michigan municipal league

Liability & Property Pool
Workers' Compensation Fund

RISK CONTROL SOLUTIONS

A Service of the Michigan Municipal League Liability and Property Pool and
the Michigan Municipal League Workers' Compensation Fund

Safety and Liability Exposures for Public Works Equipment

INTRODUCTION

Operating public service equipment is an essential element in the delivery of most, if not all, municipal services. Street graders, sewer cleaning equipment, street sweepers, mulching machines, fire trucks, buses, snow plows, refuse trucks and tractors are just a few of the types of equipment that municipalities own and operate. Personal injury and property damage resulting from the operation of equipment are the most frequent causes of loss. In addition, the negligent operation of equipment can expose a governmental entity to civil liability and generate losses of greater severity than those that either personal injury or property damage creates. This is because the operation of some equipment -- classified as motor vehicles -- is one of the few general exceptions to governmental immunity.

PERSONAL INJURY AND PROPERTY DAMAGE LOSSES

In addition to the obvious costs that personal injury or property damage losses generate, equipment related incidents frequently result in many hidden costs. These costs -- both tangible and intangible -- include:

- Employees injured or killed on the job;
- Disruption of operations or delays in completing projects;
- Impaired ability to respond to requests for service;
- Equipment damage, loss, or loss of use;
- Property damage;
- Increased maintenance costs;
- The diversion of funds earmarked for other purposes to pay for losses, and
- Increased insurance premiums.

For these reasons and more, it is essential to deal with the safety and liability exposures that are present in operating equipment. If you do not, you will not have an effective -- and complete -- general risk control program.

This document outlines the major components of an effective plan for the operation and maintenance of public service equipment.

GENERAL ISSUES

One of the first steps in developing a comprehensive motor vehicle risk reduction program that includes public works equipment is to have a fleet management program. Such a program has several key components. The program should include:

- A written policy that addresses the goals and expectations of the program.

- A statement defining accountability. Because a program cannot succeed if there is no accountability, the policy should establish that managers and supervisors are responsible for implementing and assuring employee compliance with the program.
- A policy establishing that management and supervisory effectiveness in this area should be part of the agency's periodic appraisal of performance.
- An efficient and thorough process for selecting safe and qualified operators as well as active and ongoing program for training drivers in safe operating procedures.
- A method of reporting, reviewing and evaluating all accidents.
- A program for the maintenance of equipment. Every municipality should have a preventive maintenance system in place that complies with manufacturers' recommendations as well as state and federal agencies such as MIOSHA or the Department of Transportation.
- Mandatory, periodic inspections of equipment.

You can obtain more detailed information about each component by contacting the League's Loss Control and asking for the guide to Fleet Management for Public Agencies.

SPECIFIC ACTIONS TO REDUCE YOUR RISKS

Equipment Purchases

Before purchasing a piece of equipment, always review the same issues that you would if you were purchasing it for yourself. The following are some areas you should consider:

- Maintenance requirements. Are requirements, such as maintenance intervals, reasonable?
- The cost of maintenance. Is it affordable? Ask the manufacturer or supplier for a five-year projection.
- Availability of affordable and prompt service from the vendor or another outside source. There may be service needs that your staff cannot perform.
- The past customer service history of the manufacturer and supplier. Ask the manufacturer or supplier for references.
- How long the equipment has been in production. This is an important consideration in evaluating product reliability.
- Design flaws that have resulted in a recall.
- Whether the manufacturer or supplier has a history of lawsuits or claims.
- The adequacy of the manufacturers or supplier's warranties or performance bonds?
- The availability of parts as well as shipping distances and times.
- The manufacturer's or supplier's willingness and ability to provide training to operators and mechanics.
- Whether the manufacturer has a system in place to notify you of any updates or design problems?

When you have chosen the type of equipment you want, prepare detailed specifications that explain very clearly what you expect from the bidder. This will improve your chances of purchasing equipment that meets your needs. You should ask suppliers to explain how they comply or do not comply with your specifications. Do not be afraid to reject a bid that does not meet your standards or that does not provide a sufficient explanation of any deviations. Do not be caught in the "low bid" nightmare.

A thorough evaluation of the equipment and the supplier should result in the purchase of safe and effective equipment at the lowest overall cost even if you select equipment from a supplier whose bid was not the lowest.

