

TOWN OF MILTON

HEALTH AND SAFETY MANUAL

This Health and Safety Manual was originally prepared by the Town of Milton Health and Safety Committee in 1990 - 1991. The Milton Selectboard accepted the Health and Safety Manual on February 4, 1991.

The contributions of the following members of the Workplace Safety Committee is greatly appreciated

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The manual was reviewed by Staff, Department and Division Heads. Christopher J. LaBerge, CPSI – Senior Loss Control Consultant from the Vermont League of Cities and Towns also provided us with his comments and suggestions.

This document is provided to each Staff Member at their orientation and they acknowledge receipt of this document and others. They further understand it is their responsibility as a Town Employee to read these documents and to be cognizant of its content.

Management supports this document and understands the importance of updating the information on an annual basis. This document will be updated annually as required by VOSHA.

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FORWARD

The Administration of the Town of Milton is concerned with the safety and welfare of all Staff and the public we serve. We acknowledge our obligation as an employer to provide the safest possible working conditions for our employees and the public.

The primary purpose of this manual is to acquaint Staff with the general safety rules and policies. It reflects the efforts of many people to establish reasonable, practical and safe work practices to prevent accidents. Our approach to accident prevention cannot be simple or basic; it is complicated by the wide differences in tasks performed and the differences in work environments. Rules and policies concerned with specific Department operations will be explained to you by your Supervisor.

We must perform the tasks of government operations and public services without accidents. It is the responsibility of all Town Staff to contribute to that goal. The attitude which should guide our efforts is as follows:

- ◆ Accidents are caused and can be prevented.
- ◆ The Town of Milton is sincerely interested in safety and is willing to invest time and money to prevent accidents.
- ◆ Safety is a personal responsibility.
- ◆ No task is so important and no services so urgent that expediency take precedent over safety.
- ◆ The work areas and equipment will be kept safe. As hazards are discovered, corrective measures will be taken.
- ◆ Each employee should report all unsafe conditions encountered in the work place.
- ◆ No employee is expected to undertake a job until they have learned how to do so safely and is authorized to do so by their Supervisor.
- ◆ All injuries must be reported immediately to your Supervisor.
- ◆ Compliance with safety rules (such as the use of safety equipment) is a condition of employment.

Safe workers benefit themselves, family, colleagues and their community. Please make safety your way of life – at the workplace, at home and when recreating.

Thank you.


Brian M. Palaia
Town Manager

INTRODUCTION

This manual is issued to inform Town employees about policies that are the basis for the Town's occupational safety program and to establish uniform safety procedures for tasks that are performed in more than one operating unit. Safety procedures for specialized tasks performed solely by one particular unit will be prepared by the Department Head concerned, and will be issued only to the employee performing tasks.

All employees are required to study this manual carefully as soon as it is received. Study is to be completed within thirty (30) days after receiving the manual. You further understand it is your responsibility as a Town Employee to read these documents and to be cognizant of its content.

Department Heads have been directed to make safety a matter of continuing concern. They have further been directed to develop and administer an active Department safety program. The program sets standards every employee must accept if it is to be successful. All employees are charged with responsibility for cooperating with and supporting the safety program objectives. As a condition of employment every employee is expected to concern their selves with their own safety, the safety of co-workers and the safety of the general public. It is important that the employees be constantly alert for potential hazards which are not referred to in any written practices, but which may result in injuries or property damage. All injuries must be reported immediately to your Supervisor.

Where potential hazards are thought to exist, employees should use all known precautionary measures and, when in doubt as to the procedure to follow, their Supervisor should be consulted before proceeding with the work.

Accidents are costly. They cost the employee physical pain, possible disability and potential loss of income and future earning power. Workmen's compensation, no matter how generous, will never cover the cost of injuries to employees. Accidents cost employer's money and lost time, for workmen's compensation, medical treatment, repair of damaged equipment and many hidden costs that are not as easily measured.

Accidents don't just happen, they are caused. By exercising self-control every employee has an opportunity to demonstrate job skill. Accident prevention can be the most important employment benefit.

- Safety is a matter of acceptance of procedures developed through experience for your self-protection.
- The safe way to do a job is the most efficient way to do it.
- Safe performance — a good safety record — is a mark of job skill.
- Shortcuts that ignore safety usually take more time than they save.

TRAINING AND JOB INSTRUCTION

All Supervisors are expected to study the application of safety principles to Supervisory techniques. Supervisors are expected to conduct on the job training to help teach how to adapt the skills they now have to some of the unique requirements of municipal employment. Supervisors are expected to conduct training sessions and to plan daily work assignments, emphasizing potential hazards and safety procedures to avoid them. Supervisors will observe employee performance and correct it when necessary to insure that safety procedures are followed.

When accidents occur, Supervisors will investigate them. The main purpose for the investigation is fact finding, not fault finding. The objective, of course, is to determine how and why the accident occurred so we can prevent it from happening again. There should be a constant program of job safety analysis to identify hazards and eliminate them before accidents happen.

Responsibility for Safety

1. The Department Head may delegate authority and assign responsibilities for most areas in their control. The Department Head, however, cannot delegate or sign away their responsibilities for accident prevention. The results of this program are expected to be in direct proportion to the interest and guidance provided by the Department Heads.
2. Supervisors will assume the responsibility of thoroughly instructing their personnel in the safety practices to be observed in their work situations. They will consistently enforce safety standards and requirements to the up most of their ability and authority. Supervisors will act positively to eliminate any potential hazards within the activities under their jurisdiction. They will set the example of good safety practice in all spheres of their endeavors. Safety records shall be measured along with other phases of Supervisory performance. Therefore, it is essential such records be complete, accurate and that all accidents be reported.
3. All employees are responsible for compliance with safety procedures. Standards and rules are outlined in this manual and/or other directives that are established to prevent injury to their selves, other persons or damage to equipment and property. Employees are also responsible for promptly reporting to their Supervisor any and all hazardous conditions or procedures that affect them, their co-workers and/or the general public.
4. The Town Manager is responsible for the organization, coordination and implementation of programs and safety education, hazard inspections and eliminations, and accident/injury reporting. The Town Manager does not release Department Heads and immediate Supervisors of their basic responsibility to expand their Supervisory practices to incorporate safety principles in all Supervisory efforts.

SECTION I

General Rules

Safety means efficient performance. Safety must, therefore, be a part of planning for every job equal in importance to all other operational considerations. Observing the safety procedures contained in this manual will make Town operations safer for every employee. Each employee must be alert to the possibility of improvement. Employee suggestions for improvements to work conditions and procedures are welcomed. Changes must not be made, however, until the suggestions have been evaluated and revisions of the current procedure have been approved by the Department Head.

Unsafe conditions and procedures must be identified before they can be corrected. Consequently, every employee is responsible for immediately reporting those that they recognize. All accidents should be reported, whether personal injury or property damage is involved. The accident you prevent may be the one that could have injured you.

The following general safety procedures are established:

1. Report all personal injuries no matter how minor, to your immediate Supervisor as soon as possible. This must be done whether or not injury resulted in lost time from work or required medical attention. Prompt reporting of accidents is required under Federal and State VOSHA laws and the Workmen's Compensation Regulations.
2. The Town does not expect employees to take any unnecessary chances or to work under hazardous conditions. Learn the correct way to do your job. If you are not sure you thoroughly understand the job; ask your Supervisor for further instructions.
3. Ingestion of drugs, or alcoholic beverages, or on the job or during working hours is prohibited. Any employee reporting to work under the influence of alcoholic beverages or non-prescribed substances during working hours shall be subject to disciplinary action.
4. Keep yourself in good physical condition.
5. Always inspect tools and equipment before use. Report defects to Supervisors and other potential users. Do not use defective tools or equipment to an unsafe degree.
6. Obey warning tags and signs that are posted to point out potential hazards.
7. Operate only the machinery or equipment you have been authorized and trained to operate safely.
8. Remove jewelry such as rings, identification bracelets, etc., in work involving climbing, materials handling or operating mechanical equipment.
9. Never reach over moving parts or machinery equipment, nor operate machinery or equipment with guards removed.

10. Report to work in appropriate clothing suitable for the type of work you perform, including footwear.
11. Wear protective equipment when required. Its use will be enforced.
12. Common sense, health, and sanitation rules must be observed for the welfare and consideration of other employees.
13. Always turn off all types of mechanical equipment including office equipment, before making adjustments or repairs.
14. Avoid working alone. If unavoidable, advise others where you will be and when you will return.
15. All safety regulations will be strictly enforced.

SECTION II

OFFICE SAFETY

Office work is more dangerous than is commonly supposed and many accidents occur during ordinary office routine.

1. Every employee shall be responsible to see that their own desk and work area is clean and orderly. Pick up items, pencils or paper, clips and wipe up any spilled liquids. Good housekeeping is the key to a safe office environment.
2. Be alert for loose or rough floor covering.
3. Be extra cautious when you are approaching a door that can be pushed toward you. Be careful when pushing one open and walk slowly when coming to a blind corner.
4. Extreme caution should be used when walking between desk and file cabinets. Watch out for electrical cords and keep them out of aisles.
5. All file, desk and table drawers should be kept closed when not in use. When you leave them, close them. Never open more than one file drawer at a time.
6. Overloading the top drawer of an unsecured file cabinet may cause injury or damage. Be careful not to pull them out too far if there is no locking mechanism.
7. Furniture such as tables, desks and chairs must be maintained in good condition and free from sharp corners, projecting edges, wobbly legs, etc.
8. Tilting chairs can be hazardous when improperly used. Learn the limits. Care should be taken to assure that they are in good condition.
9. Never use chairs, desks, or other office furniture as a makeshift ladder. Use a step ladder and never overreach.
10. Be sure equipment is grounded and that the cord is in good condition. If a machine gives you a shock or starts to smoke, unplug it and report it.

SECTION III

HOUSEKEEPING

Many painful, often disabling injuries are caused when employees are struck by falling items or trip over improperly placed objects. Many injuries and property damage stem from fires caused by poor housekeeping practices and improper storage of flammable materials. The best protection against this hazard is good housekeeping.

When materials are stored properly with adequate space to move through the storage area or with adequate clearance to work within an area, accidents are prevented. With proper planning, accidents can be prevented.

The following safety procedures are established:

1. Keep work areas and storage facilities clean, neat and orderly.
2. All aisles, stairways, passageways, exits and access ways to buildings shall be kept free from obstructions at all times. Grease and water spills shall be removed from traffic areas immediately.
3. Supplies should never be placed on top of lockers, boxes or other movable items.
4. Tools, equipment, machinery and work areas are to be maintained in a clean and safe manner. Defects and unsafe conditions should be reported to your Supervisor.
5. Return tools and equipment to their proper place when not in use.
6. Sharp or pointed articles should be stored so as to prevent persons from coming in contact with sharp edges or points.
7. Adequate lighting in obscure areas shall be secured for the protection of both employees and the general public.
8. Control or fuse boxes should be kept closed at all times and clear of clothing items, rags, storage boxes, etc.
9. Extension cords should not run across aisles or through water or oil. Cords should be inspected for kinks, worn insulation and/or exposed strands of wire before use.
10. Continuous blown fuses indicates an overload or short. This condition should be reported to your Supervisor immediately.
11. Keep electrical equipment properly coiled and free of grease and dirt.
12. Fire inspection and prevention policies shall be maintained.
13. Keep safety in mind when selecting housekeeping supplies and equipment. Try to minimize the use of chemicals that cause skin irritations, have harmful vapors, are

combustible or otherwise harmful to the user.

14. All chemicals, solvent and fuels will be clearly marked on the container.

SECTION IV

FIRE PREVENTION

One of the most devastating incidents that can occur in the work place is fire. In a variety of activities performed in municipal operations, there are facilities and job sites in which potential fire hazards exist. Fires can be prevented by orderly planning, good housekeeping, and observance of practical control of smoking habits when flammable substances are present.

The following safety procedures are established:

1. Fire equipment shall be permanently displayed, labeled for usage, and kept clear for easy access. There will be a 36" square area marked off around and near the equipment for clear access.
2. Know the location of the fire extinguishers and how to use them. After use of the extinguishers, report the incident immediately to your Supervisor so a replacement may be obtained or the extinguisher recharged.
3. Do not use water type extinguishers on electrical fires because of the danger of electrocution.
4. Oily rags and other flammable wastes should be kept covered in metal containers. Such debris shall be removed from the shop building as soon as possible.
5. Gasoline utilized in small quantities in shops for fueling engines being repaired, tested, etc. shall be handled and dispensed in VOSHA approved safety containers.
6. Fueling of any type of motorized equipment while the engine is running is prohibited.
7. Never overfill a tank. Allow room for the expansion of the liquid.
8. "No smoking" signs shall be posted and no smoking enforced in all areas where hazardous substances are stored or used and any other area where posted.
9. Exits shall be clearly marked and are not to be blocked or chained.
10. All heavy equipment and emergency vehicles shall have the appropriate fire extinguisher contained in the vehicle.
11. The Buildings & Grounds Superintendent or designee shall be responsible for the inspection of fire extinguishing equipment on a regular schedule.

It is necessary that facilities and activities that contain potential fire hazards have a plan to combat fire if it should occur. The plan must include: adequate warning measures for alerting all persons in the area of the existence of a fire; rapid reporting of a fire to the Fire Department; evacuation of affected employees and/or the general public from areas involved in a fire; procedures for containing a fire in so far as it is safe to do, and

to the extent that it is necessary to maintain safe exit for the general public and/or the employees who regularly work there in the duties they are to perform in given fire situations; and adequate fire extinguishing equipment that is regularly inspected by a responsible authority.

Each Town of Milton building must have an emergency fire plan. The Milton Fire Department offers a source of knowledge and assistance to Department and Division Supervisors for establishing an emergency fire plan.

Annual fire extinguisher training will be provided to all Staff Members.

SECTION V

Material Handling

Analysis of national accident records reveal that over one third of all work related injuries occur in the process of handling materials.

The types of injuries that are caused by improperly handling materials are strains, sprains, crushing, hernia, rupture, fractures, lacerations, bruises and contusions.

Accidents of this nature can be avoided by planning ahead using mechanical equipment wherever possible, and thinking about the proper way to do the task as well as the proper tools to perform the task.

The single and most important preventative measure an employee should understand is the **FOUR STEP LIFTING PROCESS**.

1. GET READY

- Size up the load. If it's too heavy or bulky, get assistance.
- Check the load and remove protruding nails, splinters, sharp edges, oil grease or moisture.
- If the surface is rough, wear gloves and protective safety glasses.
- Know where the load is going and where you are going to put it down.
- Be sure the path you take is free of obstacles.

2. PICK IT UP

- Get a firm footing and good balance; have your feet about shoulder width apart.
- If the load is below waist level, bend your knees to get into position, keep your back as straight as possible.
- Grip the load firmly.
- Lift the object to the carrying position, keeping it close to the body. Let the leg and arm muscles do the work.

3. CARRY IT CAREFULLY

- Be sure you can see where you are going.
- When changing directions, be careful not to twist your body. Turn your body by changing the position of your feet.
- Use extra caution in tight places so as not to smash your fingers or hands.

4. PUT IT DOWN

- If the receiving surface is about waist high, use the edge to take part of the load.
- If you lower the load to the floor, bend your knees; keep your back as straight as possible and the load close to your body.

SECTION VI

Protective Clothing and Equipment

The variety of work operations performed by Town employees involves many industrial hazards. The tasks performed range from custodial services to heavy construction activities. In all tasks, however, there are counterparts in private industry where much research has been done to develop measures to protect employees from accidental injury. Where possible, this is done by providing guards for various types of machinery. All machine guards shall be kept in place while machinery is in operation. Tampering with machine guards is prohibited and any removal requires the prior approval of a Supervisor. All guards are to be properly replaced after the repair work that has necessitated its removal has been completed. When working on electrically driven machinery, the disconnect switch for controlling the machine shall be secured in the open or off position by the worker or workers performing the job. The securing device should not be removed until the work has been completed and the area has been cleared.

When it is impractical or impossible to place a guard over the source of the hazard, then it becomes necessary to place the guard on the employee. This is done by wearing approved personal, protective apparel such as; hard hats, safety belts, safety goggles, traffic vests, face shields, gloves, respirators, etc. Supervisors shall insure that all their employees are properly protected. Departmental dress codes may be established within a particular Department division or work area, and each employee is expected to know and follow these codes where applicable.

It is extremely important Supervisory personnel select protective clothing and equipment that is acceptable for comfort, appearance and utility and still affords the desired protection. Safety in this instance is knowledge of the protection available, and a frame of mind that makes use of the available protection.

General Clothing

1. For the employee's safety and comfort, one should wear work clothes that are sturdy, fit well and are washable.
2. The wearing of loose flowing or ragged clothing on or near moving machinery or equipment is prohibited.
3. Work clothes should be washed frequently as a safe guard against skin infections and irritations.
4. For outdoor work in winter weather, it is best to wear loose, warm, fairly lightweight clothing. Wear layers of clothing that can be removed when working inside and put it back on when you return outdoors.
5. Oil soaked clothing is a serious fire hazard. Keep clothes free of oil.

Head Protection

Many activities performed by Town employees involve working above or below ground levels, movement of material overhead or working near construction machinery. In such operations, the hazards of being struck by falling objects, machinery, or loads being moved by machinery constantly exist. Hard hats are provided to prevent head injuries from being struck by falling objects when working in confined spaces. A hard hat is a personal item and shall be for the individual with exclusive use by the employee to whom it is issued.

Hard hats of the type approved by the Department Head shall be worn:

1. When working around front end loaders, backhoes and lifts.
2. When working in any manhole or excavation.
3. When there is any work being done above the head, whether on your job site or someone else's.
4. Supervisors will designate all other areas where hard hat use is required for their divisions.

Face and Eye Protection

Hazards involving the possibility of injuries to the face and eyes occur in both indoor and outdoor tasks. They range from dust blown in the eyes or particles of steel, sand, concrete, etc. propelled into the eyes by power tools and machinery to splashes of corrosive dust and liquid chemicals.

Face and eye protection shall be provided for any task where there is any possibility that an injury may occur without such protection. Employees assigned to perform tasks which require eye protection shall wear the protection provided. The Town shall provide appropriate face and eye protection devices at no expense to the employee and shall make their use mandatory in specific tasks.

Safety glasses, goggles and other eye protective equipment offer vital protection.

