

**CITY OF SANFORD &  
VILLAGE OF SPRINGVALE  
DEPARTMENT OF PUBLIC WORKS**



**FLEET MANAGEMENT PROGRAM  
&  
PROPOSED REPLACEMENT SCHEDULES  
FY 2015-2016**

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## MISSION STATEMENT

### **Department of Public Works and Fleet Management Program Mission Statements:**

The Department of Public Works serves to maintain and enhance the infrastructure of the Municipality through stewardship of the City's infrastructure; providing the most reliable and safe systems possible given the resources available.

The Department of Public Work's Fleet Management Program seeks to optimize the delivery of these services by documenting the processes of: drafting specifications, purchasing, utilizing, maintaining, managing, and decommissioning both vehicles and equipment required by the Department in order to fulfill the mission of the Public Works Department.

The Vehicle Replacement Program promotes an orderly system of purchasing and funding a standardized vehicle and heavy equipment fleet. The replacement process is always developing in order to plan for current and future Departmental requirements.

### **Objectives:**

The primary objectives of this document are to control the overall cost of operating and maintaining the Municipal fleet of vehicles and equipment; to maintain vehicles and equipment in a manner that extends their useful life; to control the growth in size of the fleet; to standardize the composition of the fleet; and to accurately budget for maintenance and replacement costs.

All new purchases for vehicles and equipment are part of the budget cycle and are coordinated through the **Fleet Management Team** for recommendation.

The **Fleet Management Team** shall consist of at least:

- The City's Property Subcommittee (three members);
- The Director of Public Works;
- The Garage Maintenance Supervisor.
- The City Manager;
- The Director of Highways;

### **We Will:**

- Provide at a competitive price: vehicles that are safe, reliable, and environmentally-sound;
- Provide honest, responsive, effective, and efficient fleet services to our customers;
- Maximize the return on investment (ROI) and the long-term value of the fleet investment;
- Maintain high quality internal and external services;
- Know and respond to fleet customer desires, needs, and requirements.

### **Key Customers:**

- Department of Public Works;
- Sanford Seacoast Regional Airport
- Department of Parks and Recreation;
- Administration Department

### **Definition of Product/Services:**

- Maintenance and repair over 66 DPW vehicles and pieces of field equipment;
- Maintain and repair other City Department vehicles on a case-by-case basis;
- Management of parts inventories;
- Assist in purchasing and up-fitting of new vehicles for user Departments.

## FLEET MANAGEMENT PROGRAM

### **Introduction:**

The Sanford Department of Public Works is assigned the overall responsibility for managing the Municipality's fleet of Public Works vehicles and construction/ maintenance equipment. The Public Works Department's fleet management program is intended to be a living document designed to:

- Develop vehicle and equipment specifications in partnership with City and MaineDOT standards;
- Develop vehicle and equipment replacement schedules according to the City's needs;
- Acquire vehicles and equipment balancing ever-changing priorities with available budget;
- and to reassign and dispose of vehicles and equipment.

These vehicle and equipment maintenance functions are assigned solely to the Public Works Department. The Public Works maintenance garage is located at 156 School Street and three full-time mechanics and one supervisor are employed to maintain 66 (vehicle and equipment) units with a replacement cost of over \$6.2M. The annual appropriations for operations, maintenance, and repair for Public Works vehicles and equipment is budgeted in the Public Works Operations and Maintenance Budget. The appropriations to replace vehicles and equipment is budgeted in the Capital Improvement Program Budget. Complete listings of the vehicles and equipment maintained by the Public Works mechanics is listed in Appendix A.

The purpose of this document is to propose a vehicle replacement plan for the next six years, as well as the specific vehicle and equipment needs and requirements of the Department. This document reflects the vision of the Department to create a multi-year vehicle and equipment replacement plan that will serve as a guide in providing direction to meet these needs. This is a living document that will be modified and updated annually to reflect changes in the Municipality's organizational climate, the changing needs of our internal customers, and changes in the automotive and equipment industry.

The fleet management program includes policies and procedures on acquisition, maintenance, replacement, and disposal of vehicles.