Equipment Maintenance

Public works equipment is somewhat specialized and can require specialized repairs and maintenance procedures. The mechanic who routinely diagnoses and repairs regular production vehicles may not have the qualifications, knowledge, or skills necessary to maintain or repair specialized equipment. Qualified mechanics are those individuals who are factory authorized or trained, have prior experience, and have the proper tools. There is no room for guesswork. Inadequate or faulty repairs and poor maintenance can result in costly accidents. If your employees do not have the necessary qualifications, then train them or subcontract the repair and maintenance work to someone who has the appropriate qualifications. If you choose outside vendors for repair and maintenance work, check their references before you allow them to work on your equipment. Scrutinize contractors as carefully as you would use when selecting someone to work on your own vehicle.

Assure that mechanics who perform maintenance work know and follow manufacturers' recommended procedures. They should use only factory-authorized parts and components and provide service at factory recommended intervals. If equipment will operate under extreme conditions, it may need additional maintenance. Contact the manufacturer in these cases. In addition, state and federal laws sometimes have specific requirements for equipment, including refuse trucks, platform trucks, buses, semi-trucks and trailers.

The Equipment Maintenance Supervisor should review maintenance procedures to determine those that the technician should complete and those that the operator can perform more efficiently. Usually, the operator only performs day-to-day light maintenance procedures such as greasing fittings or other routine maintenance. Whether technicians or operators perform the task, it is important to assure that they are aware of their responsibility and that they perform it as required. It is preferable to use a detailed maintenance checklist than to rely on memory.

It is also a good idea to talk to the operators and the technicians to find out about any high maintenance areas or required procedures that are either not practical or extremely difficult to perform. These are usually the areas that do not receive adequate attention but can cause problems later. For example, if a piece of equipment has a fitting that is exposed to high levels of dirt and requires constant lubricating, you need to correct the situation. You should contact the manufacturer to find out how to address the situation. NEVER modify the equipment without the manufacturer's assistance. If the manufacturer is no longer in business or if the equipment is so old that the manufacturer no longer services it, consider replacing the equipment.

Document all maintenance and repairs and retain documentation in an equipment file. Require mechanics to document completed repairs and maintenance as well as the parts they used. Many communities are now using computer software to collect this information. If you are one of these communities, make sure you back up your files weekly.

The equipment supervisor should conduct random inspections of repairs to assure quality. New employees may initially require more oversight. Supervisors should use this time to train rather than to criticize. Supervisors should check equipment with frequent problems every time a mechanic services or repairs it.

The guide to Fleet Management for Public Agencies includes a comprehensive sample repair and maintenance procedure.

Equipment Inspection

The purpose of an inspection is to assure that the equipment is working properly and in accordance with manufacturer's specifications. Mechanics and operators should use a checklist to assure that they have checked every appropriate item and to document that the inspection took place. The guide to Fleet Management for Public Agencies contains sample checklists. Public

agencies should perform two types of inspections: a regular service inspection and a pre-trip inspection. A regular service inspection is very thorough and conducted by your mechanic. A pre-trip inspection is conducted daily, usually by the operator.

Mechanics should follow the manufacturer's recommended routine inspection procedure when servicing equipment. This includes checking the operation of hydraulics, hoses, belts, controls, and safety equipment. Include the documented inspection in your maintenance file.

Operators should check all controls, safety equipment, lights, tires, and brakes every day before they drive vehicles from your yard. If the pre-trip inspection reveals that an essential component is not working or needs repair, the operator should not use the equipment until a technician services it. Operators should also inform the supervisor of a needed repair at the end of the day.

The supervisor should periodically conduct a random review of the required checklists to assure that mechanics and operators are completing them consistently.

If operators or mechanics become aware of any design problems that could result in equipment malfunction or injury to employees or the public, remove the equipment from service immediately and contact the manufacturer for assistance. Prohibit the operation of any equipment that might be unsafe until a qualified mechanic has checked it and made any necessary repairs.

Training

No matter how expensive or technically sophisticated a piece of equipment is, it will eventually malfunction if employees do not receive proper training on its correct use. Never allow an employee to operate or repair equipment without adequate training. Always conduct the training with the assistance of the manufacturer or supplier. Training should consider state and local laws that cover training requirements for specific equipment. For example, there are regulations that apply to fire trucks, lift trucks, and aerial trucks. The National Fire Protection Association (NFPA) and the Michigan Occupational Safety and Health Act (MIOSHA) have specific requirements regarding training.