Safety glasses or goggles shall be worn:

1. When using any motor, air or hydraulic driven, grinding, sanding, sawing, chiseling, hammering or mowing equipment.
2. When working with hazardous chemicals.
3. In any restricted area where safety glasses or goggles are designated.
4. Supervisors will designate all other areas where safety glasses or goggles will be required.

Gas and Electrical Arc Welding

- A. Welders helmets with proper filter lenses shall be worn.
- B. Portable welding screens shall be used to protect the eyes of others in the vicinity wherever potential exposure to others exists.
- C. Helpers and observers shall wear safety glasses, goggles or handheld shields with proper filter lenses.

Eye protection may be required on other jobs not listed, if so designated at the time by your Supervisor. Beyond this, employees are encouraged to wear eye protection at all appropriate times.

Hearing Protection

In the variety of activities conducted by Town employees, there are some machines and equipment that may produce sound levels which may cause hearing loss. When employees are subjected to excessive sound levels, attempts should be made to reduce the noise through engineering techniques. If the sound level cannot be reduced to a tolerable range, then personal protective equipment shall be provided and shall be worn by the employees that are exposed to such noise.

Ear protection may consist of ear muffs, or ear plugs. The type most acceptable to the employees shall be provided whenever possible so long as it achieves sufficient reduction of noise exposure. Cotton will be not be used as ear plugs.

Foot Protection

Many tasks involve manual lifting or handling of heavy tools and materials. Foot injuries frequently occur when heavy objects are dropped, resulting in bruises, dislocations, fractures or crushes. Shoes, rubber boots reinforced with safety toed or soles will prevent foot injuries from impacts of falling objects, stepping on sharp objects, or exposures to blades of power tools.

The Town of Milton provides Public Works Employees a monetary allowance to help cover some of the cost for acceptable safety toed boots. The allowance will be in accordance with the Town Administrative Code or current Bargaining Unit Agreement. Beginning July 1, 2007 the allowance is \$ 165.00.

Approved safety shoes shall be worn;

1. When an employee is engaged in work on an outside job site.
2. When an employee is doing work around heavy equipment or machinery
3. When an employee is lifting and/or transporting heavy objects.
4. Supervisors will designate all of the areas where safety shoe usage is required.

5.

Hand Protection

Rings should be removed or not worn to work if there is the slightest chance of getting caught in any hook, tool or piece of machinery. Rings can cause loss of fingers or painful lacerations. Other jewelry such as watches, medals, chains and bracelets should be removed when employees are working in potentially hazardous areas. Gloves should be worn when handling rough edges or abrasive material or when the work subjects hands to possible lacerations, punctures or burns. Other hand protection may be designated by authorized persons. Skin irritation should be prevented by washing with soap and water. Rubberized gloves should be worn when handling irritating materials.

Respiratory Protection

There are many tasks in municipal employment that involve exposure to fumes, gases, mists, chemical dusts, etc., that can be harmful to the human respiratory system. These hazards can be avoided by the use of the appropriate filter breathing masks, self-contained breathing apparatus, etc. Safe performance is achieved through adequate knowledge of noxious or toxic effects of substances being handled. The circumstances under which harmful atmosphere may exist in the work environment, adequate testing to determine the nature of the environment before entering into it, the type of equipment that will provide adequate protection and training in the proper way to use the protective equipment.

The following safety procedures are established:

1. Supervisors shall learn and then instruct all employees whose work assignments may involve exposure to noxious or toxic substances or oxygen deficiency of properties of such atmospheres, potential hazards and proper methods of testing of hazardous atmospheres and proper type of protective breathing apparatus, and its proper use.
2. Suitable and appropriate breathing apparatus shall be conspicuously placed near work environments involving the possibility of exposure to harmful atmospheres. The apparatus shall be kept clean and used only for the protective function intended.
3. Each time the respiratory equipment is used a report will be made to the Supervisor of the reason for its use and the approximate time it was in use.
4. Approved respirators shall be worn in the following instances.
 - a. When entering manholes, sewers, vaults, boilers or other confined spaces where tests indicate the presence of noxious atmosphere after attempts to purge and ventilate them.
 - b. When welding in confined areas where ventilation is limited.
 - c. When determined by the Supervisor to be advisable due to the knowledge of suspected presence of hazardous substances or lack of oxygen in the environment concerned.

SECTION VII

Hand Tools

Disabling injuries such as metal chips lodging in the eye or other parts of the anatomy do happen. Injuries to fingers and hands are common occurrences

The following safety rules are established:

1. Select the right tool for the job. Use tools as they were intended and not as a pry bar.
2. Sharpen the cutting edges of the tool and carry the tool with the sharp edge down.
3. Sand the wooden handles of a shovel, pick, rake, tamper, etc., thus preventing splinters and burns.
4. Check the handle on each tool for tightness.
5. Check the head of each tool, such as hammers, chisels, punches, etc., and have the tool dressed if it is mushroomed. (Includes burrs and chipped edges).
6. Wear shatterproof clear goggles when using chisels, punches and wedges. Be sure no one is in the area, without protection, before using such a tool.
7. Use only properly insulated tools (screwdrivers, wire cutters, etc.) when working around energized electrical circuits of equipment.
8. Return tools to their proper place so that they do not fall from a ledge or are tripped on.

SECTION VIII

Power Tools

Power tools substantially increase the number and types of hazards to an employee. Hazards range from electrical shock, to being struck by chips, shavings and other debris during operation.

Electrical Equipment

1. All electrical tools used in Town operations must be grounded by connecting a three wire cord with polarized, three pronged plug to a properly grounded, three-hole receptacle.
2. If extension cords are used, they must be of the three conductor type with matching plug and receptacle.
3. Each electrical tool or machine shall be visually inspected each time it is used for damage to cords and ground connections. The most common defects occur at the points where the cord is attached to the tool or where the cord is attached to the plug. Be sure to check for a secure connection plate on the inside portion of the plug.
4. Where electrical equipment is used in a wet location, use only low voltage equipment and wear rubber boots and rubber gloves.
5. Never operate power tools without the guards provided.
6. Always remove the electrical plug from the outlet when servicing electrical tools.

Grinders

1. Only those employees who are trained with the mounting of grinding wheels are permitted to do so. A ring test on each of the new grinding wheels should be completed before installation.
2. The wheel must fit easily on the spindle.
3. The maximum operating speed as given by the wheel manufacturer is on the wheel label; the grinding wheels are not to be operated in excess of these speeds.
4. The work rest must be securely adjusted on all stationary grinders to 1/8 inch of the wheel. The guard must be adjusted to 1/4" from the wheel. Never attempt an adjustment while the machine is in motion.
5. Use the cutting surface of the grinding wheel uniformly as a grooved wheel is dangerously weakened.
6. Grinder bearings must be kept properly oiled and adjusted.

7. Do not abuse the wheel by applying excess pressure.
8. Be particularly careful when grinding narrow tools or other objects as these are apt to catch between the rest and wheel.
9. The operator's eyes must be protected with full face shields at all times when the machine is in use.
10. Shields must be in place and kept clean at all times.

Drill Presses

1. Adjust the table so there is plenty of room for the jig and keep your hands away from the revolving drill. Never run the point of the drill into the table.
2. Be sure that both the chuck and the drill are tight on the spindle, and that the circular tables are tightened before beginning to drill.
3. A sluggish drill is probably the result of incorrect grinding. Be sure that the drills are sharpened properly for the particular material, so that the cut may be the right size.
4. Materials shall be clamped or otherwise fastened to the drill press bed, not held by hand.
5. Never run a drill faster than the rated speed as this may result in broken drills, damaged material, and serious injury.
6. Reduce the pressure if there is not backlash in the spindle. Listen carefully for the distinctive noise made when the drill comes through the material so that you can ease off the pressure.
7. Never wear gloves or loose clothing while operating a drill press.

Gas Welding

1. All gas welding equipment and connections should be kept free from grease and oil. Oxygen will explode upon contact with oil or grease. Oily and greasy gloves may bring about the same effect, in addition to making it difficult to handle the cylinders.
2. Never roll tanks on the floor, nor attempt to carry them by hand or hoist unless properly slung. Use the skid provided when unloading cylinders from the truck. After unloading, the cylinders must be securely chained.
3. Securely fasten the acetylene and oxygen tanks in an upright position where there is no chance of their falling.
4. Use only standard green oxygen hose with the right hand couplings, together with red acetylene hose with left hand thread.

5. Blow out the tank valve before attaching the regulator. Never use compressed air for blowing out the equipment as the air may contain some oil and moisture. Use oxygen to blow out the oxygen hose and acetylene to blow out the acetylene hose.
6. When changing empty tanks for full ones:
 - a) Shut off the valve on the empty tank
 - b) Release the thumb screw on the regulator
 - c) Disconnect regulator, blowout the tank valve and connect it to the full tank
 - d) Stand on the opposite side of the tank, point the acetylene valve outlet away from the oxygen tank and face away from the gauge while opening the tank valve.
 - e) Adjust the thumb screw on the regulator to the proper pressure. Make sure that you do not have excess oxygen, which causes unnecessary sparks in the operation.
 - f) Be sure that the end of the torch is cleaned before attempting to light it. Use only friction lighters.
 - g) At the completion of the work, the welder should make a careful inspection of the job site to insure that hot materials have not been left smoldering which might later develop into a serious fire.
 - h) Proper safety goggles and safety gloves are required.

Electric Arc Welding

1. Whenever possible, welding operations should be carried on inside a regular welding booth. The arc shall be effectively screened to prevent injuries to eyes and to others.
2. Persons entering the welding area must also wear the required eye protection.
3. Deposit used end of welding rods in the containers provided for that purpose to prevent burns and fires.
4. When not in use, place the electrical holder where it cannot cause an arc.
5. Prevent injuries from short circuits by only using welder cables that are in good condition.
6. Only operators certified by their Supervisors shall use the welding equipment.
7. Helmets and shields shall be used with all electrical welding. Do not remove your helmet while bending over a hot weld.

Tree Trimming and Chain Saw Safety

1. No employee shall be assigned to a tree trimming assignment until they have been properly trained and are familiar with the necessary equipment and machinery.
2. Before starting any tree operations, time should be taken to check for any possible hazards within the surrounding areas.

3. Except in cases of emergency, tree work should be avoided when trees are wet, during high wind or during extreme low temperatures.
4. Danger signs and barriers will be placed around the area where tree work is being done.
5. The Supervisor is responsible for:
 - a. Instruction to their Employees
 - b. Inspection of the tools
 - c. Enforcement of all safety rules
6. Ropes of suitable strength should be used for lowering hanging limbs.
7. Ropes shall be used for raising and lowering tools.
8. Ladders should not be used unless they can be set on a firm foundation and the top can be secured.
9. Ladders should be frequently inspected for damage.
10. Special precaution should be taken when it is necessary to work around live wires.
11. All wires broken during tree work should be reported to the proper utility company immediately.
12. Fallen wires should be guarded until service workers arrive.
13. Never walk with the power saw running.
14. Always stand at the end of the saw when cutting, never at the side.
15. Never replace the chain in the guide rail groove while it is running.
16. Clean and check saw thoroughly and lubricate daily as required. Maintain a proper tension on the chain. Always inspect the saw for sharpness, as a sharp saw will reduce maintenance cost and result in faster, safer and easier cutting.
17. Refuel the saw before it runs out of gasoline. Avoid the danger of fire when starting a saw at the refueling site.
18. Hard hats with face shields, safety glasses, chaps, gloves, safety shoes with metatarsal protection on the shoe are mandatory.
19. Follow manufacturer's recommendations.

Lawn Mowers

1. Power mowers shall not be left unattended.
2. The area to be mowed must be inspected for foreign objects before mowing.
3. Bystanders should be warned by the operator of the danger of flying objects. Extreme caution must be taken when there are children in the immediate area.
4. The operator must keep hands and feet from the under carriage of the mower while engine is running.
5. During maintenance repairs or when refueling, the spark plug wire must be disconnected from the spark plug.
6. After mowing is completed, disconnect the spark plug wire, remove dirt, grass, etc., from the top of the mower, and store the mower in a dry, secure location.
7. Safety devices such as grass shields, automatic shutoffs, etc., must not be altered, disconnected and/or removed.

SECTION IX

Construction Safety

Town employees are often involved in tasks that are related to the heavy construction industry. Heavy machinery is employed in public works projects to save time and labor. Potential hazards to inexperienced or untrained workers are multiplied in the process. The operators of construction machinery often do not have sufficient visibility to detect danger to nearby workers, or the ability to avoid an accident by quick reversal of controls.

Other public utilities are often installed in or near the work site area of projects to be completed by Town employees. Contact with, or damage to, the other utilities may affect the safety of the general public or the interruption of essential utility service. The following is a list of most utility services that would be encountered by a Town employee.

Central Vermont Public Service, Vermont Electric Co-Op, Vermont Gas, Verizon, Comcast.

The State laws require anyone who digs to notify utility companies before starting, and for good reason. Digging can be dangerous and costly without knowing where underground facilities are located.

Dig Safe System, Inc. is a communication network, assisting excavators, contractors and property owners in complying with state law by notifying the appropriate utilities before digging. Dig Safe®, a free service, notifies member companies of proposed excavation projects. In turn, these member utilities respond to the work area and identify the location of underground facilities. Callers are given a permit number as confirmation.

Member utilities, or contracted private locators, use paint, stakes or flags to identify the location of buried facilities. Color coding is used to identify the type of underground facilities:

The daily familiarity with these services may make an employee treat them in a haphazard manner. This attitude must be consciously avoided at all times. Safety precautions must be a part of job planning. Overhead lines constitute a hazard that must be considered when operating machinery beneath them. Underground services constitute a hazard when damaged by excavation.

The most immediate danger to workmen lies in contact with electric service or a rupture of gas service. Such accidents can be prevented by advance planning. If such an accident should occur, prompt reporting to the particular utility is of prime importance. Escaping natural gas constitutes an explosion potential and the leak must be stopped by trained personnel as soon as possible. Contact with a primary electrical circuit constitutes a shock hazard. If an injured employee is still at the point of contact or

rescuers are attempting to remove the employee, the reactivation of the circuit poses additional hazards. An immediate report to the utility affected will avoid compounding the hazard.

Some of the principal hazards affecting employees and/or public safety are:

- Excavation resulting in gas explosion, electrocution, flash burns, etc.
- Rupture of gas, water and sewer facilities from using mechanical compaction, boring or digging equipment.
- Electrocution resulting from contact with overhead electrical wires.
- Interruption of electrical service or communication lines from dig—up, pole collapse.
- Fractures, contusions, crushes, etc., from being struck or caught in materials and/or machinery.
- Eye injuries from dust and debris propelled by machinery and tools used in the operations.

Construction accidents can be prevented by constantly including consideration of necessary safety precautions in planning every job activity. Coordinating with utilities to locate services near the job site, instructing workers of the hazards involved in each job and use of approved protective clothing and equipment and adhering to approved safety procedures.

The following safety procedures are established:

Before a job is started, a Supervisor shall:

1. Check plans to see what public utility services are located.
2. Contact Dig Safe® to secure assistance in locating, all underground or overhead services that may be affected.
3. Make a personal inspection of the job site area to identify what signs, post markers, overhead electrical lines, etc., may be seen and make this information known to the workers.
4. Obtain the service and repair telephone number of all utilities having services in the job site area so that an immediate report may be made if an accidental contact occurs.

Natural Gas Service

1. Inform all crew members of location and depths of buried pipelines.
2. Consult the local gas utility of closely paralleling or crossing buried pipelines.
3. Specifically instruct all equipment operators to avoid contacts with buried lines. Do hand digging when in close proximity to buried pipelines.
4. Be aware of proper compaction procedures when using mechanical compaction

equipment after backfilling over buried pipelines.

If a Gas Pipeline is Damaged

1. Immediately call the gas utility service and repair office to report the damage.
2. Shut off all motors in the area.
3. Remove all flares or lanterns.
4. Enforce no smoking in the area.
5. Do not cover up a damaged pipeline.
6. Do not operate gas valves.
7. Check buildings in the immediate area for gas odors.
8. Request occupants to leave the area if gas odors are detected.
9. Reroute traffic from the immediate area and notify the Police and Public Works Departments of the situation.
10. Stay near the area until relieved by the police or gas company personnel.

Electrical Transmission Service

1. Contact the local electric power utility if work is to be done near electric service and accurately locates any buried services.
2. If excavating near poles or guide wires and the possibility of damaging cables or collapsing pole lines may occur, consult the power company.
3. If excavating beneath buried conduit or cables, arrangements shall be worked out in advance with the power company concerning the maintenance of electrical services, proper support of exposed conduit and suitable compacting of backfill.
4. All wires and conduit shall be considered energized and dangerous.
5. Construction equipment with protruding elements shall not be operated within 10 feet of overhead electrical lines. When construction machinery is operated in close proximity where moving parts could result in contact, all signal men shall be provided to direct the operator. Signal men in those circumstances shall be especially watchful to prevent movement of machinery and the 10 feet of clearance as prescribed above.
6. Workers on the ground level handling suspended loads or in contact with machinery must also be concerned with contact to energized electrical lines. Ground crews should be constantly aware of the potential danger.

If the Machines Contact Wires

1. Immediately contact the power company service and repair office.
2. The operator of the equipment should attempt to clear the machinery away from the service wire.
3. The operator should evacuate the machinery. Do not return and keep others away from the area.
4. If wires are down, post guards to prevent anyone from coming into contact with them.

Telephone Service

1. While telephone circuits operate on low voltage and are not an electrical hazard in themselves, they may be energized with higher voltages when crossed with power lines by accident at points far removed from the job site. Consider all lines hazardous.
2. Do not cut or disturb guide wires. A sudden release of tension may cause an entire pole line to collapse.
3. Observe the precautions listed for electric power lines.
4. Underground telephone cable is generally buried with a minimum cover of 24 inches. Subsequent grading may have reduced this minimum. Pipe pushes, trenches, boring tools, air hammers, pins for paving, etc. should not be used until determining and location of buried telephone cables and conduit.