### **Acquisition:**

The goal of the Municipality's acquisition practice is to obtain the lowest possible price and the highest possible quality. The Municipality purchases new vehicles and equipment through Publicly advertised bids, existing Municipal Contracts, and has access to many State Contracts. Specifications for vehicles and equipment are the responsibility of the Department of Public Works.

Annually, before the preparation of the Operating and Capital Budgets; the Highway, Garage, and Transfer Station supervisors meet with the Public Works Director to review the vehicle replacement schedule and plan for the upcoming fiscal year's acquisition of replacement vehicles and equipment. Any request for new equipment that would increase the size of the fleet must be cost-justified to the Director of Public Works. The Director of Public Works will then propose a re-prioritization of the annual Equipment CIP which will be made available to the City Manager as well as the Fleet Management Team.

Purchases of vehicles and equipment will typically follow the City of Sanford Purchasing Policy. However, in order to purchase time-sensitive quality after-market vehicles or equipment, the Director of Public Works will convene the Fleet Management Team for consideration of the opportunity at hand.

The Director of Public Works in conjunction with the Fleet Management Team, shall maintain a Priority List of acquisitions for the current fiscal year (Appendix E). The Priority List will be based upon the current year's Equipment Capital Improvement Plan but will also consider emergent needs. This list will be presented for discussion on a monthly basis at a minimum and updated at the same frequency to the Fleet Management Team.

In order to meet the fleet needs for vehicles and equipment within the allocated budget, the Department will occasionally target after-market items for purchase. These items will have been identified on the Priority List (as approved by the Fleet Management Team). The items will also have an associated not-to-exceed price for after-market alternatives as agreed upon by the Fleet Management Team.

Once identified on the Priority List, the Director of Public Works may convene the Fleet Management Team if the following materials are provided:

- Written offer of price and conditions (approved by the Director of Public Works or designee);
- Technical Details and/or Specifications (approved by the Director of Highways or designee);
- Completed vehicle/equipment inspection sheet (approved by the Garage Maintenance Supervisor or designee);
- Completed Vehicle/Equipment Evaluation Forms (Appendix C).

Additional items that will benefit approval consideration of the waiver of the City's Purchasing Policy will include but not be limited to:

- A Limited Warranty available as part of the purchase of the vehicle/equipment;
- Maintenance and service records for the vehicle/equipment;
- Service manual for the vehicle/equipment;
- A lifespan analysis of projected maintenance costs for similar vehicles/equipment.

Should the presentation of the above materials meet the approval of the Fleet Management Team, this process shall be considered adequate for the determination of Section 5.B.1 FORMAL COMPETITIVE BIDS IMPRACTICAL of the City's Purchasing Policy and immediate issuance of funds from the appropriate account from the City's Finance Department and Treasurer will be made available. All such purchases shall be reviewed with the City Council as soon as possible (at their next formal meeting at the latest).

### **Maintenance:**

The goal of Public Works vehicle and equipment maintenance practice is to keep vehicles and equipment in sound operating condition. Preventive maintenance routines and intervals, followed by DPW mechanics, are based on local driving conditions and the manufacturer's recommendations (for each type of vehicle or equipment and each type of maintenance service). Maintenance costs represent a significant portion of the total cost to own and operate a vehicle or piece of heavy equipment and tend to increase as a vehicle or piece of equipment ages. Escalating maintenance costs are a key factor in determining when to replace a fleet vehicle. In addition to the added cost of maintenance as a vehicle ages, there is an additional cost to the Municipality when a vehicle is in the garage receiving maintenance and not available for use. Preventative maintenance is the key to avoiding the repair or replacement of costly major vehicle components such as engines, transmissions, and drive trains. DPW mechanics make adjustments to the manufacturer's recommendations based on the specific vehicle's use. For example, a vehicle may idle for an extended period of time while on call. When an engine idles, it incurs wear and tear that will require future maintenance. So the maintenance schedule for a vehicle that runs idle 50 percent of the time may be as frequent as that of a comparable one that drives more miles.

Accurate and complete vehicle maintenance records are a key tool for making fleet management decisions. Vehicle maintenance costs are variable and distinct to each vehicle. Pertinent records maintained for each vehicle are:

- Vehicle inspection and maintenance logs;
- Fuel usage logs;
- Cumulative costs of parts, labor, and overhead by a vehicle over its life.

