

- Window replacement - \$60,701
- Lighting - \$8,775
- Heating - \$14,211

- Air Conditioning \$8,200

In addition, there is a GIS Mapping project for \$75,000 that is on hold.

Recommendations

It is recommended that the town continue to explore grants to accomplish this work, and that the Board of Selectmen explore funding options individual projects that will cost less than \$10,000.

Parks and Recreation

Overview

Parks and Recreation is planning a paving project for \$22,375 for 2015.

Recommendations

It is recommended that the Board of Selectmen evaluate the cost of paving and consider combining the project with other paving projects (Fire Department and School) to reduce costs. Parks and Recreation needs to get a professional estimate and establish a time frame from dredging the Town Beach and develop a plan for future capital expenses.

School

Overview

The school has completed a number of its projected capital improvement project this summer including the gym roof and a number of security related projects. The schools capital improvements are funded through the school budget and various grants.

Recommendations

The CIP Committee has no recommendations at this time.

Library

Overview

The Library Trustees are planning to move the library to a new location. They estimate that the new facility will cost approximately \$1,000,000 whether they build a new facility or purchase an existing facility such as the Tri-County CAP building.

Recommendation

The CIP Committee recommends that the Library Trustees submit a petitioned warrant article for an amount that they determine will help them build adequate reserves to purchase or build a new library.

Electric Department

Overview

The Electric Department currently has sufficient capital reserves to fund planned capital improvements.

Recommendations

No recommendations at this time.

Water and Sewer Department

Overview

The Water and Sewer Department is in the process of evaluating its capital improvement requirements.

Recommendations

It is recommended that the Water and Sewer Department meet with the CIP Committee once the commissioners complete their plan.

Grants

Grants can reduce yearly and long-term costs significantly and allow the town to build more capital reserves for future capital improvements. As an example, the town is applying for grants for fire engines and sidewalks. The initial cost of a new fire engine is \$375,000; however, the cost with a 20% matching grant would be \$300,000, a savings of \$80,834 on a 5-year lease. A \$300,000 sidewalk project would cost the town \$60,000 with an 80% matching grant.

The CIP committee recommends that the town aggressively pursue grants to help reduce the cost of necessary capital improvements, including grants for planning and engineering. To be successful the town needs to take the following steps:

- Develop a coordinated grant writing effort employing the skills of town employees and volunteers
- Develop contacts and supporters at the State and Federal level
- Establish priorities and apply for grants in key areas to establish a track record with funding agencies

- Develop shovel-ready projects to improve infrastructure
- Perform well on grants that have been awarded
- Establish a capital reserve for matching grants

Cost of Delaying Capital Expenditures

Overview

Inflation causes the cost of delaying capital expenditures to compound over time. Therefore, when developing a budget, both the cost of a capital improvement and the cost of not funding a capital improvement must be taken into consideration by decision makers and voters.

Factors that increase costs:

- Inflation
- Interest rates
- Maintenance costs
- Credit rating*
- Borrowing options
- Ability to obtain grants

Analysis

Police Vehicles

Delaying the purchase of the Ford Interceptor until 2016 will cost an additional \$5,791.55 due to the cost of inflation on the vehicle and its replacement in 2021. It also increases the yearly costs for police vehicles over a 10-year period. If the purchase of the other vehicles is also delayed for an additional year, the total increase in cost would be approximately \$17,000.

Fire Engines

Purchasing one fire engine in 2015 and one in 2019 rather than purchasing two in 2015 will cost an additional \$41,604, increase maintenance costs, and increase risk that the engine will not be able to perform all of its functions. Delaying purchasing two engines (\$125,000 down) one year will cost \$26,633.84.

Roads

Delaying road repairs for one year increases the final cost \$54,145.30, assuming that the town funds the roads using capital reserves.

DPW Equipment

The cost of delaying purchasing DPW Equipment by one year is shown in Table 11. Delaying the purchase of this equipment increases maintenance costs and can impair DPW operations.

Equipment	2015	2016	2017	2018	2019	2020	Difference
Backhoe		\$132,613	\$136,591				\$3,978
85 Pick up	\$35,020	\$36,071					\$1,051
86 Pickup			\$37,153	\$38,268			\$1,115
Ford 550 Plow				\$78,786	\$81,150		\$2,364
2005 Dump Truck	\$175,000	\$180,250					\$5,250
2009 Dump Truck					\$197,077	\$202,989	\$5,912
Loader/Plow		\$212,180	\$218,545				\$6,365
Mini Loader	\$49,000	\$50,470					\$1,470
Baler		\$15,000	\$15,450				\$450
Totals							\$27,955

Table 11. Cost of Delaying the Purchase of DPW Equipment

Recommendations

The cost of postponing a capital improvement should be taken into consideration when making cuts to the budget or voting to reject a warrant article.