Digging and Trenching Operations

1. Approved guards such as curbing, barricades, warning signals, or a certified flagger shall be in place when workers are engaged in any street excavation or repair work. MUTCD warning devices shall be placed in accordance with MUTCD at sufficient distances to permit vehicles a reasonable stopping distance with regard for visibility, space and volume of traffic. Open manholes shall be properly guarded with approved warning devices.
2. A signalman shall be posted to assist the machine operator. The signalman shall be stationed where visible to the operator and outside the range of movement; or hazardous areas from load and able to warn the operator of the presence of others who may enter the area.
3. All tools, materials and equipment shall be kept at a reasonable and safe distance from the edge of trenches, curbs, or embankments.
4. Excavation areas must be properly sloped and shored.
5. Hard hats shall be worn at all times by workers in or around excavations, trenches, tunnels, sewers or other subsurface operations.

6. When chains, ropes, cables, slings, etc., are placed under tension, workers and observers must be cautioned to stay well beyond the range of the hazard.

7. The public shall be directed away from hazardous areas and materials piles.

Material Handling Machinery

1. When moving objects with heavy equipment, use the proper sling and grips to secure the load.

2. Never enter under a suspended work load.

Working in the Public Right of Way

Town employees are often required to work in or along side rights-of-way. Only Town employees who have completed the requirements set forth by the State of Vermont to be designated as a Registered Flagger with a valid certificate will be allowed to flag for the Town. Normally these rights-of-way are used for vehicle or pedestrian traffic to repair utility services, perform tree trimming, landscaping tasks, and other maintenance activities. It is desirable that whenever possible to maintain a flow of traffic with the least possible interference. There are two safety considerations included:

1. Protecting employees from being struck by vehicular traffic.
2. Helping the public to safely avoid hazardous obstructions, etc. that interrupt the flow of both vehicle and pedestrian traffic.

When road surfaces are being repaired, manholes opened, or excavations dug, it is necessary that adequate warning of the hazard be posted, that a minimum amount of the right-of-way be blocked off consistent with safety requirements and that traffic be efficiently rerouted.

If repair work obstructs a traffic lane in a street and thus compresses several lanes of traffic into fewer lanes, warning by signs and barricades must be given to motorists well in advance of the obstruction. If manhole openings and excavations constitute a hazard to pedestrians, then adequate barricades and rerouting of walkways must be provided.

Maintenance activities may include such minor interferences as tree trimming, curb side planting, street sweeper operation, repair of culverts, chlorination of roads, etc. This may interfere with normal traffic. Proper precautionary signs, markings, etc., must be employed during the operation.

Consult with MUTCD to determine the appropriate Temporary Traffic Control setup.

The following safety procedures are established:

1. No town street shall be completely closed for utility repair without prior approval of the appropriate Public Works Department and adequate notice given to the Police, Fire and Rescue Departments.

2. When Town work crews perform emergency repair work, the Public Works shall notify the Police, Fire, and Rescue Departments.
3. If an open cut is left in a posted traffic lane when work is stopped or suspended for any reason, a steel plate cover of sufficient strength to sustain normal traffic loads should be placed over the cut and anchored. If a cut cannot be covered, signs and barricades shall be left in place, adequate lighting shall be provided, and the Public Works Department shall be consulted.
4. When a portion of a street has been closed for maintenance and repair work and construction equipment must be intermittently operated in lanes open to traffic, a certified flagger shall be provided to control traffic.
5. Any construction in a public right-of-way by Town work crews for maintenance and repair work exceeding 15 minutes shall be signed and barricaded according to MUTCD.

Traffic Warnings

1. Protection of hazards such as large holes, soft patches, frost heaves, etc.
 - a) Place signs plus flashing lights at night in advance of the hazard.
 - b) Protect holes and patches with wooden horses or snow fence barricades at the hazard.
2. The employee responsible for the project must:
 - a) Make sure flashing lights are in proper working order.
 - b) Insure that the lights are properly placed and adequate for the job.
3. Protection of employees working on the roadway:
 - a) "Road Work Ahead" signs shall be placed in advance of the work in both directions during the road maintenance operation.
 - b) Work shall be done on one-half the roadway at a time when patching and/or filling pot holes, cracks, etc.
 - c) A registered flagger will be used in all instances.

SECTION X

Working in Confined Areas

Town employees are often required to work in confined areas. Examples of confined areas are storage tanks, valve chambers, ductwork tunnels, vaults, manholes, etc. where heavier than air gases may accumulate.

The hazards include flammable, explosive gases or vapors, and not enough oxygen to support life. They can kill with frightening speed. Often they are colorless and odorless.

When employees enter manholes to clean sewer, catch basins, etc. there may be flammable gases, asphyxiant gases, and irritant gases from decomposition, spills of chemicals or seepage through the ground. Protection against these hazards involves adequate precautionary measures. Testers are available to detect the presence of explosive gases or vapors, and to detect the presence of other toxic vapors and gases if tests indicate danger, the area should be purged of dangerous atmospheres whenever possible and ventilated then tested again. The source of contamination should be closed off if possible. Whenever it is necessary for a worker to enter a space that is potentially hazardous, appropriate respiratory equipment shall be available.

The following safety procedures are established:

1. Before entering confined spaces, a test shall be made to determine whether explosive or toxic gases or vapors are present and also, if there is sufficient oxygen present.
2. Ventilating of the hazardous atmospheres shall be accomplished before entering whenever possible.
3. Maintain adequate ventilation while working.
4. Adequate respiratory equipment shall be available.
5. No employee shall enter a manhole, sewer tank or other under-ground confined space without a safety belt or harness and attached lifeline tended by another employee at the point of entry.
6. Smoking or open flames shall be prohibited in any under-ground operations or in other confined spaces.
7. Only lights approved and provided by the Department shall be used in manholes and sewers.
8. No gasoline or diesel motor shall be operated in the shop or other enclosed places unless the exhaust is connected to the proper outlet.

SECTION XI

Motor Vehicles and Mobile Equipment

Town vehicles are easily identified as such and thus constitute a traveling advertisement to many of our citizens. In our relationship with other motorists and pedestrians while operating Town vehicles, we control an important influence upon public relations within the Town of Milton. By courteous, considerate driving habits we can build good public relations if we apply the principle of defensive driving. The following safety procedures are established:

1. All employees shall be responsible for a safety check each day of any vehicle or mobile equipment they are assigned.

2. Safety checks should include:

Lights	Power steering fluid and reservoir
Horn	Windshield washers and wipers
Directional Signal	Tires
Motor oil	Belts
Brakes and brake fluid	Hoses

Adequate warning signals must be used as well as a certified flagger if traffic and conditions warrant.

3. Position all adjustments for safe driving before putting the vehicle into gear such as seat, inside or outside mirrors.

4. Drivers of Town vehicles must possess a valid Vermont driver's license and they must be thoroughly familiar with state and local regulations governing motor vehicle operation. The fact that an employee is operating an emergency vehicle does not absolve them from civil or criminal liability for the consequences of wantonly reckless driving.

5. Never take drugs or strong medication before operating a vehicle. Drugs, illness or extreme fatigue may affect your ability to judge distances, speed and driving conditions.

6. All persons who drive or ride in Town vehicles will in all cases wear the installed seat belts.

7. Except when working conditions require otherwise, parked vehicles must have motor stopped, key removed and emergency brakes set.

8. When trucks or vehicles must be stopped on streets or highways adequate warning signals must be used as well as a certified flagger if traffic and condition warrants.

9. Stay within the posted speed limits, slow down when conditions warrant.

10. When filling tanks:

- a) Shut off the motor on the equipment.

- b) Do not smoke near gasoline pumps.
- c) Keep the hose nozzle against the edge of filler pipe.
- d) Avoid spilling gasoline; never fill the tank too fast or too full.

11. In the case of an accident involving a Town owned vehicle, the following procedure will be followed:

- a) Render first aid and arrange for an ambulance if necessary.
- b) Notify the Police Department immediately and request an investigation at the scene.
- c) At the scene of the accident it is permissible to exchange names addresses, vehicle serial numbers, insurance company, etc. however, do not admit fault or express opinion as how the accident could have been avoided.
- d) The driver of the Town vehicle must report the accident to their Supervisor as soon as possible. The Supervisor shall report this accident to the proper authorities as soon as possible.
- e) All claims against the Town's insurance policies are to be forwarded to the Town Manager's Office.

SECTION XII

First Aid

While emphasis is placed on the prevention of accident and injuries that often result, accidents do occur, Prompt knowledgeable treatment of wounds and other physical results of accidents will in many cases prevent minor injuries from becoming major ones and sometimes save lives.

The following first aid rules are established:

1. First aid cabinets or kits shall be maintained in all Town of Milton buildings. First aid kits shall be carried in all Municipal vehicles.
2. Minor medical treatment for cuts, scratches, etc. should whenever practical be given by Supervisors. Always be sure that open wounds are thoroughly cleansed with soap and water to prevent infection.
3. There may be cases in which an injured employee, while needing professional attention, could be transported to the hospital by a Town vehicle. There may be cases, however, in which it is more important that the injured employee be transferred by ambulance as a stretcher case with a qualified attendant available. If there is any doubt in the mind of the Supervisor or lead employee in charge, it should be resolved by calling for ambulance service. As an example the following conditions would definitely indicate ambulance service.
 - a) Employees unconscious or in apparent shock.
 - h) Any apparent fracture.
 - c) Hemorrhaging – uncontrolled bleeding.
 - d) Severe abdominal cramps and/or vomiting
 - e) Other symptoms of internal injury.
 - f) Any back or neck injuries
6. All animal bites, because of the possibility of rabies, should receive prompt medical attention by a physician. If someone is bitten, an attempt should be made to confine the animal and the Health Officer shall be notified.
7. All injuries, no matter how minor, are to be reported to the Town Manager's Office. Injury report forms shall be made available by the Supervisor.
8. All injuries and illnesses are to be logged in the Log of Occupational Illness and Injured.

SECTION XIII

VOSHA Hazard Communication Program

1. General Information

In order to comply with VOSHA 1910.1209, Hazard Communication Standard, the following written hazard communication has been established. All Departments with the Town of Milton are included within this program.

a. Container Labeling

All Department Heads will be responsible for the verification of the proper labeling of all containers. Verification will include:

- labels clearly indicate the container contents
- the appropriate hazard warning is clearly noted
- the label list, the name and address of the manufacturer

b. Material Safety Data Sheets

The Department head will be responsible for obtaining and maintaining data sheet system. In addition, they will be responsible for the review of all incoming data sheets for new and significant health safety information and disseminating this information to all affected employees. Copies of the Material Safety Data Sheets will be kept in an appropriate place available to all employees in a particular Department.

c. Employee Training and Information

The Department head is responsible for the employee training program. They will insure that all elements specified below are carried out. As part of the introductory process, new employees will be oriented on health and safety issues and receive information and training on the following matters:

- an overview of the requirement contained in the VOSHA Hazard Communication Standard
- chemicals present in the workplace and where to locate the MSDS
- new chemicals as they are introduced
- location and availability of written hazard policy
- physical and health effects of the hazardous chemicals-
- methods and observation techniques used to determine the presence of hazardous chemicals in the work area.
- emergency procedures to follow if the employee is exposed to these chemicals
- how to read labels and review the material safety data sheets to obtain appropriate hazard information
- location of the material safety data sheets file and location of the hazard chemical list
- attend all required training sessions

After attending the orientation session, all new employees will be presented with the Health and Safety Manual for which they will sign a verification form acknowledging receipt of the Manual.

SECTION XIV

Written Programs

Buildings & Grounds Department

- Weed Wacker/Trimmer Safety Plan

Highway Department

- Dump Truck Plow Frame
- Excavation Safety Plan
- Hazard Communication Program
- Sewer Vac-Truck Operator Safety Plan
- Tree Clearing, Trimming and Chipping Plan
- Work Zone Safety and Traffic Control Plan

Water/Wastewater Department

- Control of Hazardous Energy: Lockout/Tagout Procedure
- Excavation Safety Plan
- Hazard Communication Program
- Noise and Hearing Conservation Guide
- Permit Required Confined Space Written Program

VOSHA Written Programs Matrix

- Municipal Safety Programs and Written Policies

Buildings & Grounds Department

Written Programs

Weed Wacker/Trimmer Safety Plan

Revised – September 1, 2010

What is a Weed Wacker/Trimmer?

- A weed wacker/trimmer (or weed cutter) is defined as a hand implement, often powered by electricity or a gasoline motor, for cutting weeds or trimming grass and often utilizing a rotating nylon cord as the cutting blade.

Weed Wacker/Trimmer Uses

- Weed wackers are primarily used in the landscaping.
- Used to cut through weeds and overgrown areas.
- Used to trim grass/weeds around trees and scrubs.
- Most have attachments for edging curbs and sidewalks.

Safety Hazards

- Eye injuries
- Lacerations
 - Weed wacker/trimmers can send debris flying back at the operator and others in the area of operation
- Heat related illness
- Back strain
- Wrist strain

Fatality Statistics

- It should be noted that fatality and injury statistics are not specifically mentioned in the OSHA Accident Investigation Data from 1990 - 2007
- U.S. Consumer Product Safety Commission estimates that in 1989 there were approximately 4600 hospital emergency room-treated injuries associated with power lawn wacker/trimmers or edgers
 - 1/3 were injuries to the eye

Heat Related Illness

- From 1999 – 2003, a total of 3,442 deaths were reported in America from exposure to extreme heat.
- Heat related illness included:
 - Heat rash, heat cramps, heat edema, heat tetany, fainting, heat exhaustion, and heat stroke
- Heat exhaustion and heat stroke need IMMEDIATE medical attention

Weed Wacker/Trimmer Safety Plan

Revised – September 1, 2010

- Be sure to stay hydrated and rest often when working outside for long periods of time
- Wear sunscreen!

Proper Personal Protective Equipment (PPE)

- Safety glasses/goggles
- Gloves (recommended)
- Long pants or chaps (recommended)
- Closed toed shoes
- Hearing protection

Fueling Safety

- Be aware of the property safety procedures when using a gas-powered weed wacker:
 - ✓ Check fuel/oil levels in a properly ventilated area before using
 - ✓ Do not add fuel to a hot engine
 - ✓ Do not overfill
 - ✓ Wipe any spillages
 - ✓ Do not smoke while operating

Best Practices

- Always wear proper clothing and eye and ear protection
- Never operate a machine while under the influence of alcohol, drugs, or medication
- Use caution when using weed wacker/trimmer
- They can throw objects such as sticks, stones, and other objects
- Main injuries occur to eyes

- Perform a safety check before and after each time you use the wacker/trimmer
- Check and tighten all loose nuts, bolts, and screws
- Check to see if rotating cord is in good condition and of sufficient length.
- Make sure protective shield is not cracked.
- Always make sure the shield around the cutter is protecting the user.
- Never remove safety guards or shields

- Clear the trimming areas of stones, sticks, wire, and other debris prior usage.
- Do not operate when others are within 30 feet.
- Operators must make sure to use caution to avoid injury to self and those nearby

Weed Wacker/Trimmer Safety Plan

Revised – September 1, 2010

- Do not lift weed wacker above waist.
- Do not over reach
- Always be properly balanced
- Be alert if the area you are trimming is wet or on a slope
- Avoid hitting curb or sidewalks when edging.

- Do not touch the wacker/trimmer string while it is rotating
- Do not do mechanical work while the engine is running
- Keep your hands, face, and feet away from any moving parts
- Never touch moving parts
- If wacker/trimmer should become entangled, stop engine immediately
 - Untangle the wacker/trimmer line
 - Check for damage before restarting engine

- Rest frequently and stay hydrated.
- Clean machine after each use.

Think Safety

Work Safely

Highway Department

Written Programs

Town of Milton
Highway Department
July 27, 2010

Title: Standard Operating Procedure

Subject: Dump Truck Plow Frame
Maintenance and Repair procedures

I). Adhering to Policy

- A) This policy will be observed strictly whenever truck maintenance requires that plow frames be lowered from their standard carry position.
- B) This policy assumes that all established "Lock Out/Tag Out" procedures are being followed for all maintenance procedures.
- C) There are no exceptions without the expressed consent of the Safety Officer (David Antone).

II). Special Safety Precautions

- A) Standard equipment maintenance LO/TO procedure is put in place.
- B) A minimum of two people will be present when lowering the frame for maintenance.
- C) An extra safety chain will be added to provide back-up to existing chains (load tested for 1600 lbs.)
- D) Visually check system components before lowering frame.

III). Warning, Signs, or Barriers

- A) Measure the extent of throw if the frame were to drop and seal off the area that could put someone in harm's way.

IV). System Repairs

- A) Assure that all parts and procedures used in repairing the lift system are approved by the Safety Officer (David Antone).

V). Vehicle Inspections

- A) Assure that all drivers are trained to inspect this system when performing vehicle inspections

VI). Maintenance Records

- A) Assure that maintenance personnel are directed to give the highest priority to keeping this lift system in good repair.
- B) Always follow up on vendor provided repairs to assure work is complete and acceptable.

Town of Milton
Excavation Safety Plan

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Excavation Safety Highway Department

Prepared by: David Antone, Milton Highway Superintendent

I. Objective

This Excavation Safety has been developed to protect employees from safety hazards that may be encountered during work in trenches and excavations. This is intended to assure that:

- A. Employees who perform work in excavations are aware of their responsibilities and know how to perform their duties in a safe manner.
- B. The Highway Department has appointed several individuals within the department to assure overall compliance with this safety.
- C. The responsibilities of these individuals and that of workers are clearly explained in this.
- D. All persons involved in excavation and trenching will have received the proper training in safe work practices that must be followed when performing this type of work.
- E. Proper equipment and warning devices are identified to meet work requirements.

II. Assignment of Responsibility

A. Employer

In administering the Excavation Safety, the **Town of Milton - Highway Department** will:

1. Monitor the overall effectiveness of the program
2. Provide atmospheric equipment and testing as needed.
3. Provide personal protective equipment as needed.

4. Provide protective systems as needed.
5. Provide training to affected employees and supervisors.
6. Provide technical assistance as needed.
7. Preview and update the on an annual basis or as needed.

B. Management

The Highway Superintendent (David Antone) acts as the Safety Officer and overall manager. The Highway Superintendent and Supervising Equipment Operator (Mark Mossey) will fulfill "Competent Person" duties for any site excavations and will have the responsibility of overseeing inspections and signing documents required to accommodate excavations. The Safety Coordinator (William Sanderson) will maintain all records and training documents for the Highway Department.

1. Both persons acting in the "Competent Person" role will be responsible for making sure that all procedures are followed as prescribed in this.
2. All employees entering excavations or trenches will be properly trained and equipped to perform their duties.
3. All required inspections, tests, and recordkeeping functions will be performed for all excavations.