While we currently collect this information, we lack automated systems that can produce information in a timely manner. Overly frequent or delinquent preventive maintenance intervals are counter-productive to controlling costs.

### **Replacement:**

A sound vehicle and equipment replacement schedule is important to the functioning of the Sanford Public Works Department. Reliable vehicles and equipment in good working order are essential to day to day operations and are critical when responding to snow and ice emergencies, removing fallen trees, storm water overflows and flooding, and performing countless other activities that ensure the Public receives services in a timely and professional manner.

Trucks and heavy equipment that break down frequently due to age or excessive use, interfere with workforce planning and can lead to disrupted and delayed service programs. In today's rapidly changing technological world, older equipment quickly becomes obsolete and difficult to maintain. Good, dependable working equipment enables trained Public Works crews to respond quickly and professionally to emergency situations and reflects well on the stature of the community and its Elected Officials.

Our vehicle and equipment fleet is nothing more than a tool for the provision of services to the general Public by Municipal employees. When tools wear out, become obsolete, or require repetitive upkeep; our ability to provide necessary services to our residents suffers. An essential component of effective fleet management is the commitment to replace vehicles and equipment before service delivery is impaired or diminished. A fleet replacement schedule can accomplish the following:

- Less vehicle downtime and lower operating and maintenance costs by the elimination of the high maintenance cost vehicles;
- Assurance to (and coordination with) Elected Officials that we are doing our best to plan for the replacement of vehicles and equipment before critical failure;
- A streamlined fleet achieved through the elimination of unnecessary spares no longer needed to fill in for vehicle down time for recurring repairs.

Many municipal governments react to the need for vehicle and equipment replacements either based on available funding or when no other choice exists (for example, when ample funds are available: vehicles get replaced). Or, if a crisis exists such as a blown engine or a vehicle is wrecked beyond repair, a case for immediate replacement can be made. However, best practices require vehicles and equipment to be replaced according to sound principals and in accordance with a formal replacement schedule.

Additionally, the age of the fleet and its condition have a significant impact on the municipality's image and the morale of its employees.

When to replace a vehicle is a significant decision. The fleet replacement policy must mesh with our organizational goals and the need to meet the priorities of our customers (Residents). There are more advantages to operating a newer fleet of vehicles than an aged fleet. These advantages are:

- The ability to minimize safety risks by driving vehicles with state-of-the-art safety equipment and newer components;
- Reduced downtime for employees driving vehicles that require minimal repair and maintenance;
- Enhanced employee morale and organizational image;
- A reduction in the expense incurred to maintain and repair vehicles.

As with other aspects of fleet management, replacing a vehicle too soon or too late wastes money. The Department of Public Works is developing replacement standards based on APWA, industry guidelines, and years of experience in operating and maintaining vehicles and equipment. The goal is to analyze the costs associated with a vehicle and identify the point when, on average, a vehicle is reasonably depreciated but not yet incurring significant maintenance costs. By replacing vehicles at this point, DPW can avoid escalating maintenance costs and optimize vehicle resale value. The three criteria that are considered when establishing the vehicle replacement schedule are vehicle mileage, age, and use. Because each municipality's fleet and usage is unique, a universal management guide does not exist that can be applied to all types of fleets for every locality. However, MaineDOT does track State vehicles that run comparable routes using comparable vehicles and equipment. The State fleet manager is willing to share their data so that Sanford can routinely take advantage of their data and experience.

Eventually, all vehicles and equipment wear out. As they wear, they become increasingly expensive to operate and maintain and less reliable and safe to use. They become more expensive, in part because major components and systems, which are costly to repair or replace, cease to function properly or at all. They also become more expensive because component failure tends to be unpredictable, and unplanned repairs are more likely to interfere with vehicle use, impose uneven demands on maintenance resources, and ultimately may lead to the disruption and delay of Municipal services.

Most fleet organizations (private and Public) establish formal replacement criteria in terms of vehicle age and/or usage (in terms of miles or engine hours) in order to forecast replacement funding requirements, develop budgets, and to trigger the examination of specific units for potential replacement. Some vehicles do not wear out as quickly as others, perhaps because their usage is lower in intensity than of other vehicles of their type. Some vehicles need to be replaced sooner than others because they experience above average wear and tear.