Always document training and list all employees who attended the sessions. Always give a post-test to assure that participants understood the training. The municipality should provide refresher courses regularly or, at a minimum, whenever improper use has resulted in an incident. Implementing an incentive program can encourage employees to follow the procedures they have learned in training. However, no matter how thorough or effective the training, there will be employees who refuse to follow procedures. Progressive discipline is the appropriate action in such cases.

Emergency Procedures

Despite your best fleet management and training efforts, equipment will malfunction. Most of the time, equipment failure is no more than an inconvenience. Sometimes, however, it creates an emergency situation that can result in injury to or the death of an employee or a member of the public, property damage, and the disruption of services or of traffic flow.

Employees should receive training on what to do should their equipment fail. Training should include instruction on when they should drive the equipment to the garage or when they should park it and wait for a mechanic to evaluate the problem. Usually, the operator can make this decision. However, if driving the equipment back to the garage has the potential to cause an accident or injury, the operator should communicate this to his or her supervisor and wait for guidance.

Some equipment can malfunction and leave the operator in a precarious position, such as being stuck in a lift truck. Most manufacturers of equipment with special functions provide emergency unloading procedures. Although the operator may not be in immediate danger, an untrained employee who attempts to operate the equipment may put this person in serious danger. Employees who operate this type of equipment should receive instruction in operating it according to the manufacturer's guidelines. A copy of the emergency procedures should be in the glove box or permanently attached near the controls.

If your community has equipment that can trap an employee, you should review proper operating procedures for the equipment with both police and fire departments. While they will not necessarily be experts or remember the operating procedures, reviewing them once will, at least, give department members some familiarity. Each piece of equipment that can trap an employee should have clear rescue procedures posted near the equipment controls. Equipment that can entrap an employee may be considered a confined space and therefore may require special procedures before entry. A lockout procedure may also be required before an employee enters an area of the equipment to prevent an accidental start-up of the power source. An operator should never be allowed to enter an area considered to be a confined space or requiring special safety precautions without the assistance of other employees.

It is a good practice for every piece of equipment to have a means of communication. This allows the operator to report on his or her progress and to summon any help needed in emergency and non-emergency situations. If an emergency occurs that results in an injury, the amount of time that it takes for the rescue team to assist the operator makes a significant difference.

Other Issues

It is wise to store equipment in a fenced area to prevent vandalism. Avoid storing the equipment next to buildings, fences or fuel storage areas. When parking equipment outside the garage area, always park legally, lock the equipment, and remove the keys from the ignition. Operators should never leave equipment running when they take their break.

If leaving the equipment overnight on a street or highway is necessary, the operator should set up adequate warning lights. This is especially true if the equipment is large.

Your written policy should state that employees or contractors may not use the equipment for their own use. However, since you cannot always control their actions, employees may abuse this rule and the municipality may be held responsible for any damages.

Equipment should have adequate safety equipment such as seat belts, first aid kits, warning flares, flashing lights, or back-up alarms. To prevent accidents, operators should always display warning

devices when equipment breaks down in the path of other traffic. They should move equipment away from the traffic as soon as possible.

For insurance purposes, you should conduct an inventory of your equipment. While you should discuss coverage issues with your marketing representative, having your equipment properly inventoried and listed in your insurance policy will assure that it will be protected if a loss occurs.

Conclusion

This document outlines the major components of an effective plan to operate and maintain public service equipment. The plan includes a number of suggestions including having a comprehensive fleet management program, purchasing the safest but most effective equipment, maintaining equipment to operate as designed, having a thorough inspection program, and training employees on how to properly operate the equipment, as well as some other special issues as they relate to equipment exposures.

Municipalities are encouraged to review this as well as other Loss Control resource documents that pertain to operating motor vehicles with their equipment managers.

Important Telephone Numbers

MML Risk Management Services	800/653-2483 or 734/662-3246
Loss Control Services	800/482-0626

Note
This document is not intended to be legal advice. It does not identify all the issues surrounding the particular topic. Public agencies are encouraged to review their procedures with an expert or an attorney who is knowledgeable about the topic.