C. Employees/Contractors

All employees, including contractor personnel, who work in or around excavations, must comply with these requirements. Employees are responsible for reporting hazardous situations to any Highway Department Supervisor or Town of Milton Administrative Staff.

III. Training

A. Training Schedule

1. All personnel involved in trenching or excavation work shall be trained in the requirements of this by the Safety Officer (David

Antone) with assistance from the Crew Supervisor (Mark Mossey) and Safety Coordinator (William Sanderson).

2. Training shall be performed before employees are assigned duties in excavations.

3. Retraining will be performed when employees indicate a lack of knowledge related to this, when changes are made to the plan, and on a periodic basis to provide a refresher on details.

4. Training records will be maintained by the Safety Officer and Safety Coordinator and shall include:

- The date of the training
- The name(s) of the instructor(s)
- A copy of training material and/or course outline
- Name(s) of the employee(s) who received the training

B. Training Components

The training provided to all personnel who perform work in excavations shall include:

1. The work practices that must be followed during excavating or working in an excavation site.

2. The use of personnel protective equipment that will typically be required during work in excavations.

3. Procedures to follow if a hazardous atmosphere exist or could be expected to develop during an excavation process.

4. The OSHA Excavation Standard, 29 CFR 1926, subpart P.

5. Emergency situation response and first aid procedure.

6. Town of Milton policy on reporting incidents that result in injury.

C. Training and Duties of Manager

The Safety Officer, David Antone, shall receive training on the requirements detailed in this shall seek additional training on the OSHA Excavation Standard. The Safety Officer shall:

1. Coordinate, actively participate in, and document the training of all employees affected by this.
2. Ensure on a daily basis, as detailed in this, that all worksite conditions are safe for employees to work in excavations.
3. Determine the means of protection that will be required for all each excavation site (sloping, trench box etc.).
4. Ensure a certified engineer is used, if required, to design protective systems for unusual or extreme excavation conditions (cave-ins, heavy water, etc.).
5. Make available a copy of this or the OSHA Excavation Standard to any employee who request it.

IV. Excavation Requirements

A. Utilities and Pre-Work Site Inspection

Prior to excavation, the site shall be inspected by the appointed "Competent Person" being Mark Mossey or David Antone or both.

B. Surface Encumbrances

All equipment, materials, supplies, permanent installations (buildings, paved road, sidewalk, etc.) trees, brush, boulders, and other objects at the surface that could present a hazard to persons working in the excavation shall be removed or supported as necessary to protect workers in the excavation and surrounding area.

C. Underground Installations

1. The location of all underground utilities that may be encountered during excavation shall be determined and clearly marked prior to excavation. All markings will be properly maintained by the Highway Department until work begins. The Highway Department will arrange as needed for the shutdown of utilities if required to assure safe working conditions are maintained (such as when a gas leak is detected).
2. If it is not possible to determine the exact locations of underground installations/utilities, work can commence only if reasonable detection equipment and methods are utilized. For instance, workers should be supplied with proper hand tools, metal probes, metal detectors, or other suitable means of proceeding with care.
3. Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by whatever method necessary to protect workers in the excavation. For example, clear marking, supporting, shoring, or barricading could be choices for protecting workers or other methods that meet the conditions at hand as determined by the Safety Officer or Competent Person(s).

D. Protection of the Public

Barricades, walkways, lighting, and posting shall be provided as necessary for the protection of the general public prior to the start of excavation operations.

1. Guardrails, fences, or barricades shall be provided on excavations adjacent to walkways, driveways, and other pedestrian or vehicle thoroughfares. All excavation work zones shall be properly secured at the end of each day. Fencing, barricades, caution tape, reflective devices, or other means, as determined by the Safety Officer or Competent Person, shall be in place to maintain overnight protection of driveways, walkways, and roadways.
2. No excavation will be left unprotected. All excavations will be backfilled as soon as possible. If an excavation is to be suspended for

any period of time, all protective measures must be inspected and maintained daily. Such inspections should be recorded by the Safety Coordinator or other designated employee.

3. Walkways or bridges shall be protected by acceptable guardrails where a person is allowed to pass over excavations. Where workers are to be working under such walkways, a standard toe-board shall be used to protect workers from falling objects. OSHA standards should be considered before constructing walkways, guardrails, toe-boards or any other protective structure. All such structures should be approved by the Safety Officer or Competent Person on site.

E. Protection of the Employees

Stairs, ladders, or ramps shall be provided at excavation sites where employees are required to enter trench excavations 4 feet or more in depth. The maximum distance of lateral travel (along the length of the trench) necessary to reach a means of egress shall not exceed 25 feet.

1. Structural Ramps and Non-Structural Ramps

Structural ramps will be designed by a Competent Person. Ramps will have cleats to provide slipping and cleats or other surface treatment shall be designed to prevent tripping or slipping. Any ramp constructed from more than one structure shall be mechanically joined and inspected by a competent person.

Non-Structural Ramps (excavated ramp) may be used where smooth non-slip surface can be provided and approved by the Safety Officer. Debris such as rocks or sticks must not be allowed to exist in the walking area.

2. Ladders

- When portable ladders are used, the ladder side rails shall extend a minimum of three feet above the upper surface of the excavation.
- The ladder will have non-conductive side rails if work will be performed near exposed energized equipment or systems.
- Ladders will be inspected prior to use by a Competent Person and damaged ladders will be taken out of service.

- Ladders will be placed in a location where a reasonably level and firm base is available.
- Securing or spotting will be utilized wherever non-ideal conditions may exist.
- Non self supporting ladders shall be placed so that the foot of the ladder is one-quarter of the working length away from the support source.
- All employees will receive ladder safety instruction and review as needed.
- Employees shall not carry an object or load that could cause them to lose their balance.

F. Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with, and shall wear warning vest or other reflective garments as prescribed in the Manual on Uniform Traffic Control as adopted by the Vermont Agency of Transportation. Anyone engaged in traffic control must have a garment that clearly displays the words "Traffic Control". There must be a written for traffic control that states all details relating to equipment and methods being used. Also, a written indicating where signage and other warning devices will placed must be present at the job site. Refer to the Traffic Control for additional information.

G. Exposure to Falling Loads

No employee is permitted underneath loads being handled by lifting or digging equipment. Employees are required to stand away from the object or materials being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when said vehicle will provide adequate protection from a falling load. People on the ground should consider slopes as that may send a falling object in their direction.

H. Warning Systems for Mobile Equipment

All vehicles will be equipped with audible back-up alarms that are maintained in operating condition at all times. At anytime an operator must operate in a blind spot, an assistant will be present to provide

hand signals as needed to assure safe movement of equipment. When equipment such as wheel loaders must approach an open excavation, workers in the ditch must stand well clear of the approach zone and a signalman must be present on the ground level to provide guidance to the equipment operator. Universal hand signals should be discussed and understood by the operator and signalman prior to operations. The equipment should approach on the down grade side of the ditch whenever possible. Stop logs, barricades, and other warning devices should be used as conditions warrant and such items are prescribed by the Safety Officer or Competent Person.

I. Hazardous Atmospheres

In any excavation where a Hazardous Atmosphere could potentially exist, no excavation will occur until proper testing has occurred and has been established to monitor and control the Atmosphere. For example, in excavations in landfills, areas that store hazardous substances, or in an area where a Gas line may be present in a trench excavation that is over 4 feet deep. If atmospheric testing indicates a problem, forced ventilation or other acceptable means will be employed to keep employee exposure within acceptable limits. In some cases, excavation may have to occur before any hazard can be detected. In those cases, testing will be ongoing with the excavation process.

All testing equipment must meet calibration and inspection requirements. The Milton Highway Department would rely on the Milton Water/Wastewater Department to supply test equipment or another outside source that is qualified for such testing.

Whenever working in a hazardous atmosphere is necessary, an emergency rescue will be established, rescue equipment will be on site, and trained personnel will be on stand-by to perform and necessary rescue operations and the appropriate PPE will be supplied for the protection of workers.

J. Personal Protective Equipment

1. All employees working in trenches and excavations shall wear approved hardhats and safety toed shoes or boots meeting ANS Z41.1-1967 requirements and specifications.
2. Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding, and similar operations shall wear approved safety glasses or face shield.
3. Employees performing welding, cutting, or brazing operations or are exposed to the hazards of such operations, shall wear approved eye and face shielding as well as body protection as needed to avoid burns or clothing fire.
4. Employees shall wear approved gloves or other hand protection that is appropriate for the task being performed. For example, rubber gloves may be best when handling certain liquids while leather gloves may not be appropriate. In some cases, metal stranded gloves might be needed to handle sharp objects.
5. Employees working in the immediate vicinity of hammer drills, masonry saws, jackhammers, or similar high noise producing equipment shall wear suitable hearing protection.
6. When excavation of six feet or more in depth, precautions must be taken to provide fall protection for employees and the public. The Safety Officer should determine what type of protection is appropriate for the circumstances such as the location and duration of the excavation. Anything from temporary fencing, barricades, tie backs, guardrail walks or other OSHA approved system may be considered and utilized.
7. A ladder is always required for culvert installations that are 4 feet or more in depth and longer than fifty feet.
8. Whenever working in a hazardous atmosphere is necessary, an emergency rescue will be established, rescue equipment will be on site, and trained personnel will be on stand-by to perform and

necessary rescue operations and the appropriate PPE will be supplied for the protection of workers.

9. In addition, any hazards identified and reported by employees will be addressed by the Safety Officer or Competent. Any such hazard that presents immediate and serious danger will cause all work to cease.

K. Protection from Water Accumulation Hazards

1. Employees are not permitted to work in excavations that contain or are accumulating water unless precautions have been taken to protect them from hazards that are posed by the standing or accumulating water. Precautions, for example, may include shoring, trench boxes, vacuum excavation, or other water removal and the use of harness with a lifeline.

2. If water removal equipment is deemed adequate to prevent water accumulation, it must be certified as such and monitored by the "Competent Person". The Safety Officer will provide additional input for any additional measures that may be required beyond water control.

3. Employees will be properly trained to recognize hazards and to take the proper precautions in a wet excavation.

L. Protection from Falling Objects and Loose Soil, Rocks, or other Impediments.

1. Adequate protection shall be provided to protect employees from loose impediments or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:

- a) Scaling to remove loose material from the slope or face
- b) Installation of barricades
- c) Sufficient Benching and sloping
- d) Place excavated material away from top edge of excavation
- e) Lace excavated material on a downgrade from the excavation

2. Excavation personnel should not work above one another when the danger of falling material exists.

3. Special requirements shall be considered in areas where excavation may be exposed to heavy vehicular traffic. Concrete barriers, shoring, and trench boxes are examples of items for consideration. Also, diversion of traffic a safe distance from the excavation or road closings could be considered. The Safety Officer and/or Competent Person shall insure that it is provided, recorded, and adhered to by workers.

4. For benching and sloping operations, a soil classification of "C" will be assumed unless documentation by the Town Engineer or and other Engineering firm is provided. The slope requirements will be available on site as a part of the field kit carried by the Safety Coordinator or Competent Person. The field kit contains a copy of slope requirements for A, B, or C soil conditions as described in OSHA text 29 CFR 1926, Subpart P, Appendices A and B.

5. Use of other protective systems will be carried out only after consultation with the Safety Officer and Town Engineer. Conditions requiring such systems will likely be reassigned to a qualified sub-contractor. All excavations that are 5 feet or more in depth will employ a protective system that meets industry standards. Examples include Sloping, Shoring, and trench boxes.

M. Inspection Requirements

1. Daily inspections will be performed by the Competent Person in charge and a checklist will be used to record inspection results. The checklist will be kept on site and made available to the Safety Office or State and local regulatory agencies upon their request.

2. In addition to daily inspections by the Competent Person in charge, additional inspections will be performed by the Safety Officer to assure that all work conforms to this. The Safety Officer will initial the daily checklist to record the additional inspection.

3. The site shall be re-inspected after a substantial rainfall has occurred or if the site is shut down and abandoned during the course

of the day. If either event occurs in the course of one day, the initial inspection will no longer be sufficient and a new one will be performed.

4. The time and date accompanied by the signature of the Inspector shall be recorded on every inspection checklist.

V. Accident Investigations

1. All accidents will be reported to the Safety Officer/Department Head, Town Manager, Human Resources Coordinator and other agencies as required by OSHA standards.

2. A thorough investigation of all accidents will be carried out by the Safety Officer/Department Head and the results will be formally reported to the Human Resources Coordinator.

3. All accident investigations will be kept on record at the Town Manager's Office.

4. The Town Manger and Department Head will provide directives for any corrective or disciplinary action that may be required.

VI. Changes to the Program

1. As work proceeds through each calendar year, there may be a need to make additions or deletions to this. All such edits can be recorded in this section and be re-written into the plan an annual basis or as deemed necessary by the Safety Officer.

Town of Milton
Public Works - Highway Division
Hazard Communication Program
June 2009

General information

The management staff of the Town of Milton is committed to the prevention of incidents or happenings that result in injury and/or illness and to comply with all applicable federal and state health and safety rules. We require that management spare no effort in providing a safe and healthful work environment for all employees, that all levels of supervision be accountable for the health and safety of those employees under their direction, and through this written Hazard Communication Program share assigned responsibility.

In order to comply with Occupational Health and Safety Administration 1910.1200, the following written Hazard Communication Program has been established for Town of Milton – Public Works Department, Highway Division.

The program documents will be available in the Highway Maintenance Garage for review by any interested employee or other authorized person.

The elements of this Hazard Communication Program are as follows:

Container Labeling

The **Safety Coordinator, William Sanderson** and **Maintenance Mechanic, Rob Deforge** will verify that all containers received for use will clearly list contents on the label and that will be additionally labeled in accordance with this Hazard Communication Program. The additional labels are produced by the Highway Department and will provide a direct correlation to the MSDS sheet for each product. All containers whether they are original or generic/secondary will have the title/name of the contents and a label stating where the item is normally stored.

The storage location labeling will facilitate quick look-up of MSDS information. This is accomplished by organizing the MSDS manual to correlate directly with a small number of storage locations. Each storage cabinet will be clearly marked with its designated number (1, 2, or 3). In addition to the three fire proof cabinets, there is an OIL ROOM which has the words OIL ROOM painted above the doorway. These four primary storage areas will house 90% of items requiring MSDS information. The remaining items will be listed as **Gases, Site Materials, or Miscellaneous**, and will be located under those headings in the MSDS manual.

In summary, most items will have labels showing where they are stored and this is also how they are sectioned in the MSDS book. The additional labeling is placed on items as they are purchased and placed into storage. It is also placed

on any generic containers as they are put into use. Some generic containers are pre-labeled for designated uses. Some items cannot be stored in specific areas and will be labeled as they are categorized in the MSDS manual (Gases, Site Materials, or Miscellaneous). Again, all items in each section will be listed in alphabetical order in the MSDS manual.

Material Safety Data Sheets (MSDS)

Copies of MSDS's for all hazardous chemicals to which employees of this Department may be exposed will be kept in the Highway Garage Maintenance Building. The **MSDS** manual will be prominently displayed in the work area and will be available for review by any employee or worker who may be exposed to the listed items.

Two procedures will be followed to assure MSDS will stay current. First, any person who is purchasing items will have to be trained on the importance of maintaining the Material Safety Data Sheets and will be aware of the need to request sheets for any new products.

Second, the Highway Department will subscribe to a procedure which calls for using a standard product list with infrequent changes to brand and product features.

The Highway Department will perform an administrative review, on an annual basis, to assure procedures are being followed.

In addition to the comprehensive manual maintained in the maintenance garage, the Safety Coordinator, William Sanderson, will carry some MSDS Sheets in the Safety Coordinator's field kit. These sheets will be the section entitled **Site Materials** and will contain information on items used by the site work crew. The Safety Coordinator will be responsible for obtaining any updates needed by the site work crew.

All employees will be engaged in ongoing discussions to review information on MSDS sheets. These discussions will be part of the regularly scheduled Highway Department Safety Meetings. Several MSDS sheets will be discussed and documented at each meeting. This process will be ongoing as part of regular safety training.

Employee Information and Training

Each newly hired employee will attend a health and safety orientation and will receive information and training on the following:

- An overview of the Highway Department's Safety Program and how it is administered.

- An overview of the Hazard Communication Program and how to address questions relating to chemical hazards in the workplace.
- Overview of chemicals hazards in the workplace and possible related hazards.
- Possible ways in which hazardous exposure can occur in the workplace.
- Location and availability of written hazard program.
- Location of MSDS documents and how to use them.
- Steps that should be taken by workers and supervisors to reduce or prevent the possibility of exposure to hazards.
- Emergency stations that are available to address hazard exposure (eyewash, shower, first aid, burn kit, etc ;).
- How to properly use Personal Protective Equipment to avoid exposure.
- How to properly address spills of Hazardous material.

The Highway Department will document all training given to all employees. Employees will be encouraged to check product information prior to use rather than waiting until exposure has occurred. As new products are introduced, no employee will be allowed to use the product without first reading product labels and understanding possible hazards. This is a standard that will be frequently reviewed in training sessions to create an understanding among employees that this is the protocol for introducing new products.

Hazardous Chemical Listing

The Highway Department considers all chemicals in our MSDS manual to be hazardous to some degree. It is important for employees to use the labels and MSDS manual to provide an overview of possible hazards and best means of responding. Through regular safety meetings, the department will facilitate an overall increase in awareness by featuring discussions on chemicals that are the most hazardous. Chemical compounds that require special care to avoid burns, skin irritations, damage to lungs or other major organs, and possible eye irritations, will be the subject of review on an ongoing basis and such review will be documented by the Highway Department Safety Coordinator.

The items listed do not preclude other items from the MSDS manual as being considered hazardous. The items placed on this list are of particular concern because of manufacturers suggested possibility of severe reactions from normal handling and use. Generally, a warning to utilize a specialized environment of Personal Protective Equipment will prompt items to be placed on this list.

Workers and Supervisors will update the list on an ongoing basis. The list will be reviewed by the Safety Coordinator on a quarterly basis to assure that updates are occurring.

Informing Contractors

It is the responsibility of the Highway Superintendent to provide or request the following information to or from contractors.