Below are the age and mileage standards that are being used by other municipalities to plan for the replacement of their vehicle and equipment fleets. Once the vehicles and equipment units reach the age and mileage/hour thresholds they are carefully inspected and evaluated to ensure that they are in safe working order and free of major defects. Vehicles that fail the evaluation are scheduled for replacement. Sanford uses a similar age and use criteria and constantly evaluates the condition of its fleet. The goal of this policy is to plan for the systematic upkeep of the fleet through routine maintenance as well as systematic and well-informed replacement of fleet vehicles and equipment pieces.

This policy seeks to avoid the dangers of keeping vehicles and equipment beyond reasonable life cycles which will cause total vehicle costs to rise, making the fleet more costly to own and operate. The following values are for example purposes only and not the recommended schedule set by the City of Sanford (eventually, the Fleet Management Team should revise expectations based on the needs of the Municipality). Schedules listed in the vehicle descriptions are the current policy of the Department and Municipality.

VEHICLE TYPE	REPLACEMENT RANGE (YEARS)	THRESHOLD MILEAGE
Sedan	3	60,000
Pickup Trucks	6	50,000
Light Dump Trucks	7	60,000
Heavy Dump Trucks	9	80,000
4-Wheel Drive Vehicles	6	40,000

Source: Federal Minimum Replacement Standards 41CFR 102-34.280

Light Dump Trucks	7-	80,000
Heavy Dump Trucks	7-	80,000
Pickup Trucks	7	80,000
Utility Trucks	7-	80,000
Street Sweeper	7	90,000
Backhoes	8-10	
Front End Loaders	8-	
Field Tractors	6-8	

Source: City of Pittsburgh Vehicle Replacement Schedule, Jake Harvey, General Manager

Pickup Trucks	7	100,000
Dump Trucks	7-	150,000
Backhoes	7-	150,000

Source: American Public Works Association Vehicle Replacement Guide

### **Reassignment and Disposal of Vehicles and Equipment:**

The vehicle and equipment fleet is intended to be sized to meet the current needs of the Municipality. Fleet vehicles and heavy equipment will not be reassigned unless they are used to replace a unit currently assigned to other Departments. In all other instances, the older units will be disposed and the proceeds will be allocated to the DPW Capital Improvement Program's equipment budget:

Annually, before Operating and Capital Budgets are prepared, the Public Works supervisors will meet with the Public Works Director to review the vehicle and equipment replacement schedule, and plan for the reassignment or disposal of vehicles and equipment that have reached their age, and mileage thresholds and will be replaced in the next budget cycle. Vehicles or equipment may be reassigned internally within Public Works and Environmental Services as deemed necessary by the Public Works Director. Reassignment of vehicles within other City Departments will also be considered upon request. Vehicles selected for replacement will typically be sent to Public auction or sold for scrap outright. Sealed bids, internet auctions, trade journal advertisements, and Public auctions will be utilized for the disposal of Public Works equipment.

All vehicles acquired and maintained by the Municipality are recommended for replacement in accordance with adopted guidelines/procedures and all subject Departments are responsible for complying with these guidelines/procedures.

**Development of Guidelines/Procedures:**

The Public Works Director (as part of the Fleet Management Team) has inventoried existing vehicles and equipment and has prepared a six-year replacement schedule for all Public Works vehicles and equipment (see Appendix B). The schedule will be updated annually and will be used as the basis for planning for the replacement of vehicles and equipment through the operating and capital budgets. The vehicle and equipment maintenance costs details will include the following information for each vehicle or unit of capital equipment:

- a. Age in years (also known as life) (Appendix A);
- b. Usage in hours or miles (Appendix C);
- c. Useful life (based on Fleet Management standards for municipal vehicles and equipment);
- d. Annual Cost of Maintenance (Appendix D);
- e. Overall condition: mechanical, operating, safety, or appearance (Appendix C);;
- f. Downtime (percent utilized based on Fleet Management standards);
- g. Availability of replacement parts (Appendix D);
- h. Funding for replacement (Annual CIP Budget and Fleet Management Priority List).