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Reducing Safety and Liability Exposures for Public Works Equipment

Self-Assessment

To reduce the exposure to claims of injuries or property damage as a result of the use of incidents with public works equipment, municipalities should conduct the following self-assessment. This self-assessment will help you address the major issues related to this exposure. Additional self-assessments are available to assess other motor vehicles by contacting the League's Loss Control Services.

Does Your Organization:

1. Have a comprehensive fleet management program?

☐ Yes ☐ No

Do you:

- Have a written policy that addresses the goals and expectations of the program?
- Hold managers and supervisors accountable for the success of the program?
- Have an efficient system for selecting safe and qualified operators?
- Train operators on how to operate the equipment?
- Investigate all accidents?
- Assure that the equipment is maintained as required by the manufacturer as well as state and federal law?
- Conduct regular pre and post trip inspections of equipment?

2. Do you purchase the best equipment you can buy with the available budget?

☐ **Yes** ☐ **No**

Do You Evaluate:

- The manufacturer and the supplier?
- Maintenance requirements, costs and practicality?
- The longevity and reliability of the equipment?
- Recommendations from past users of the equipment?
- Supplier response to clear and detailed specifications?
- Warranty claims?
- Whether your staff will be able to service the equipment?
- Bids to find the lowest qualified bidder rather than the low bid?

3. Do you have an effective maintenance program for public service equipment?

☐ Yes ☐ No →

Do you:

- Have maintenance staff that is qualified to work on your specialized equipment?
- Assure that maintenance staff receives factory authorized training?
- Assure that contractors who work on your equipment are factory authorized or trained?
- Check references of vendors who work on your equipment?
- Always follow manufacturers' recommendations?
- Use only factory authorized parts and components?
- Review NFPA, DOT, or MIOSHA requirements for very specialized equipment servicing?
- Assure that employees and contractors are following maintenance procedures?
- Document all maintenance and repairs?
- Pay special attention to high maintenance or problem areas?
- Modify equipment only with the manufacturer's approval?
- Conduct random inspections to assure the quality of the repairs?

4. Do you inspect your equipment to assure that it is safe?

☐ **Yes** ☐ **No** →

Do you:

- Require operators to complete a written pre-trip inspection?
- Do you regularly test mechanical and hydraulic controls, hoses, and safety equipment?
- Bring design problems to the manufacturer's attention?
- Remove equipment that is believed to be unsafe during an inspection from service and lock it out if necessary?

5. Do you properly train your mechanics and operators?

☐ **Yes** ☐ **No** →

Do you:

- Require training before an employee can operate or repair equipment?
- Retrain or discipline employees who operate equipment in an unsafe manner?
- Document your training?
- Assure that training meets state and federal laws pertaining to the equipment or operation?
- Assure that operators have appropriate licenses?

6. Does your organization know what to do if incidents or emergencies occur?

☐ **Yes** ☐ **No** →

Do you:

- Train employees to take proper action during an emergency?
- Train other employees so they know how to operate the equipment if required?
- Review emergency operating procedures with your police and fire departments?
- Post emergency procedure instructions in a clearly accessible location on equipment?
- Provide your employees with a means of requesting assistance such as a radio?
- Require employees to practice the emergency procedures?
- Follow confined space or lockout procedures when required?

7. Does your organization address other issues?

☐ **Yes** ☐ **No** →

Do you:

- Store equipment in a fenced location?
- Lock equipment whenever it is parked and unattended?
- Shut off equipment and remove the keys when it is left unattended?
- Park equipment safely when you leave it unattended?
- Prohibit the use of your equipment for non-municipal use?
- Assure that your equipment has adequate safety equipment?
- Inventory your equipment?

Conclusions

☺ If you were able to honestly answer "yes" to all seven questions and your organization is following most or all of the suggested practices, then your organization has reduced its exposure to future workers' compensation and liability claims resulting from an equipment loss. You should congratulate yourself.

☹ If you are unable to answer "yes" to any of the seven questions, your organization may have an exposure to claims from employees and the public resulting from your organization's practices. Missing components of one or more of the seven recommended practices may also indicate a deficiency in your current program. You should take one or more of the following actions:

- Correct any deficiency that may exist;
- Contact your specialist in fleet management;
- Contact the MML Risk Management Services at (800) 653-2483; or
- Contact the League's Loss Control Services at (800) 482-0626.

Note

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