- Hazardous chemicals to which they may be exposed while on the job site and the procedure for obtaining MSDS information.
- Precautions employees may take to lessen the possibility of exposure by using appropriate protective measures and an explanation of the labeling system used.
- The contractor shall also disclose what type and provide the same information for chemicals that he/she may be bringing to the workplace.

**Town of Milton
Public Works - Highway Division
Hazard Communication Program**

TRAINING RECORD FOR HAZARD COMMUNICATIONS

This is to certify that I have been trained and informed about the hazards and precautions associated with the use of hazardous chemicals in my work as required in the Milton Highway Department's written HAZARD COMMUNICATION PROGRAM.

To confirm my understanding of such training and instructions, the department Safety Officer, David Antone has provided me with a comprehensive review and has indicated his satisfaction by checking the box before each of the topics listed below.

- Overview of the requirements contained in the Hazard Communication Rules, 29 CFR 1910.1200.
- Chemicals present in my workplace operations.
- Locations and availability of our written Hazard Communication Program and the MSDS manual for hazardous chemicals.
- Physical and health effects of these hazardous chemicals.
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in my work area.
- How to lessen or prevent the exposure to these hazardous chemicals through control and work practices and use of protective clothing or equipment.
- Steps the Milton Highway Department has taken to lessen or prevent exposures to these chemicals.
- Safety emergency procedures to follow when reacting to an exposure to these chemicals.
- How to read container labels and use labeling in conjunction with the MSDS manual to obtain appropriate hazard information.

Employee's Name

Date Attested

Safety Officer or Appointed Trainer

Date

EDITS AND UPDATES TO THE HAZARD COMMUNICATION PLAN (AS NEEDED)

The Following additions, deletions, or updates shall be written into the plan during the quarterly review or sooner if deemed necessary:

Town of Milton
Sewer Vac-Truck
Operator Safety Plan
May 18, 2009

Prepared By: David Antone, Highway Superintendent

I. General Safety Requirements

Please note the Vac Truck and all functions that it performs will be referred to, in this Plan, as “this unit”. When speaking of a specific function or the vehicle alone, this will be specifically noted.

- **DO NOT OPERATE** this unit unless proper training has been received in the operation, safety, and general maintenance of the vehicle and its accompanying functions.
- Read and understand the owner’s manual before operating this unit.
- The operation of this unit involves the use of high pressure water and vacuum levels that can present potential hazards if proper precautions are not followed.

**ALL OF THE FOLLOWING SECTIONS OF THIS PLAN MUST BE
READ AND UNDERSTOOD BEFORE OPERATING THIS UNIT.**

- Wear the appropriate PPE as detailed later in this Plan. Operating without such equipment presents a serious danger for the operator and all helpers.
- Do not permit employees to enter manholes or other confined spaces without following the appropriate “Confined Space Entry” procedures as specified in the Town of Milton Written Plan.
- Any individuals standing in close proximity to work being performed must also wear the appropriate PPE. Hearing Protection and Safety Glasses would be the minimum for anyone allowed into a close proximity of work being performed. Any bystanders who are not appropriately equipped must be warned to stay clear of the work zone.
- Park the vehicle as close as possible to the work area. Try to limit long boom extensions and full rotations whenever possible. Always set the parking brake and use wheel chocks when working on a steep grade.
- Provide traffic cones around work area and manholes. Use additional protective systems as required in the Town of Milton Excavation Plan whenever performing hydro excavations.

- Use a pry bar to loosen manhole and catch basin covers, remove manholes with lifting hooks.
- Do not leave manhole or catch basin cover suspended from boom after removal. Lower the boom to the ground while work is being performed.
- Do not use the boom to lift anything other than manhole/catch basin covers, vacuum hose and vacuum pipe.
- Do not operate or perform maintenance on this unit while wearing jewelry or loose fitting clothing. Also, do not wear shorts while performing hydro excavations or vacuum operations.
- Lift manhole and catch basin covers only high enough for maneuvering. Keep as low as possible when maneuvering.
- Always tag out this unit for all maintenance procedures. Do not perform even routine maintenance such as greasing without tagging out.
- In addition to the tag-out, be sure that the key is removed from the ignition and in the possession of the mechanic or operator who is performing maintenance.
- Be sure that all safety devices and guards are kept in place whenever this unit is being operated.
- Stop using this unit whenever abnormal noise, pressure leaks, or erratic functioning occurs.
- Cease operation and return unit to garage or park if inoperable.
- Do not move chain drives by hand.
- When moving belt drives by hand, keep hand open and flat. Do not grasp the belt with a closed grip. This is the procedure recommended by the Operator's Manual.
- Do not ride on any part of this unit other than in the truck cab.
- Always inspect this unit prior to use using the Pre-operation Checklist provided in this Safety Plan

II. Water System Safety

- **Starting a nozzle into a Pipe**

Step 1- Make sure that sewer cleaning hose, leader hose, skid and nozzle are properly tightened.

Step 2- Insert the complete nozzle, skid and tiger tail assembly into the pipe opening.

Step 3- Make sure all personnel are clear from the manhole area before pressurizing the nozzle. The water jets can cause serious bodily injury.

Step 4- **SLOWLY** increase water pressure and let the nozzle start it's movement into the pipe until the leader hose has completely entered the pipe.

Step 5- Once the head is inserted, set the footage counter at zero or mark the hose with tape to provide warning when withdrawing the nozzle.

Step 6- Once the above steps are complete, turn on water pressure and slowly increase Pressure to begin cleaning.

- Do not place your hands or any other part of your body in front of handgun, sewer cleaning nozzle, or open sewer cleaning hose.
- Do not direct the water stream from any of the above listed attachments toward anyone.
- Do not operate the hose reel if sewer cleaning hose is cut, severely worn, or improperly mended.
- Turn off the water pressure to the sewer cleaning hose before removing the nozzle, skid, and leader hose from the pipe being cleaned.
- Always use a hose guide (tiger tail) or roller assembly to avoid abrasion of the sewer cleaning hose.
- Do not operate without a leader hose. The leader hose is designated to absorb abrasions from flying nozzle debris and it also warns the operator of the end being near during extraction from the pipe.
- Never pressurize the sewer cleaning hose unless it has been inserted into a pipe. Always be sure that the operator has a clear communication from helpers before starting pressure.
- Never move the truck unless the boom is in the travel position.
- Always note any overhead hazards such as power lines.

- Never raise the boom unless the vacuum has been shutdown. Always keep an operating Vacuum close to the ground.
- Do not stand directly behind the debris tank door open safety “T” handles, unless hydraulic door latches are engaged and debris tank is in the lowered position.
- Always dump debris tank on a reasonably level surface to avoid tipping and be sure dumping area is clear for dumping.
- Try to avoid moving vehicle with debris tank raised.
- Do not stand behind or immediately to the side of debris door while dumping.
- Do not stand between an open debris tank door and the debris tank without the door prop in place.

III. Required Personal Protective Equipment and Safety Devices

- Hard Hat for all individuals in the work zone. Work zone shall be defined as all area within the reach of the fully extended boom for a 360 degree turn.
- Safety Glasses, goggles, or face shield for all individuals in the work zone.
- Reflective vest for all individuals in the work zone.
- Hearing protection for all individuals in the work zone.
- Safety toed shoes, meeting OSHA standards for all workers in the work zone.
- Sanitary Latex gloves, rubber gloves, and standard work gloves should be available to all personnel and utilized as conditions require. Gloves of some type should be used at all times.
- Safety cones, work signs, and barricades as prescribed by VAOT and MUTCD.
- Fire Extinguishers that have been properly inspected and tagged.
- Manhole hooks and pry bar.
- Wheel Chocks
- Work Light
- All devices needed to comply with commercial vehicle codes.

IV. Pre-operation Walk Around/Checklist

1) Vehicle Checklist

- Use vehicle checklist to inspect vehicle prior to daily operations.
- The checklist will be available from the Highway Department and will be designed to comply with Federal Motor Carrier and VT DMV regulations for commercial vehicles.
- Vehicle Checks must be completed every time the Vehicle is used even if the duration is very short. Prior to each day or prior to each use is the rule. The operator should sign and date each inspection.
- Any repairs needed must be reported per Commercial Vehicle regulations. A written request is needed for every repair. Forms are available at the Highway Garage.
- No one should drive the vehicle if repairs are deemed to be significant to the operation of the vehicle.
- Each Department Head is responsible for assuring that their staff is complying with Commercial Vehicle regulations.

2) Combination Sewer Cleaner

- Use the Combination Sewer Cleaner Checklist provided in the VAC-CON Safety Manual on page 16. Copies of this page are available at the Highway Garage.
- This list refers to all accessories on the vehicle such as the Vacuum, Hand Held Water Gun, Water Tank, Debris Tank, Hoses, Pumps, and related systems that support Sewer-Vac operations.
- This list needs to be completed each time the equipment is used.
- The list should always be completed with the vehicle form and the vehicle should not be transported until all checks are complete.
- The Truck should not be used unless all systems are in good working condition and all repairs should be reported on the form available at the Highway Garage.
- Employees should be properly trained to do the walk around inspection. Training is provided periodically at the Highway Garage.

V. Changes to this Plan

For information of the Board of Directors, the following changes have been made to the Plan:



The Board of Directors has approved the following changes to the Plan:

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Town of Milton
Tree Clearing, Trimming, and Chipping Plan
Highway Department

Prepared By: David Antone, Milton Highway Superintendent

I. Objective

This tree cutting plan is being developed by the Highway Department, not only to guide Highway Staff but, as a template of safe operating practices for all Town of Milton employees. This plan is intended to identify common hazards that will be experienced in tree cutting operations. This plan is intended to assure that:

- A) All employees know their responsibilities and know how to perform their work in a safe manner.
- B) Each department has appointed a person or persons to assure overall compliance with this plan.
- C) The responsibilities of these individual's are defined in this plan.
- D) All person's involved in tree cutting operations are properly trained and equipped to carry out their work requirements.

II. Departmental Responsibility

A) All Departments

Any Department using this plan should be aware of the content and follow the plan as written or provide an alternate written plan. The Highway Department will assist anyone, as needed, to assure compliance with the plan.

B) Highway Department Program Management

The Highway Superintendent (David Antone) acts as the Safety Officer and overall Program Manager. The Highway Superintendent

and Supervising Equipment Operator (Mark Mossey) will fulfill “Competent Person” duties for any site tree cutting operations and will have the responsibility of overseeing inspections and signing documents required to accommodate tree cutting operations. The Safety Coordinator (William Sanderson) will maintain all records and training documents for the Highway Department.

1. Both persons acting in the “Competent Person” role will be responsible for making sure that all procedures are followed as prescribed in this program.
2. All employees involved in tree cutting operations will be properly trained and equipped to perform their duties.
3. All required inspections, tests, and recordkeeping functions will be performed on a daily basis.

C) Employees/Contractors

All employees, including contractor personnel, who work in or around tree cutting operations, must comply with the requirements of this program. Employees are responsible for reporting hazardous situations to any Highway Department Supervisor or Town of Milton Administrative Staff.

III. Training

A. Training Schedule

1. All personnel involved in tree cutting operations shall be trained in the requirements of this program by the Safety Officer (David Antone) with assistance from the Crew Supervisor (Mark Mossey) and Safety Coordinator (William Sanderson).
2. Training shall be performed before employees are assigned duties in tree clearing operations.
3. Retraining will be performed when employees indicate a lack of knowledge related to this plan, when changes are made to the plan, and on a periodic basis to provide a refresher on plan details.

4. Training records will be maintained by the Safety Officer and Safety Coordinator and shall include:

- The date of the training
- The name(s) of the instructor(s)
- A copy of training material and/or course outline
- Name(s) of the employee(s) who received the training

B. Training Components

The training provided to all personnel who perform work in tree cutting operations shall include:

1. The work practices that must be followed tree cutting operations.
2. The use of personnel protective equipment that will typically be used when performing tree cutting operations.
3. Procedures for workers to follow if any hazards exist or could exist in the work zone to include professional assistance from outside sources.
4. Environmental Hazards related to weather, poisonous plants, insects, and other elements of the environment that may be present in the work zone.
5. Emergency situation response and first aid procedure.
6. Town of Milton policy on reporting incidents that result in injury.

C. Training and Duties of Program Manager

The Safety Officer, David Antone, shall receive training on the requirements detailed in this program shall seek additional training on the OSHA Excavation Standard. The Safety Officer shall:

1. Coordinate, actively participate in, and document the training of all employees affected by this program.

2. Ensure on a daily basis, as detailed in this plan that all worksite conditions are safe for employees to work in tree cutting operations, all tools and equipment are in good condition and that each employee is supplied with the proper protective equipment.
3. Determine the means of protection that will be required for each clearing site by doing a pre-work site inspection to identify specific hazards and create the proper plan to deal with each hazard.
4. Ensure that a professional tree cutting contractor or local power company is employed whenever cutting demands exceed the competency of Towns Staff.
5. Make available a copy of this plan to any employee who request it.

IV. Field Safety Plan

Tree Trimming and Chain Saw Safety

1. No employee shall be assigned to a tree trimming/felling assignment until they have been properly trained and are familiar with equipment/machinery and proper procedures.
2. Before starting any tree cutting operations, time should be taken to check for any possible hazards within the immediate cutting area.
3. Except in cases of extreme emergency, cutting should be avoided during extremely wet weather, high wind conditions, accumulated wet snow and extreme low temperatures as trees will be unpredictable in these circumstances. Extreme caution should be applied when emergencies justify cutting in these conditions.
4. Warning signs will be in place before any cutting procedures begin. Signs will be placed in accordance with the TCP (traffic control plan).
5. The Highway Department will refrain from cutting trees that exceed the capability of their equipment and employee training. Cutting will be restricted to trees that can be felled in a controlled manner. As a rule of thumb, no tree should exceed an approximate diameter of 8 inches. The

Highway Department Field Supervisor will make a final determination on whether or not the highway crew can safely handle a particular tree.

6. Any tree that is high enough to require cutting from the top down will be handled by a professional tree contractor. The highway crew is not trained in use of rope and pulley systems or tree climbing that may be required to handle such trees. The Highway Department Field Supervisor will make the final determination on whether or not the highway crew can safely handle a particular tree.

7. Ropes and Pulleys will not be used by highway crew.

8. The highway crew will refrain from cutting trees that could come in contact with a power line. Any trees that could fall into a power line will be handled by subcontracting to a tree cutting service. In some cases, the power company will assist with such cutting.

9. The use of ladders for cutting is forbidden.

10. The proper utility shall be notified whenever wires are damaged during cutting operations.

11. All fallen wires will be protected until service workers arrive.

12. When felling trees into the traveled way, extreme caution is required:

a) A Signalman must be appointed and properly identified for the purpose of communicating with traffic control personnel and the chainsaw operator.

b) The Signalman will be responsible for making sure all traffic is stopped before the order is given to let the tree fall.

c) The Signalman will make eye contact and signal all staff to stand clear while the tree is being felled.

d) No staff member other than the Signalman can give the order to fell the tree.

e) Traffic control will only respond to directives from the Signalman.

f) The Signalman will have an identifying feature such as a White hard hat or an orange vest. All other staff will have an opposing colored hat or vest that is uniform.

g) A Signalman should be used whenever there are multiple workers in the work zone and trees are being felled.

13. All saw operators must be trained in proper cutting techniques, safe cutting practices, and managing common cutting hazards.

14. When bent branches or trees under stress are being cut, no one except the cutter and spotter shall be close to the cut area. All other workers must be far enough away to avoid contact with the tree if movement after cutting occurs.

15. All gasoline fueling will take place outside of the work zone. All restarting of saws will take place at least 10 feet from the fueling location and fuel containers.

16. In addition to items highlighted in this plan, all workers will have training and constant access to safety and operational guidelines. The Safety Coordinator (William Sanderson) will carry such guidelines in the Highway Department field kit. The kit will contain a thorough overview of common safe work practices for chain saw and cutting operations.

V. Type of Cutting Operation

Town of Milton employees will encounter several types of cutting situations. In all situations, the aforementioned training and general practices will be applied. However, in some circumstances, other requirements or precautions may be applied.

A) Mobile Operations

Most of the Town's day to day maintenance operations will consist of moving from one location to another and clearing/cutting one or two trees or just trimming some low hanging branches. In these situations, legal work zone set-up requirements will be less stringent and a pre-work survey or checklist will not be required. Because of the short duration and the small scope of the work area, workers (a minimum of

two crew members will be required) will be expected to identify hazards prior to working and take appropriate steps as provided in their training.

B) Storm Response

This similar to Mobile Operations and much the same procedure will be followed. The difference is that inclement weather may exist during cutting operations and special precautions may need to be taken to protect workers. Workers will be instructed to proceed with extreme caution and be aware that road closings will be initiated whenever the conditions present a danger to the well being of any workers or other individuals.

C) Major Clearing Operations

This classification refers to clearing large sections of roadway and will usually occur on an annual basis. This type of clearing will usually accompany a paving project or roadway drainage project. Such major clearing operations will follow the aforementioned guidelines in section IV of this Plan and in addition, the Highway Department will complete a daily checklist for each day field operations occur. Under the checklist system, the Competent Person(s) will identify and clearly mark noticeable hazards in each work zone. The hazard identification and marking will take place prior to starting work in that work zone.

VI. Daily Checklist:

1) Equipment Check

A) Assure all chainsaws, pole saws, and hand cutting tools are properly sharpen and maintained in good operating condition.

B) Inspect Bars and Chains to be sure both are in good condition, chains are sharp, and slack is properly adjusted to prevent loss of chain.

C) Be sure all fuel is properly contained in metal or plastic containers and are in good condition with proper caps, vents, funnels, as required.

D) Assure all tools required for field maintenance such as chain adjusting and sharpening are available on site.

E) Have an extra chain and bar available on site to replace as needed.

F) Assure guards, stop switches, and chain brakes are in operating condition.

G) Assure the saws are in good running condition and that tools and equipment are on site to do needed adjustments.

H) Wedges are available to be used as needed.

I) Assure broken equipment is tagged if any equipment is not in good working order.

J) Heavy Equipment such as the Tractor/Chipper, Excavator, and Trucks will be inspected through the Maintenance Shop Inspection Program which means they are inspected each time they are put into use and needed repairs are reported to the maintenance shop using the EQUIPMENT MAINTENANCE REPAIR Request Form.