The guidelines for vehicles considered for replacement are based on vehicles meeting predetermined age and/hour/or mileage criteria. Additional consideration is given to functionality, maintenance history, and overall condition of the vehicle. As vehicles reach the threshold miles or age of replacement criteria, a vehicle maintenance evaluation is performed by the Highway Garage Supervisor of the Public Works Department (Appendix C - Evaluation Forms). The Evaluation Forms will be provided to the Fleet Management Team for further review and consideration. If the evaluation proves the vehicle would be economical to retain for an additional year, the vehicle will be targeted for retention or reassignment. In some cases, it may be reassigned to other Departments with "low usage" requirements. The Fleet Management Team will jointly review and approve all specifications for new purchases of Municipal vehicles and motorized equipment. Depending on the availability of funds, vehicles and equipment will be replaced when they are at the end of their economic life, no longer safe to operate, not reliable enough to perform their intended function, or there is a demonstrated cost saving to the Municipality of Sanford.

## FLEET AND GARAGE MAINTENANCE OPERATIONS

### **Inspections:**

**State Inspections:** Annual inspection and registration deadlines, as required by the State of Maine, shall be tracked by the Municipal Equipment Management System (MEMS) program and scheduled by the Garage Maintenance Supervisor.

**Preventative Maintenance (PM):** Vehicle and equipment hours and mileage are both tracked in order to schedule timely PM. By keeping a vigilant PM schedule of work in the garage, oftentimes damage due to excessive wear and extremely costly repairs can be avoided.

**Warranty Inspections/Service:** Any inspections and/or service, as required by the manufacturer's or dealer's warranty, shall be tracked by the MEMS program and scheduled by the Garage Maintenance Supervisor.

**Daily Inspections:** Daily Vehicle/Equipment Inspections shall be required in all instances where a Commercial Driver's License (CDL) is required. For all other vehicles and equipment, a Daily Vehicle/Equipment Inspection will also be completed.

Operators will utilize a Vehicle Inspection Checklist, as provided by the Department, to complete both a pre-trip inspection as well as note any problems during the work day. If a vehicle is deemed not operable or unsafe by the operator, the Vehicle Inspection Checklist will be turned in to the Garage Maintenance Supervisor immediately and the Operator's supervisor will be notified immediately thereafter. Vehicle Inspection Checklists will be turned in at the end of each working day, to a common location in the break room for review by the Garage Maintenance Supervisor.

### **Prioritization and Generation of Work Orders:**

The Garage Maintenance supervisor will prioritize the turned-in Vehicle Inspection Checklists. The Director of Public Works, Highways, Transfer Station, or Highway Working Foreman may have input on the prioritization given their current and/or upcoming operational needs in the field. This prioritization amongst supervisors will happen formally at least once a week at the Public Works Staff meetings.

Short-term re-prioritization based on emergency need will be discouraged so that garage efficiency will be maximized.

The Garage Maintenance Supervisor will take the prioritized checklists and generate a Work Order associated with the Vehicle Inspection Checklist. The Work Order will include any specific instructions outside of the comments on the Vehicle Inspection Checklist.

### **Assignment of Work Orders:**

The Garage Maintenance Supervisor shall affix the appropriate Vehicle Inspection Checklist to a Garage Maintenance Work Order and distribute to the Garage Mechanics as necessary. Along with the work order, an estimate on the number of hours the repairs will require will be included within the Quality Control (QC) sign-off field.

**Repairs Effected:**

Mechanics will complete the repairs in the priority designated to them by the Garage Maintenance Supervisor. Based on the scope of the repair, Mechanics will utilize different baseline safety checklists:

- A Preventative Maintenance (PM) - Type A Service is intended to take one hour or less;
- A PM - Type B Service is intended to take over one hour;
- A PM - Type C Service is a major mileage service (i.e. 50,000 or 100,000 miles).

Repairs effected by the Mechanic shall not be presented to QC until a thorough and complete review and repair has been effected by the Mechanic. For verification that all issues have been reviewed, the mechanic will initial each Driver's Vehicle Inspection Report slip reviewed within the packet as well as sign-off on the pertinent copies of the same slips stored with the vehicle.

**Outstanding Work:**

Should additional repairs needed be found upon the Mechanics inspection of the vehicle, they shall convey them in writing via the respective Type A, B, or C Service Checklist to the Garage Maintenance Supervisor.