All equipment being used in today's cutting operations has been inspected and is in proper running order....Date _____

Yes _____ By: _____

The following equipment has been tagged out and repair request will be filed with the maintenance shop at the end of the work day:

2) PPE (Personal Protective Equipment)

A) Assure a First Aid Kit is available and well stocked. Each vehicle shall be equipped with a First Aid Kit.

B) Each employee involved in cutting operations will be supplied with a helmet/hardhat designed for tree cutting. Each helmet will have a flip down screen designed to provide face protection from protruding branches and flying debris.

C) Each employee involved in cutting operations has been supplied gloves that provide adequate agility and hand protection.

D) Each employee involved in cutting operations has been issued a set of cutting chaps to provide lower extremity protection. All chaps have been inspected and are in good condition (free from cuts or holes).

E) Every employee working in close proximity to saws, chippers, and other noise producing equipment has been supplied with adequate ear protection and are utilizing such protection during cutting and chipping operations.

F) All personnel in the work zone are required to be equipped with safety toed boots and are currently in compliance.

G) No one is allowed to work alone when performing tree clearing and trimming operations.

The above items have been checked by the Safety Coordinator (Will Sanderson) or the Competent Person (Mark Mossey)....Date _____
Yes _____ by: _____

3) Site Inspection and Preparation for Major Clearing Operations
(This Section is completed for Major Clearing Operations only)

Major Clearing is defined as an area of clearing of more than 100 lineal feet or more than one work-day in duration and will involve the cutting of large trees that cannot be easily directed or handle with hand tools and manpower only.

A) The Site Supervisor (Mark Mossey, or David Antone) have done a pre-inspection of the site to identify areas of concern such as uneven terrain, power lines, dead tree limbs, or other hazards that may require special attention during the cutting process.

B) Overhead power lines will be noted on the asphalt with orange dash marks (crossing road overhead) and/or an orange P enclosed by a circle on the pavement to assure awareness and caution among workers.

The above items have been completed prior to the start of work in the current work zone.....Date _____

Yes _____ By: _____

C) Dead trees or trees with dead limbs overhead will be marked with white paint prior to cutting. Heavy boom equipment such as the Town's track excavator will be used to push down the partially cut trees while employees stand in a safety zone or the boom equipment may be used to shake broken or dead limbs free before cutting.

D) Dead trees that cannot be safely handled by the Highway Crew have been marked with a "C" in orange paint to indicate the tree can only be cut by a professional tree contractor.

The above procedures are being followed to address dead tree situations.....Date _____

Yes _____ By: _____

E) The Town will have the excavator available, as deemed necessary by the Competent Person, to address areas of uneven ground that may require leveling to accommodate cutting operations. Although much cutting will be carefully performed in uneven areas, when the terrain prevents proper footing or balance from being achieved, the excavator will be available for use in those areas that need additional preparation or leveling. Also, when a tree is felled on a slope, the excavator may be utilized to move the tree to a more level area for trimming.

The above procedures are being used to address uneven areas that prevent workers from achieving adequate footing or balance to perform cutting operations.....Date _____

Yes _____ By: _____

4) Environmental Hazards.

A) The workers are being allowed adequate opportunity to take rest breaks and drink liquids in order to avoid heat related stress.

B) Insect repellants are being supplied as needed to help avoid insect related hazards.

C) The work area has been surveyed to check for bees, hornets, wasps, or any other aggressive insects that may cause harm to workers.

D) The work area has been surveyed for obvious signs of Poison Ivy, Oak, or other infectious plants and employees are wearing clothing that will offer protection from such hazards.

The above procedure has been followed to avoid environmental hazards.....Date _____

Yes _____ By: _____

5) Chipping Operations

A) The same PPE as listed above is being worn for chipping operations.

B) No workers are permitted to wear loose fitting garments that may be snagged on trees being chipped.

C) The throat of the chipping unit is equipped with a safety bar (shutdown bar) that is maintained in operating condition.

D) Wood chips are directed away from the work zone.

E) Wood is being cut into pieces that can be easily handled by workers.

F) A safe walking path is maintained from the cutting area to the chipper.

The above procedures are being followed for all chipping operations.....Date _____
Yes _____ By: _____

6) Upon Completion of Operations

A) All power equipment will be cleaned and inspected before being placed in storage at the Highway Garage.

B) All cleaned and inspected power equipment will be tagged by the individual who has done the cleaning and inspection. The tag will show the date and the name of the person who has inspected the equipment.

C) Confirming and inspection means that all saws are sharpened and in good running condition. Adequate gas is available for next use and all tools needed for maintenance are available in the saw's tool box.

D) All PPE has been accounted for and is in good condition prior to storage.

E) A purchase request or maintenance request has been completed to replaced any damaged PPE or repair any equipment.

The above procedure has been followed at the completion of this cutting and trimming operation.....Date _____
Yes _____ By: _____

VII. Changes and Additions to this plan

As work proceeds through each calendar year, there may be a need to make additions or deletions to this plan. All such edits can be recorded in this section and be re-written into the plan on an annual basis or as deemed necessary by the Safety Officer. Please record suggestions below:

Town of Milton – Public Works Department
Work Zone Safety and Traffic Control Plan
July 31, 2009

Prepared by: David Antone, Highway Superintendent

I. Objectives

The two primary objectives of this plan are:

- 1) To keep safe all workers, pedestrians, visitors or other individuals who may work in or otherwise enter or exit the “Work Zone.
- 2) To allow for safe efficient movement of traffic and pedestrians through the “Work Zone”.

In addition, this plan will establish procedures to be followed to assure that the above listed objectives can be achieved.

II. Public Notification

The “Public Works Department” has adopted a set of standardized procedures for all PW Divisions to follow. This may vary between planned projects, emergency maintenance, and minor maintenance projects. It is unlikely that unplanned minor maintenance projects will allow for Public Notification except for occasional courtesy notices posted on the Town’s Website. A consistent standard is followed for major projects that present an adequate timeline for Public Notification. More detail is available at the “Public Works Office”.

III. Work Zone Policy and Procedure

- 1) MUTCD and Vermont DOT-The Town of Milton adheres to policy and procedures provided by the Vermont Department of Transportation. The VT-DOT policies are derived from the federal regulations provided by the “Manual on Uniform Traffic Control Devices”. As a general planning guide, the Town of Milton Public Works refers to “Vermont’s Guide to Highway Work Zones” which is approved of by the VT-DOT. This guide provides a broad scope of information to assist with setting up and properly managing work zones as well as providing data on proper signage, work clothing, and general safe and efficient practices. Additional reference information is provided by the MUTCD guidelines.

IV. Traffic Control Plan

Every temporary Work Zone is different. Many variables, such as location of work, duration of work, road type, geometrics, intersections, interchanges, user volumes, and traffic speed affect the needs of each Work Zone. In order to adapt to the broad range of variables, the Milton Public Works Department will utilize information provided in the MUTCD and VT-DOT manuals to produce a "Traffic Control Plan" that is suitable to the circumstances. In many cases, the above mentioned "Vermont's Guide to Highway Work Zones" will provide the proper illustration for common work zones. In those cases, this publication will serve as the "Traffic Control Plan" and will be present in the field for reference purposes. In other cases, special circumstances may exist that will require that specific plan be written to incorporate all circumstances. This may be a hand written plan constructed in the field or a more elaborate plan depending on the circumstances. All stationary work zones within the roadway shall require a "Traffic Control Plan" specifying signage, flagging, and movement of traffic through the work zone and through detour routes. A similar plan is needed to describe any road closings.

V. Signage and Traffic Control Devices

All Signage and Traffic Control Devices will suit the Work Zone as prescribed in MUTCD guidelines. All items will have proper dimension, reflective requirements, and be constructed of proper materials. All items will be placed in accordance with the "Traffic Control Plan" and address work zone variables. Sign and Traffic Control Device placement and spacing will be in accordance with guidelines provided by either of the two aforementioned manuals and placement will be illustrated on the "Traffic Control Plan".

VI. Flagging

All Flagging personnel will be properly attired with ANSI Type II reflective garments. Traffic control personnel will have vest that are properly lettered with the words "Traffic Control". All other workers will be attired with type II reflective garments. All Flagging personnel will have been certified at some time within the past two years and should carry a card to indicate certification is current. Certification must be a course that is approved of by the VT-DOT and be at least four hours in duration. Flaggers will be visible to oncoming vehicles and standing alone. In addition to a traffic control vest, Flaggers will be equipped with proper signaling paddles. When two Flaggers cannot maintain visual contact, approved audio communication devices will be required.

VII. Training

Any person who assumes a traffic control or flagging duty is required to have four hours of VT-DOT approved training every two years. Anyone who supervises a work zone

should have similar training but is not required to have certification unless that person actually engages in the act of flagging or directing traffic in the work zone. All personnel in the work zone should have training that is specific to the operations being performed and to the working environment.

VIII. Recordkeeping

All traffic control plans, work plans, training sessions, or other documents relative to the operations or workers shall be kept on file and available for inspection upon request from the proper agencies or individuals.

Changes and Additions-Any changes or additions that may be required or suggested should be noted here. The plan will be formally rewritten periodically to incorporate said changes.

Town of Milton
Highway Work Zone Check List
Public Works Department
July 31, 2009

Prepared by: David Antone, Highway Superintendent

Pre-work Checklist:

- 1) Traffic Control Plan is completed Yes

- 2) Type of Plan in use Page#
 - A) Vermont's Guide to Highway Work Zones. Yes
 - B) Handwritten Plan or illustration. Yes
 - C) Formal Plan specifications and drawing. Yes

- 3) Equipment Check:
 - A) Are there an adequate number of cones and barricades? Yes
 - B) Do cones and barricades meet size, color, and reflectivity requirements? Yes
 - C) Are adequate signs and traffic control devices available to support the "Traffic Control Plan"?
 - D) Is all equipment in acceptable condition? Yes
 - E) Are all personnel provided with the proper attire? Yes
 - F) Are audio communication devices on site? Yes

- 4) Work Zone Set-Up
 - A) Has the work zone been set-up according to the "Traffic Control Plan" or have adjustments been noted? Yes
 - B) Has the work zone been set-up prior to start of work? Yes
 - C) Are there any conditions that should be given additional consideration by supervisors of safety officer?

Comments: _____

Completed by: _____ Date _____

Water/Wastewater Department

Written Programs

TOWN OF MILTON – WATER & WASTEWATER DIVISION – CONTROL OF HAZARDOUS ENERGY: LOCKOUT/TAGOUT PROCEDURE

Publication Provided by:
Project Work **SAFE**
1-888-SAFE-YES

Adopted from: Colorado State University
Health & Safety Consultation

Employees can be seriously or fatally injured if machinery they service or maintain unexpectedly energizes, starts up, or releases stored energy. OSHA's standard on the Control of Hazardous Energy (Lockout/Tagout), found in *Title 29 of the Code of Federal Regulations (CFR) Part 1910.147*, spells out the steps employers must take to prevent accidents associated with hazardous energy.

"Lockout/tagout" refers to specific practices and procedures to safeguard employees from the unexpected energization or startup of machinery and equipment, or the release of hazardous energy during service or maintenance activities. This requires, in part, that a designated individual turns off and disconnects the machinery or equipment from its energy source(s) before performing service or maintenance and that the authorized employee(s) either lock or tag the energy-isolating device(s) to prevent the release of hazardous energy and take steps to verify that the energy has been isolated effectively. If the potential exists for the release of hazardous stored energy or for the re-accumulation of stored energy to a hazardous level, the employer must ensure that the employee(s) take steps to prevent injury that may result from the release of the stored energy.

If your employees service or maintain machines where the unexpected startup, energization, or the release of stored energy could cause injury, the standard likely applies to you. The standard applies to all sources of energy, including, but not limited to: mechanical, electrical, hydraulic, pneumatic, chemical, and thermal energy.

OSHA's standard specifies that employers must establish a written energy-control program to ensure that employees isolate machines from their energy sources and render them inoperative before any employee services or maintains them. As part of an energy-control program, employers must:

- Establish written energy-control procedures for removing the energy supply from machines and for putting appropriate lockout or tagout devices on the energy-isolating devices to prevent unexpected re-energization. When appropriate, the procedure also must address stored or potentially re-accumulated energy;
- Train employees on the energy-control program, including the safe application, use, and removal of energy controls; and
- Review these procedures annually to ensure that they are being followed and that they remain effective in preventing employee exposure to hazardous energy.

This sample program is not intended to be a legal interpretation of the provisions of the *Occupational Safety and Health Act of 1970*. It is intended to be used as a guide for employers developing their own site-specific Lockout/Tagout Program.

Should you have any questions, please contact us at 1-888-SAFE-YES

TOWN OF MILTON – WATER & WASTEWATER DIVISION – CONTROL OF HAZARDOUS ENERGY: LOCKOUT/TAGOUT PROCEDURE

CONTROL OF HAZARDOUS ENERGY (Lockout/Tagout) Revised May 8, 2009

POLICY

It is the policy of Town of Milton - Water & Wastewater Division to implement and maintain a successful Lockout/Tagout program, in order to protect our people, property and processes.

PURPOSE

To establish a program and utilize procedures for affixing appropriate lockout/tagout devices, and to otherwise disable machines or equipment from unexpected energization, start-up or release of stored energy in order to prevent needless deaths or serious injuries.

SCOPE

This program covers the servicing and maintenance of machines and equipment in which the unexpected energization or release of stored energy could cause injury to employees or outside personnel.

Servicing and/or maintenance which take place during normal production operations are covered by this standard if:

- a) An employee is required to remove a guard or bypass a guard or other safety device.
- b) An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operation cycle.

Note: The exception to paragraph (b) is: Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this program if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection.

This program does not apply to the following:

- a) Work on cord and plug connected electric equipment for which exposure to the hazard of unexpected energization is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
- b) Hot tap operations involving the transmission and distribution of substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines.

GENERAL PROCEDURES

Separate procedures are relevant for the application of control devices and removal of control devices. These procedures are defined in more detail below.

APPLICATION OF CONTROL PROCEDURE

Energy isolation and lockout/tagout are to be applied only by trained employees authorized to perform service or maintenance. The goal of this control procedure is to achieve “Zero Energy State” and “Zero Mechanical State”. The 8-step control procedure listed below must be followed.

1. **NOTIFICATION** - Notify all affected employees that servicing or maintenance is required on a machine or piece of equipment and that the machine or equipment must be shut down and locked out to perform the servicing.
2. **PREPARATION** - Authorized employees shall be knowledgeable of and use the energy isolation procedures to prepare for shutdown. This procedure includes the identification of all energy sources (types, magnitudes), the hazards of the energy to be controlled, and the method (energy isolation devices) to control energy.
3. **EQUIPMENT SHUTDOWN** - Shut down the system by using the proper shutdown procedure. Insure that no personnel are endangered during the shutdown.
4. **EQUIPMENT ISOLATION** - De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s). Be sure to isolate *all* energy sources, including secondary power supplies. Energy can come from many different sources including: electrical, mechanical, hydraulic, pneumatic, chemical, and thermal.
5. **ISOLATION DEVICES** - All energy isolation devices are to be locked out with the use of an attached lock, and tag. The tag must display the authorized person’s name. Only standardized devices supplied by the company are to be utilized. More than one employee can lock out a single energy device by using a multiple-lock hasp. Use an appropriately designed lockout providing “attachment device” if a lock cannot be placed directly on the energy control.

The authorized employee that applied the lock shall maintain the key (to the lock) in his or her possession during the time the lockout is under their control. The Senior Operator on duty shall be responsible for the integrity of the lockout, in the event of shift or personnel changes. The integrity of the lockout/tagout protection must not be interrupted!

6. **STORED ENERGY** - All potentially hazardous stored or residual energy shall be dissipated and restrained. *This includes stored energy in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure etc.* The dissipation process shall include methods such as grounding, repositioning, blocking, bleeding down etc.

7. VERIFICATION - Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. This process is otherwise known as the "Tryout". *Caution: Return operating controls to neutral or "off" position after verifying the isolation of the equipment.*
8. SUCCESSFUL VERIFICATION - The machine or equipment is now effectively locked out.

RELEASE FROM CONTROL PROCEDURE

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following 5 steps must be taken.

1. AREA SURVEY - Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
2. PREPARATION - Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. VERIFICATION - Verify that the controls are in neutral.
4. DEVICE REMOVAL - Remove the lockout devices and reenergize the machine or equipment. Removal of the lockout device shall be removed from each energy isolating device by the employee who applied the device.

When the authorized employee who applied a lockout device is not available to remove it, that device may be removed only under the agreement and direction of Senior Operator On Duty and second most Senior Operator On Duty. It is also necessary to adhere to all of the following minimum criteria:

- a) Verification that the authorized employee who applied the device is not at the facility.
 - b) Making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout out has been removed.
 - c) Ensuring that the authorized employee has this knowledge before he/she resumes work at that facility. *Note: The removal of some forms of blocking may require re-energization of the machine before safe removal.*
5. NOTIFICATION - Notify all affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use. (Energy must not be restored to any equipment, until this notification has been successfully completed.)

SPECIFIC PROCEDURES

The General Procedures listed (in the previous section) are supplemented, where applicable, with equipment or machine specific procedures listed on a separate Lockout/Tagout Data Sheet (see Appendix A for example). *Note: Equipment or machine specific procedures are not required or provided when all of the following exist:*

1. The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees.
2. The machine or equipment has a single energy source which can be readily identified and isolated.
3. The isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment.
4. The machine or equipment is isolated from that energy source and locked out during servicing or maintenance.
5. A single lockout device will achieve a locker-out condition.
6. The lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance.
7. The servicing or maintenance does not create hazards for other employees.
8. In utilizing this exception, no accidents have occurred involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance.

TRAINING & RETRAINING

Training shall be provided to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. All training and retraining requirements shall be conducted and fulfilled by Water & Wastewater Superintendent.

Training shall include the following:

- a) Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- b) Each affected employee shall be instructed in the purpose and use of the energy control procedure.
- c) All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.
- d) Supervisors shall receive training on their supervisory responsibilities.

Retraining shall include the following:

- a) Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or process that present a new hazard, or when there is a change in the energy control procedures.
- b) Additional retraining shall also be conducted whenever a periodic inspection reveals, or there is reason to believe that there are deviations from or inadequacies in the employees' knowledge or use of the energy control procedure.
- c) The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures as necessary.
- d) The trainer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

ENFORCEMENT

Enforcement is necessary to make sure workers do their part in protecting their own safety.

- a) In addition to the required annual inspections, informal or random inspections will be conducted regularly as a part of the supervisory responsibilities of the Water &

Wastewater Superintendent. These inspections shall verify that energy control procedures are being carried out.

- b) Enforcement of safety rules shall be fair and uniform.
- c) The penalties for failure to comply with our energy control procedures will result in disciplinary steps taken against the non-complying employee, (up to and including immediate termination).

PROGRAM EVALUATION & MAINTENANCE

At least annually a review of the complete energy control program and an inspection of all equipment or machine specific lockout/tagout procedures shall be conducted by the Water & Wastewater Superintendent or Safety Coordinator.

When additions or modifications are made with regard to facilities, equipment or machinery it shall be the responsibility of the Water & Wastewater Superintendent to provide or update the Lockout/Tagout Date Sheet, where applicable, and insure that timely and accurate information is provided before releasing the equipment or machine into service.

OUTSIDE PERSONNEL

Whenever outside servicing personnel (contractors, etc.) are to be engaged in activities covered by the scope and application of this program, Town of Milton and the outside employer shall inform each other of their respective lockout or tagout procedures. The outside employer shall meet the minimum requirements set forth by the Town of Milton. If deviations in our normal procedures are approved, adequate communication of such changes must occur with all employees affected, prior to initiating the lockout procedure.

Appendix A - LOCKOUT/TAGOUT DATA SHEET

Equipment Description			
Equipment	Manufacturer	Model #	Serial #

Equipment Actuation Control:

Step No.	Hazardous Energy		Isolation Device		Control Device		Additional Hardware Required
	Type	Magnitude	Type	Location	Lock & Tag	Tag Only	
Additional Measures							

Authorized Employees		

Document Control			
Verified By:	Date		Date
		Issued:	

APPENDIX A – Example LOCKOUT/TAGOUT DATA SHEET

Equipment Description			
Equipment	Manufacturer	Model #	Serial #
Automatic Drill Press	Clausing	CL-2500	CSN-5658745

Equipment Actuation Control:

- Single Button (Operator Controlled) Actuation Switch on the Control Panel.
- A "Limit Switch" is used as an Automatic End of Cycle and Return to Top.

Step No.	Hazardous Energy		Isolation Device		Control Device		Additional Hardware Required
	Type	Magnitude	Type	Location	Lock & Tag	Tag Only	
1	Elec.	120 volt	Elec. Disc.	Labeled ED1	X		
2	Pneumatic	50 p.s.i.	3-way Valve	Tagged PV1	X		
	Additional Measures or Comments						
2	When closed, the 3-way valve releases all stored energy from the equipment.						

Authorized Employees	Joe Miller	Frank Smith
John Doe	Harry White	Jim McClung

Document Control			
Verified By:	Date	Issued:	Date
Joe Miller	08/01/02		08/03/02

RESTORING EQUIPMENT TO SERVICE

JOB COMPLETION/CERTIFICATION

The job has been completed and the equipment has been tested by me and found to be in proper working order.

Date _____ Time _____ Signature _____

EQUIPMENT/PERSONNEL CHECK

All equipment and personnel have been cleared from the area and there is no danger to either one.

Date _____ Time _____ Signature _____

STARTUP

All locks have been removed and the energy isolating devices may now be operated to restore energy to the equipment.

Date _____ Time _____ Signature _____



Reorder No. 11907-6

LOCKOUT-TAGOUT CHECKLIST

NOTIFICATION

I have notified all affected employees that a lockout is required and of the reason for the lockout.

Date _____ Time _____ Signature _____

SHUTDOWN

I understand the reason the equipment is to be shutdown following normal procedures.

Date _____ Time _____ Signature _____

DISCONNECTION OF POWER SOURCES

I have operated the switch, valve, or other energy isolating device(s) so that each energy source (electrical, mechanical, hydraulic, etc.), has been disconnected or isolated from the equipment. I have dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. all stored energy (such as capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems and air, gas, steam or water pressure).

Date _____ Time _____ Signature _____

LOCKOUT

I have locked out the energy isolating devices with assigned and check marked individual locks.

Date _____ Time _____ Signature _____

SAFETY CHECK

After ensuring that no personnel are exposed, and as a check on having disconnected all energy sources, I have operated the start button or other normal operating controls to make certain that the equipment will not operate.

Date _____ Time _____ Signature _____

THE EQUIPMENT IS NOW LOCKED OUT

Town of Milton
Public Works Department - Water & Wastewater Division
Excavation Safety Plan
July 2009

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Excavation Safety Plan
Public Works Department – Water & Wastewater Division

Prepared by: David F. Antone, Highway Superintendent

Amended by: Roger Hunt, Water/Wastewater Superintendent

I. Objective

This Excavation Safety Plan is designed specifically for use by the Town of Milton, Public Works Department, and Water & Wastewater Division Personnel while conducting its own excavations without the aid of Highway Division personnel.

In joint excavation operations with the Highway Division, the Highway Department Excavation Safety Plan shall apply in its entirety. The Highway Superintendent, at his discretion, may designate the Water & Wastewater Safety Officer as the competent person on his behalf.

This Excavation Safety Plan has been developed to protect employees from safety hazards that may be encountered during work in trenches and excavations. This plan is intended to assure that:

- A. Employees who perform work in excavations are aware of their responsibilities and know how to perform their duties in a safe manner.
- B. The Town of Milton, Water & Wastewater Division has appointed several individuals within the department to assure overall compliance with this safety plan.
- C. The Responsibilities of these individuals and that of workers are clearly explained in this plan.
- D. All persons involved in excavation and trenching will have received the proper training in safe work practices that must be followed when performing this type of work.

E. proper equipment and warning devices are identified to meet work requirements.

II. Assignment of Responsibility

A. Employer

In administering the Excavation Safety Program, the **Town of Milton, Water & Wastewater Division** will:

1. Monitor the overall effectiveness of the program.
2. Provide atmospheric equipment and testing as needed.
3. Provide personal protective equipment as needed.
4. Provide protective systems as needed.
5. Provide training to affected employees and supervisors.
6. Provide technical assistance as needed.
7. Preview and update the program on an annual basis or as needed.

B. Program Management

The Water & Wastewater Superintendent (Roger Hunt) acts as the Safety Officer and overall program manager. The Water & Wastewater Superintendent and Water & Wastewater Chief Operator (Nathan Lavallee) will fulfill “Competent Person” duties for any site excavations and will have the responsibility of overseeing inspections and signing documents required to accommodate excavations. The Safety Coordinator (Randy Mathieu) will maintain all records and training documents for the Town of Milton, Water & Wastewater Division.

1. Both persons acting in the “Competent Person” role will be responsible for making sure that all procedures are followed as prescribed in this program.

2. All employees entering excavations or trenches will be properly trained and equipped to perform their duties.
3. All required inspections, tests, and recordkeeping functions will be performed for all excavations.

C. Employees/Contractors

All employees, including contractor personnel, who work in or around excavations, must comply with the requirements of this program. Employees are responsible for reporting hazardous situations to any Town of Milton, Water & Wastewater Division supervisor or Town of Milton Administrative staff.

III. Training

A. Training Schedule

1. All personnel involved in trenching or excavation work shall be trained in the requirements of this program by the Safety Officer (Roger Hunt) with assistance from the Chief Operator (Nathan Lavalley) and Safety Coordinator (Randy Mathieu).
2. Training shall be performed before employees are assigned duties in excavations.
3. Retraining will be performed when employees indicate a lack of knowledge related to this plan, when changes are made to the plan, and on a periodic basis to provide a refresher on plan details.
4. Training records will be maintained by the Safety Officer and Safety Coordinator and shall include:
 - The date of the training
 - The name(s) of the instructor(s)
 - A copy of training material and/or course outline
 - Name(s) of the employee(s) who received the training

B. Training Components

The training provided to all personnel who perform work in excavations shall include:

1. The work practices that must be followed during excavating or working in an excavation site.
2. The use of personnel protective equipment that will typically be required during work in excavations.
3. Procedures to follow if a hazardous atmosphere exist or could be expected to develop during an excavation process.
4. The OSHA Excavation Standard, 29 CFR 1926, subpart P.
5. Emergency situation response and first aid procedure.
6. Town of Milton policy on reporting incidents that result in injury.

C. Training and Duties of Program Manager

The Safety Officer, Roger Hunt, shall receive training on the requirements detailed in this program shall seek additional training on the OSHA Excavation Standard. The Safety Officer shall:

1. Coordinate, actively participate in, and document the training of all employees affected by this program.
2. Ensure on a daily basis, as detailed in this plan that all worksite conditions are safe for employees to work in excavations.
3. Determine the means of protection that will be required for all each excavation site (sloping, trench box etc ;).
4. Ensure that a certified engineer is used, if required, to design protective systems for unusual or extreme excavation conditions (cave-ins, heavy water, etc ;).

5. Make available a copy of this plan or the OSHA Excavation Standard to any employee who request it.

IV. Excavation Requirements

A. Utilities and Pre-Work Site Inspection

Prior to excavation, the site shall be inspected by the appointed "Competent Person" being Roger Hunt or Nathan Lavallee or both.

B. Surface Encumbrances

All equipment, materials, supplies, permanent installations (buildings, paved road, sidewalk, etc ;) trees, brush, boulders, and other objects at the surface that could present a hazard to persons working in the excavation shall be removed or supported as necessary to protect workers in the excavation and surrounding area.

C. Underground Installations

1. The location of all underground utilities that may be encountered during excavation shall be determined and clearly marked prior to excavation. All markings will be properly maintained by the Town of Milton, Water & Wastewater Division until work begins. The Town of Milton, Water & Wastewater Division will arrange as needed for the shutdown of utilities if required to assure safe working conditions are maintained (such as when a gas leak is detected).

2. If it is not possible to determine the exact locations of underground installations/utilities, work can commence only if reasonable detection equipment and methods are utilized. For instance, workers should be supplied with proper hand tools, metal probes, metal detectors, or other suitable means of proceeding with care.

3. Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by whatever method necessary to protect workers in the excavation. For example, clear marking, supporting, shoring, or barricading could be choices for protecting

workers or other methods that meet the conditions at hand as determined by the Safety Officer or Competent Person(s).

C. Protection of the Public

Barricades, walkways, lighting, and posting shall be provided as necessary for the protection of the general public prior to the start of excavation operations.

1. Guardrails, fences, or barricades shall be provided on excavations adjacent to walkways, driveways, and other pedestrian or vehicle thoroughfares. All excavation work zones shall be properly secured at the end of each day. Fencing, barricades, caution tape, reflective devices, or other means, as determined by the Safety Officer or Competent Person, shall be in place to maintain overnight protection of driveways, walkways, and roadways.

2. No excavation will be left unprotected. All excavations will be backfilled as soon as possible. If an excavation is to be suspended for any period of time, all protective measures must be inspected and maintained daily. Such inspections should be recorded by the safety coordinator or other designated employee.

3. Walkways or bridges shall be protected by acceptable guardrails where a person is allowed to pass over excavations. Where workers are to be working under such walkways, a standard toe-board shall be used to protect workers from falling objects. OSHA standards should be considered before constructing walkways, guardrails, toe-boards or any other protective structure. All such structures should be approved by the Safety Officer or Competent Person on site.

D. Protection of the Employees

Stairs, ladders, or ramps shall be provided at excavation sites where employees are required to enter trench excavations 4 feet or more in depth. The maximum distance of lateral travel (along the length of the trench) necessary to reach a means of egress shall not exceed 25 feet.

1. Structural Ramps and Non-Structural Ramps

Structural Ramps will be designed by a Competent Person. Ramps will have cleats to provide slipping and cleats or other surface treatment shall be designed to prevent tripping or slipping. Any ramp constructed from more than one structure shall be mechanically joined and inspected by a competent person. Non-Structural Ramps (excavated ramp) may be used where smooth non-slip surface can be provided and approved by the Safety Officer. Debris such as rocks or sticks must not be allowed to exist in the walking area.

2. Ladders

- When portable ladders are used, the ladder side rails shall extend a minimum of three feet above the upper surface of the excavation.
- The ladder will have non-conductive side rails if work will be performed near exposed energized equipment or systems.
- Ladders will be inspected prior to use by a Competent Person and damaged ladders will be taken out of service.
- Ladders will be placed in a location where a reasonably level and firm base is available.
- Securing or spotting will be utilized wherever non-ideal conditions may exist.
- Non self supporting ladders shall be placed so that the foot of the ladder is one-quarter of the working length away from the support source.
- All employees will receive ladder safety instruction and review as needed.
- Employees shall not carry an object or load that could cause them to lose their balance.

F. Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with, and shall wear warning vest or other reflective garments as prescribed in the Manual on Uniform Traffic Control as adopted by the Vermont Agency of Transportation. Anyone engaged in traffic control must have a garment that clearly displays the words "Traffic Control". There must be a written plan for traffic control that states all details relating to equipment and methods being used. Also, a written plan indicating where signage and other warning devices will be placed must be present at the job site. Refer to the Traffic Control Plan for additional information.

G. Exposure to Falling Loads

No employee is permitted underneath loads being handled by lifting or digging equipment. Employees are required to stand away from the object or materials being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when said vehicle will provide adequate protection from a falling load. People on the ground should consider slopes as that may send a falling object in their direction.

H. Warning Systems for Mobile Equipment

All vehicles will be equipped with audible back-up alarms that are maintained in operating condition at all times. At anytime an operator must operate in a blind spot, an assistant will be present to provide hand signals as needed to assure safe movement of equipment. When equipment such as wheel loaders must approach an open excavation, workers in the ditch must stand well clear of the approach zone and a signalman must be present on the ground level to provide guidance to the equipment operator. Universal hand signals should be discussed and understood by the operator and signalman prior to operations. The equipment should approach on the down grade side of the ditch whenever possible. Stop logs, barricades, and other warning devices should be used as conditions warrant and such items are prescribed by the Safety Officer or Competent Person.

I. Hazardous Atmospheres

In any excavation where a Hazardous Atmosphere could potentially exist, no excavation will occur until proper testing has occurred and a plan has been established to monitor and control the Atmosphere. For example, in excavations in landfills, areas that store hazardous substances, or in an area where a Gas line may be present in a trench excavation that is over 4 feet deep. If atmospheric testing indicates a problem, forced ventilation or other acceptable means will be employed to keep employee exposure within acceptable limits. In some cases, excavation may have to occur before any hazard can be detected. In those cases, testing will be ongoing with the excavation process.

All testing equipment must meet calibration and inspection requirements. The Milton Town of Milton, Water & Wastewater Division will supply its own test equipment or from another outside source that is qualified for such testing.

Whenever working in a hazardous atmosphere is necessary, an emergency rescue plan will be established, rescue equipment will be on site, and trained personnel will be on stand-by to perform and necessary rescue operations and the appropriate PPE will be supplied for the protection of workers.

J. Personal Protective Equipment

1. All employees working in trenches and excavations shall wear approved hardhats and safety toed shoes or boots meeting ANS Z41.1-1967 requirements and specifications.
2. Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding, and similar operations shall wear approved safety glasses or face shield.
3. Employees performing welding, cutting, or brazing operations or are exposed to the hazards of such operations, shall wear approved eye and face shielding as well as body protection as needed to avoid burns or clothing fire.

4. Employees shall wear approved gloves or other hand protection that is appropriate for the task being performed. For example, Rubber gloves may be best when handling certain liquids while leather gloves may not be appropriate. In some cases, metal stranded gloves might be needed to handle sharp objects.

5. Employees working in the immediate vicinity of hammer drills, masonry saws, jackhammers, or similar high noise producing equipment shall wear suitable hearing protection.

6. When excavation of is six feet or more in depth, precautions must be taken to provide fall protection for employees and the public. The Safety Officer should determine what type of protection is appropriate for the circumstances such as the location and duration of the excavation. Anything from temporary fencing, barricades, tie backs, Guardrail Walks or other OSHA approved system may be considered and utilized.

7. A ladder is always required for culvert installations that are 4 feet or more in depth and longer than fifty feet.

8. Whenever working in a hazardous atmosphere is necessary, an emergency rescue plan will be established, rescue equipment will be on site, and trained personnel will be on stand-by to perform and necessary rescue operations and the appropriate PPE will be supplied for the protection of workers.

9. In addition, any hazards identified and reported by employees will be addressed by the Safety Officer or Competent. Any such hazard that presents immediate and serious danger will cause all work to cease.

K. Protection from Water Accumulation Hazard

1. Employees are not permitted to work in excavations that contain or are accumulating water unless precautions have been taken to protect them from hazards that are posed by the standing or accumulating water. Precautions, for example, may include shoring, trench boxes, Vacuum Excavation, or other water removal and the use of harness with a lifeline.

2. If water removal equipment is deemed adequate to prevent water accumulation, it must be certified as such and monitored by the "Competent Person". The Safety Officer will provide additional input for any additional measures that may be required beyond water control.

3. Employees will be properly trained to recognize hazards and to take the proper precautions in a wet excavation.

L. Protection from Falling Objects and Loose Soil, Rocks, or other Impediments.

1. Adequate protection shall be provided to protect employees from loose impediments or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:

Scaling to remove loose material from the slope or face

Installation of barricades

Sufficient Benching and sloping

Place excavated material away from top edge of excavation

Place excavated material on a downgrade from the excavation

2. Excavation personnel should not work above one another when the danger of falling material exists.

3. Special requirements shall be considered in areas where excavation may be exposed to heavy vehicular traffic. Concrete barriers, shoring, and trench boxes are examples of items for consideration. Also, diversion of traffic a safe distance from the excavation or road closings could be considered. The Safety Officer and/or Competent Person shall insure that a plan is provided, recorded, and adhered to by workers.

4. For benching and sloping operations, a soil classification of "C" will be assumed unless documentation by the Town Engineer or and other Engineering firm is provided. The slope requirements will be

available on site as a part of the field kit carried by the Safety Coordinator or Competent Person. The field kit contains a copy of slope requirements for A, B, or C soil conditions as described in OSHA text 29 CFR 1926, Subpart P, Appendices A and B.

5. Use of other protective systems will be carried out only after consultation with the Safety Officer and Town Engineer. Conditions requiring such systems will likely be reassigned to a qualified subcontractor. All excavations that are 5 feet or more in depth will employ a protective system that meets industry standards. Examples include Sloping, Shoring, and trench boxes.