Should the work required be unable to be completed due to parts needing to be ordered, one of the three following scenarios will be followed and noted on the Work Order:

- The Mechanic will order the parts if the approximate total value of the order is less than or equal to \$500.00;
- The Mechanic will order the parts with the consent of the Garage Maintenance Supervisor if the approximate total value of the order exceeds \$500.00;
- The Mechanic will request that the Garage Maintenance Supervisor order the parts. A complete, detailed, and legible written inventory of the required parts must accompany this request on the Work Order.

**Quality Control (QC):**

Once repairs have been effected, the Mechanic will submit the Work Order (along with all attached documentation) back to the Garage Maintenance Supervisor or their designee for a Quality Control check.

The Garage Maintenance Supervisor or their designee will review all documentation including but not limited to: the Daily Vehicle/Equipment Inspection, the Work Order, all parts ordered, any notes associated with the repair, and the Class A, B, or C Checklist.

The Garage Maintenance Supervisor or their designee will then inspect the vehicle/equipment to make sure all repairs have been completed effectively. This may include test operation.

The Garage Maintenance Supervisor or their designee, in coordination with the Mechanic, will then review and discuss any outstanding work on the vehicle/equipment and ensure that a proper and prioritized timeline for additional work is established and documented with a new checklist and work order.

Once the above is satisfactory and complete to the Garage Maintenance Supervisor or their designee, they shall sign-off on the work order with their initials as well as the acronym "QC" circled.

**Municipal Equipment Management System (MEMS):**

The completed and signed work orders shall be delivered on a daily basis to the Public Works front office for incorporation into MEMS where the following will be tracked:

- City Vehicle Number, Make, Model, Description, Mileage, Operating Hours, etc.;
- Hours spent on the repair;
- The costs of parts used for repairs (each bill will have itemized costs, City Vehicle Number, and Mechanic noted);
- Schedule for annual inspections;
- Preventative Maintenance (PM) schedules.

A copy of the work order and itemized repair slip will be filed with the respective vehicle/equipment documentation folder.

The original Vehicle inspection checklist with attached work order and other attached materials will be forwarded to the Public Works Director or their designee for Quality Assurance (QA) purposes.

**Quality Assurance:**

The Public Works Director or their designee shall be responsible for Quality Assurance (QA). This will encompass making sure that all steps of the process are being completed as well as tracking the cumulative maintenance costs of the vehicles/equipment for Appendix D of the Fleet Management Program.

The first step of QA for this program will be to take the completed work orders received from the garage and match them with the initial Daily Inspections as completed by the operators. Other steps include speaking with each person in the process and making sure there are clear lines of communication and reasonable expectations expressed without misunderstandings. Direct coordination with the mechanic and QC will be a standard operating procedure.

## VEHICLE & EQUIPMENT DEFINITIONS

**Vehicle Categories:** For the purposes of this document, the Municipal fleet has been grouped into twelve (12) distinct categories. These vehicles and equipment are maintained by the Public Works Department and purchased through the annual Capital Improvement Equipment Program budget. Each category is described below, and the number of units currently on hand, replacement cost and useful life range for each category is summarized in Appendix A.

**Sedans:** The Department of Public Works utilizes one sedan for engineering inspection. Its FY 14/15 replacement value is \$28,000. The City fleet has three (3) more sedans that the DPW maintains. The typical useful life of a sedan is 15 years.

**Pick-up Trucks:** This class of vehicle is typically equipped with two-wheel drive and may have an extended cab capable of carrying a crew of five personnel along with light hand equipment or materials. DPW pick-up trucks are used for transportation as well as errands for parts and pieces. DPW owns three (3) pick-up trucks with a FY 14/15 replacement value of \$107,000. The City fleet has seven (7) more pick-up trucks that the DPW maintains. The typical useful life of a pick-up truck is 10 years.

**¾ Ton Trucks-** This class of vehicle is typically equipped with four-wheel drive and may have an extended cab capable of carrying a crew of five personnel along with light hand equipment or materials. They are typically used for winter operations, plowing, and pulling small trailers. The Municipality owns three (3) ¾ T o n pick-up trucks with a FY 14/15 replacement value of \$132,000. The typical useful life of a ¾ t o n pick-up truck is 10 years.

**1-Ton Trucks:** This class of vehicle is typically equipped with four-wheel drive and may have an extended cab capable of carrying a crew of five personnel along with heavy hand equipment or materials. They are typically used for cold-patch transport, catch basin repair, hauling, and other miscellaneous projects. DPW owns five (5) with a FY 14/15 replacement value of \$340,000. The Municipality owns two (2) additional 1-T o n trucks. The typical useful life of a 1-T o n truck is 10 years.

**6-Wheel Dump Trucks:** These vehicles have a gross vehicle weight (GVW) of around 50,000 pounds and load carrying capacity of approximately 8 cubic yards. 6-wheel dump trucks are used to haul heavy equipment and trailers as well as place large loads of rock salt during the winter. A combination of eleven (11) 6-wheel and 10-wheel dump trucks are required during the winter for snow plowing/salting and snow removal. The remainder of the 13 plow routes are handled with front-end loaders. Currently there are five (5) 6-wheel units on hand. These vehicles are fitted with heavy duty steel dump bodies, hydraulic packages, plows with wings, and sanders for salting. The FY 14/15 replacement value for the five 6-wheel dump trucks is \$925,000. 6-wheel dump trucks have a useful life of twelve years and one is replaced every two years. The Municipality owns two (2) additional 6-wheel dump trucks. The typical useful life of a 6-wheel dump truck is 10 years.

**10-Wheel Dump Trucks:** These vehicles have a gross vehicle weight (GVW) of around 80,000 pounds and load carrying capacity of approximately 18 cubic yards. 10-wheel dump trucks are used to haul heavy equipment and trailers as well as place large loads of rock salt during the winter. These vehicles are considered the Department's most efficient hauling units. A combination of eleven (11) 6-wheel and 10-wheel dump trucks are required during the winter for snow plowing/salting and snow removal. The remainder of the 13 plow routes are handled with front-end loaders. Currently there are five (5) 10-wheel

units on hand. These vehicles are fitted with heavy duty steel dump bodies, hydraulic packages, plows with wings, and sanders for salting. The FY 14/15 replacement value for the five 10-wheel dump trucks is \$1M. 10-wheel dump trucks have a useful life of twelve years and one is replaced every two years. The typical useful life of a 10-wheel dump truck is 10 years.

**Winter Maintenance Equipment:** This equipment includes all pieces solely devoted to treating winter conditions and includes sidewalk tractors, plows, and snow blowers. The Trackless units are capable of using plows as well as snow blowers to remove snow while the larger Blanchet is mounted on a front end loader to remove large volumes of snow from areas such as downtown or parking lots. The Department currently owns four (4) tractors and one (1) large snow blower. The Municipality also owns additional pieces used to maintain the Airport. The FY 14/15 replacement value for the five pieces of winter maintenance equipment is \$610,000. The typical useful life of this equipment is 10-years.

**Transfer Equipment:** These vehicles and pieces of equipment are almost exclusively utilized for Transfer Station operations. They include tractor trailers units that haul waste for disposal, a garbage truck (not currently utilized), and a backhoe used to compact material bins for efficient disposal. The FY 14/15 replacement value of this equipment is \$863,500. The typical useful life of this equipment is 10 years.

**Field Equipment:** Equipment of this class includes the basin vacuum, the broom truck, the bucket truck, the wood chipper, the air compressor, portable generators, tractors, and motorized mowing equipment. At the time of this inventory, this included a total of six (6) pieces of field equipment with a FY 14/15 replacement cost of \$560,000. DPW also services additional pieces owned by the Municipality. Useful lives range between 10 to 12 years.

**Garage Equipment:** This equipment is utilized almost exclusively by the Highway Garage and consists of forklifts as well as the vehicle lifts. A total FY 14/15 replacement cost of \$200,000 is currently estimated.

**Heavy Equipment:** This is mobile on-road and off-road equipment that is used to dig, load, process, place, and grade materials; as well as carry large loads over a short distance. The inventory includes one (1) backhoe, one (1) excavator, three (3) front end loaders, one (1) gravel screen, one (1) bulldozer, one (1) skidsteer (with bucket and grinding head), and one (1) grader. This equipment is capable of moderate to heavy excavation for most base roadway construction activities (notably missing a medium-sized or large-sized vibratory compactor). These units have a replacement value of \$1,313,000 and useful lives of approximately 15 years.

**Trailers:** These are licensed, motor-less tow behind units that are used to move equipment, other vehicles, and materials. DPW owns four (4) such trailers at a FY 14/15 replacement cost of \$100,000. The Municipality has additional trailers also maintained by DPW. The average useful life is 15 years.

## **APPENDIX A – COMPREHENSIVE VEHICLE AND EQUIPMENT LISTS**

The following tables represent all of the Department's vehicles and equipment with full descriptions, serial numbers, City vehicle numbers, model year, etc. Also included are current estimated replacement costs along with scheduled replacement year, depreciation, and future year replacement costs (assuming 3% inflation).

## **APPENDIX B – VEHICLE AND EQUIPMENT REPLACEMENT SCHEDULES**

The following tables represent the vehicle and equipment replacement schedules for the next six (6) years, FY 15/16 through FY 20/21. These schedules are based on the current replacement values of the individual vehicles and equipment units that are currently included in our fleet. Replacements are based on the year the unit was placed in service plus the unit's useful life. For example a 6-wheel dump truck placed into service in 2008 has a useful life of 10 years and would be evaluated for replacement in 2018.

## **APPENDIX C - VEHICLE EVALUATION FORMS**

The following forms are completed at least once annually to track the condition of each fleet vehicle and piece of equipment. Evaluations will be kept with the maintenance records and be made available for review to the Fleet Management Team upon request and/or during such a time when the priority of the replacement of the vehicle becomes necessary.

## VEHICLE/EQUIPMENT EVALUATION FORM

Vehicle or Equipment VIN or Serial# \_\_\_\_\_

Vehicle or Equipment #: \_\_\_\_\_ Department Assigned to: \_\_\_\_\_

Make: \_\_\_\_\_ Model: \_\_\_\_\_ Year \_\_\_\_\_

Mileage: \_\_\_\_\_ Hours of Operation: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_ Evaluator: \_\_\_\_\_

System	Diagnosis	Estimated Repair Cost
Engine		
Transmission		
Drive Line		
Differential		
Exhaust		
Pumping System		
Hydraulic System		
Electrical System		
Brakes		
Tires		
Body		
Interior/Exterior		
Front End/Suspension		
Air Conditioning		
Other		
Total Estimated Repair Cost		
Diagnosis Code	Code Description	
Good 3	System is functioning well, and no repairs expected at this	
Fair 2	Minor Repairs required	
Poor 1	Major repairs needed as soon as possible - consider replacing	

Evaluator's Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**VEHICLE/EQUIPMENT EVALUATION SUMMARY REPORT**

Vehicle or Equipment #: \_\_\_\_\_ VIN or Serial #: \_\_\_\_\_

Department Assigned to : \_\_\_\_\_

Make: \_\_\_\_\_ Model: \_\_\_\_\_ Year : \_\_\_\_\_

Description of use: \_\_\_\_\_

**SUMMARY OF VALUES**

CURRENT YEARS OF SERVICE \_\_\_\_\_ USEFUL LIFE \_\_\_\_\_ (YEARS)  
YEARS OVER OR UNDER CURRENT USEFUL LIFE \_\_\_\_\_ (OVER/UNDER)

CURRENT MILEAGE \_\_\_\_\_ USEFUL MILEAGE \_\_\_\_\_ (MILES)  
MILES OVER OR UNDER USEFUL MILEAGE \_\_\_\_\_ (OVER/UNDER)

CURRENT HOURS \_\_\_\_\_ USEFUL HOURS \_\_\_\_\_ (HOURS)  
HOURS OVER OR UNDER USEFUL HOURS \_\_\_\_\_ (OVER/UNDER)

MAINTENANCE/REPAIR COSTS TO DATE: (ATTACHED)

PURCHASE COST: \_\_\_\_\_ REPAIR COST: \_\_\_\_\_

REPLACEMENT COST: \_\_\_\_\_ TRADE IN VALUE: \_\_\_\_\_

COMMENTS AND OTHER CONSIDERATIONS:

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RECOMMENDATIONS:

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## **APPENDIX D – ANNUAL VEHICLE AND EQUIPMENT MAINTENANCE COSTS**