M. Inspection Requirements

1) Daily inspections will be performed by the Competent Person in charge and a checklist will be used to record inspection results. The checklist will be kept on site and made available to the Safety Office or State and local regulatory agencies upon their request.

2) In addition to daily inspections by the Competent Person in charge, additional inspections will be performed by the Safety Officer to assure that all work conforms to this plan. The Safety Officer will initial the daily checklist to record the additional inspection.

3) The site shall be re-inspected after a substantial rainfall has occurred or if the site is shut down and abandoned during the course of the day. If either event occurs in the course of one day, the initial inspection will no longer be sufficient and a new one will be performed.

4) The time and date accompanied by the signature of the Inspector shall be recorded on every inspection checklist.

V. Accident Investigations

1) All accidents will be reported to the Safety Officer/Department Head, Town Manager, and other agencies as required by OSHA standards.

2) A thorough investigation of all accidents will be carried out by the Safety Officer/Department head and the results will be formally reported to the Town Manager.

3) All accident investigations will be kept on record at the Town Manager's Office.

4) The Town Manger and Department Head will provide directives for any corrective or disciplinary action that may be required.

VI. Changes to the Program

1) As work proceeds through each calendar year, there may be a need to make additions or deletions to this plan. All such edits can be recorded in this section and be re-written into the plan on an annual basis or as deemed necessary by the Safety Officer or Town Manager.

Town of Milton, Vermont – Public Works Department – Water & Wastewater Division - Hazard Communication Program

General information

The Management Staff of the Town of Milton is committed to the prevention of incidents or happenings that result in injury and/or illness and to comply with all applicable federal and state health and safety rules. We require that management spare no effort in providing a safe and healthful work environment for all employees, that all levels of supervision be accountable for the health and safety of those employees under their direction, and through this written hazard communication program share assigned responsibility.

In order to comply with Occupational Health and Safety Administration 1910.1200, the following written Hazard Communication Program has been established for Town of Milton – Public Works Department, Water & Wastewater Division.

The written program will be available in the Wastewater Treatment Facility Control Building for review by any interested employee.

We will meet the requirements of this rule as follows:

Container Labeling

The Water & Wastewater Division Chief Operator will verify that all containers received for use will clearly list contents on the label, note the appropriate hazard warning, and list the manufacturer's name and address.

It is the policy of this Municipality that no container will be released for use until the above data are verified.

The Supervisor in each section will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with the "central stores" generic labels that have appropriate identification and hazard warnings.

Material Safety Data Sheets (MSDS)

Copies of MSDSs for all hazardous chemicals to which employees of this municipality may be exposed will be kept in the Wastewater Treatment Facility Control Building. Pertinent copies of the MSDSs will also be maintained at each location where hazardous chemicals are stored. MSDSs will be available to all employees in their work area for review during each work shift. If MSDSs are not available or new chemicals in use do not have an MSDS, immediately contact the Water & Wastewater Chief Operator.

Employee Information and Training

All new hire employees' will attend a health and safety orientation and will receive information and training on the following:

Town of Milton Vermont – Public Works Department – Water & Wastewater Division Hazard
Communication Program
July 2009

- An overview of the requirements contained in 29 CFR 1910.1200 and 1926.59 – Hazard Communication Standard.
- Chemicals present in their workplace operations.
- Location and availability of our written hazard program.
- Physical hazards and health effects of the hazardous chemicals.
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
- How to reduce or prevent exposure to these hazardous chemicals through use of control/work practices and personal protective equipment.
- Steps the Municipality has taken to reduce or prevent exposure to these chemicals.
- Safety emergency procedures to follow if the employee is exposed to these chemicals.
- How to read labels and review MSDSs to obtain appropriate hazard information.

Any training an employee receives must be documented in the employee's safety training file.

Prior to a new hazardous chemical being introduced into any section of this Municipality, each employee of that section will be given information as outlined above.

The Water & Wastewater Chief Operator is responsible for ensuring that MSDSs for new chemicals are available.

Hazardous Chemicals List

The list of all known hazardous chemicals used by the Water & Wastewater Division employees can be found in Appendix 1 – Chemical Inventory.

More information on each chemical noted is available by reviewing MSDSs located in the Wastewater Treatment Facility Control Building.

Informing Contractors

It is the responsibility of Water & Wastewater Superintendent to provide contractors with the following information:

- Hazardous chemicals to which they may be exposed while on the job site and the procedure for obtaining MSDSs.
- Precautions employees may take to lessen the possibility of exposure by using appropriate protective measures and an explanation of the labeling system used.

Also, it is the responsibility of the Water & Wastewater Superintendent to identify and obtain MSDSs for the chemicals the contractor is bringing into the workplace.

TRAINING RECORD FOR HAZARD COMMUNICATIONS

This is to certify that I have been trained and informed about the hazards and precautions associated with the use of hazardous chemicals in my work as required in the Town of Milton's written hazard communication program.

To confirm my understanding of such training and instructions, _____
reviewed them with me and he/she indicated his/her satisfaction by checking the box
before each of the topics listed below:

- Overview of the requirements contained in the Hazard Communication Rules, 29 CFR 1910.1200.
- Chemicals present in my workplace operations.
- Locations and availability of our written hazard communication program and the MSDSs for the hazardous chemicals.
- Physical and health effects of these hazardous chemicals.
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in my work area.
- How to lessen or prevent exposure to these hazardous chemicals through control and work practices and use of personal protective equipment.
- Steps the Municipality has taken to lessen or prevent exposure to these chemicals.
- Safety emergency procedures to follow in the event of exposure to these chemicals.
- How to read container labels, review, and interpret MSDSs to obtain appropriate hazard information.

Employee's Name

Date Attested

Trainer

Note to employee: This form will be made a part of your personnel file. Please read and understand its contents before signing.

Water/Wastewater Department
July 2009
Hazard Communication Checklist

- _____ 1. Has a list been prepared of all hazardous chemicals in the workplace?
- _____ 2. Is the company prepared to update the hazardous chemical list?
- _____ 3. Has the company obtained or developed a material safety sheet for each hazardous chemical we use?
- _____ 4. Has a system been developed to ensure that all incoming hazardous chemicals are checked for proper labels and data sheets?
- _____ 5. Are procedures in place to ensure labeling or warning signs for containers that hold hazardous chemicals?
- _____ 6. Are employees aware of the specific information and training requirements of the Hazard Communication Standard?
- _____ 7. Are employees familiar with different types of chemicals and hazards associated with them?
- _____ 8. Have employees been informed of the hazards associated with performing non-routine tasks?
- _____ 9. Do employees understand how to detect the presence of release of hazardous chemicals in the workplace?
- _____ 10. Are employees trained about proper work practices and personal protective equipment in relation to the hazardous chemicals in their own work area?
- _____ 11. Does the training program provide information on appropriate first aid, emergency procedures and the likely symptoms of overexposure?
- _____ 12. Does the training program include an explanation of labels and warnings that are used in each work area?
- _____ 13. Does the training describe where to obtain data sheets and how employees may use them?
- _____ 14. Is a system in place to ensure that new employees are trained before beginning work?
- _____ 15. Is a system in place to identify new hazardous chemicals before they are introduced into a work area?
- _____ 16. Is a system in place to inform employees of new hazardous associated with a chemical?

Town of Milton – Water & Wastewater Division - Noise and Hearing Conservation Guide

Updated - May 2009

Introduction - Purpose

It has been determined that no spaces or equipment operated or maintained by the Town of Milton – Water & Wastewater Division require the implementation of a formal hearing conservation and testing program as defined by 29 CFR 1910.65. There are no detected work environments which subject employees to noise level exposures equal or exceed an 8-hour time weighted average sound level (TWA) of 85 decibels or a dose of 50% (29 CFR 1910.95(c)(1)).

This program is merely a guide to assist in determining if in the future a work environment exists to warrant implementation of a formal plan as described below. This guide is also intended to assist employees in determining the noise level of a space and the proper hearing protection to utilize in their work environment.

Occupational Noise Exposure

Noise, or unwanted sound, is one of the most pervasive occupational health problems. It is a by-product of many industrial processes. Sound consists of pressure changes in a medium (usually air), caused by vibration or turbulence. These pressure changes produce waves emanating away from the turbulent or vibrating source. Exposure to high levels of noise causes hearing loss and may cause other harmful health effects as well. The extent of damage depends primarily on the intensity of the noise and the duration of the exposure. Noise-induced hearing loss can be temporary or permanent. Temporary hearing loss results from short term exposures to noise, with normal hearing returning after a period of rest. Generally, prolonged exposure to high noise levels over a period of time gradually causes permanent damage.

OSHA's hearing conservation program is designed to protect workers with significant occupational noise exposures from suffering material hearing impairment even if they are subject to such noise exposures over their entire working lifetimes.

The following summarizes the required components of OSHA's hearing conservation program.

Noise Monitoring

The hearing conservation program requires employers to monitor noise exposure levels in a manner that will accurately identify employees who are exposed to noise at or above 85 decibels (dB) averaged over 8 working hours, or an 8-hour time-weighted average (TWA.) That is, employers must monitor all employees whose noise exposure is equivalent to or greater than a noise exposure received in 8 hours where the noise level is constantly 85 dB.

The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. This requirement is performance-oriented since it allows employers to choose the monitoring method that best suits each individual situation. Monitoring should be repeated when changes in production, process, or controls increase noise exposure. Such changes may mean that additional employees need to be monitored and/or their hearing protectors may no longer provide adequate attenuation.

Under this program, employees are entitled to observe monitoring procedures and they must be notified of the results of exposure monitoring. The method used to notify employees is left to the discretion of the employers.

Instruments used for monitoring employee exposures must be carefully checked or calibrated to ensure that the measurements are accurate. Calibration procedures are unique to specific instruments. Employers have the duty to ensure that the measuring instruments are properly calibrated. They may find it useful to follow the manufacturer's instruction to determine when and how extensively to calibrate.

Audiometric Testing - Not currently required per 29 CFR 1910.95(c)(1)

Audiometric testing not only monitors the sharpness and acuity of an employee's hearing over time, but also provides an opportunity for employers to educate employees about their hearing and the need to protect it.

The employer shall establish and maintain an audiometric testing program. The important elements of an audiometric testing program include baseline audiograms, annual audiograms, training, and follow-up procedures. Audiometric testing must be made available at no cost to all employees who are exposed to an action level of 85 dB or above, measured as an 8-hour TWA.

The audiometric testing program follow-up should indicate whether the employer's hearing conservation program is preventing hearing loss. A licensed or certified audiologist (specialist dealing with an individual having impaired hearing), an otolaryngologist (physician specializing in the diagnosis and treatment of disorders of the ear, nose, and throat), or a physician must be responsible for the program. Both professionals and trained technicians may conduct audiometric testing. The professional

in charge of the program does not have to be present when a qualified technician conducts tests, however. The professional's responsibilities include overseeing the program and the work of the technicians, reviewing problem audiograms, and determining whether referral is necessary.

The employee needs a referral for further testing when test results are questionable or when problems of a medical nature are suspected. If additional testing is necessary or if the employer suspects a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors, the employee shall be referred for a clinical audiological evaluation or otological exam, as appropriate. There are two types of audiograms required in the hearing conservation program: baseline and annual audiograms.

A. Baseline Audiograms

The baseline audiogram is the reference audiogram against which future audiograms are compared. Baseline audiograms must be provided within 6 months of an employee's first exposure at or above an 8-hour TWA of 85 dB. An exception is the use of mobile test vans to obtain audiograms. In these instances, baseline audiograms must be completed within 1 year after an employee's first exposure to workplace noise at or above a TWA of 85 dB. Employees, however, must be fitted with, issued, and required to wear hearing protectors for any period exceeding 6 months after their first exposure until the baseline audiogram is obtained.

Employees should not be exposed to workplace noise for 14 hours preceding the baseline test; however, appropriate hearing protectors can serve as a substitute for this requirement and can be worn during this time period.

B. Annual Audiograms

Annual audiograms must be conducted within 1 year of the baseline. It is important to test hearing on an annual basis to identify deterioration in hearing ability so that protective follow-up measures can be initiated before hearing loss progresses. Annual audiograms must be routinely compared to baseline audiograms to determine whether the audiogram is valid and to determine whether the employee has lost hearing ability-- i.e., if a standard threshold shift (STS) has occurred. STS is an average shift in either ear of 10 dB or more at 2,000, 3,000, and 4,000 hertz. An averaging method of determining STS was chosen because it diminished the number of persons falsely identified as having STS and who are later shown not to have had a change in hearing ability. Additionally, the method is sensitive enough to identify meaningful shifts in hearing early on.

Audiogram Evaluation - Not currently required per 29 CFR 1910.95(c)(1)

If an STS is identified, employees must be fitted or refitted with adequate hearing protectors, shown how to use them, and required to wear them. Employees must be notified within 21 days from the time the determination is made that their audiometric

test results showed an STS. Some employees with an STS may need to be referred for further testing if the professional determines that their test results are questionable or if they have an ear problem of a medical nature that is thought to be caused or aggravated by wearing hearing protectors. If the suspected medical problem is not thought to be related to wearing hearing protection, employees must be informed that they should see a physician. If subsequent audiometric tests show that the STS identified on a previous audiogram is not persistent, employees whose exposure to noise is less than a TWA of 90 dB may discontinue wearing hearing protectors.

An annual audiogram may be substituted for the original baseline audiogram if the professional supervising the program determines that the employee's STS is persistent. The original baseline audiogram, however, must be retained for the length of the employee's employment. This substitution will ensure that the same shift is not repeatedly identified. The professional also may decide to revise the baseline audiogram if an improvement in hearing occurs. This will ensure that the baseline reflects actual hearing thresholds to the extent possible. Audiometric tests must be conducted in a room meeting specific background levels and with calibrated audiometers that meet American National Standard Institute (ANSI) specifications of SC-1969.

Hearing Protectors

Hearing protectors must be available to all workers exposed to 8-hour TWA noise levels of 85 dB or above. This requirement will ensure that employees have access to protectors before they experience a loss in hearing. Hearing protectors must be worn by

1. employees for any period exceeding 6 months from the time they are first exposed to 8-hour TWA noise levels of 85 dB or above until they receive their baseline audiograms in situations where baseline audiograms are delayed because it is inconvenient for mobile test vans to visit the workplace more than once a year;
2. employees who have incurred standard threshold shifts since these workers have demonstrated that they are susceptible to noise; and
3. Employees exposed over the permissible exposure limit of 90 dB over an 8-hour TWA.

Employees should decide, with the help of a person who is trained in fitting hearing protectors, which size and type protector is most suitable for their working environment. The protector selected should be comfortable to wear and offer sufficient attenuation to prevent hearing loss.

Hearing protectors must adequately reduce the severity of the noise level for each employee's work environment. The employer must reevaluate the suitability of the employee's present protector whenever there is a change in working conditions that may cause the hearing protector being used to be inadequate. If workplace noise levels

increase, employees must be given more effective protectors. The protector must reduce employee exposures to at least 90 dB and to 85 dB when an STS already has occurred in the worker's hearing. Employees must be shown how to use and care for their protectors and must be supervised on the job to ensure that they continue to wear them correctly.

Training

Employee training is very important. When workers understand the reasons for the hearing conservation programs' requirements and the need to protect their hearing, they will be better motivated to participate actively in the program and to cooperate by wearing their protectors and taking audiometric tests. Employees exposed to TWAs of 85 dB and above must be trained at least annually in the effects of noise; the purpose, advantages, and disadvantages of various types of hearing protectors; the selection, fit, and care of protectors; and the purpose and procedures of audiometric testing. The training program may be structured in any format, with different portions conducted by different individuals and at different times, as long as the required topics are covered.

Recordkeeping

Noise exposure measurement records must be kept for 2 years. Records of audiometric test results must be maintained for the duration of employment of the affected employee. Audiometric test records must include the name and job classification of the employee, the date, the examiner's name, the date of the last acoustic or exhaustive calibration, measurements of the background sound pressure levels in audiometric test rooms, and the employee's most recent noise exposure measurement.

As of January 2004, employee hearing loss should be recorded on the OSHA 300 Log. A special checkbox has been added to the 300 Log for this purpose. Hearing loss is considered an occupational illness and should be recorded on the 300 Log when the following conditions are identified during an employee's annual audiogram:

- employee has a standard threshold shift (STS), and
- the STS is work-related, and
- The employee has aggregate hearing loss exceeding 25 dB from audiometric zero.

Hearing Testing Resources (Vermont)

The following companies should be able to provide employee hearing tests (audiograms) for employees. Please see the Yellow Pages of phone book under Audiologists for additional hearing conservation sources.

Sample Written Program

Although OSHA does not require a written hearing conservation program, the attached program, if properly completed, will not only help you work through the pertinent issues, but will also constitute an adequate hearing conservation program in accordance with 1910.95(c)(1). This program should not be used without consideration of the unique conditions and requirements at each site and it may be necessary to modify the program for your specific needs.

This sample program is not intended to be a legal interpretation of the provisions of the *Occupational Safety and Health Act of 1970*.

HEARING CONSERVATION PROGRAM FOR

Town of Milton - Water & Wastewater Division

INTRODUCTION

Hearing conservation is an important aspect of the overall safety and health program. Workplace noise can cause hearing loss, create physical and psychological stress, and contribute to accidents by making it difficult to communicate. An estimated 14 million employees throughout the United States are exposed to hazardous noise.

Fortunately, noise exposure can be controlled. Every effort is made to use quieter processes, machinery, and equipment. When feasible engineering controls do not reduce the noise level to or below the OSHA permissible exposure limit (PEL) of 90 dB, proper hearing protectors are used. Also, all employees exposed to noise levels above 85 dB are included in a hearing conservation program. There are many reasons for providing an effective hearing conservation program, including: protecting the organization's most important resource - employees, providing a safe and healthful workplace, and complying with governmental regulations.

Management, supervisory, and employee commitment to hearing conservation and positive attitude are important aspects of the overall hearing conservation program. The key elements of the organization's hearing conservation program are:

1. Noise exposure measurements
2. High exposure areas or jobs
3. Audiometric testing and follow-up
4. Employee Education
5. Engineering and administrative noise exposure control
6. Personal hearing protection
7. Recordkeeping

Roger Hunt, Water & Wastewater Superintendent has been designated as the program administrator for Hearing Conservation.

NOISE EXPOSURE MEASUREMENT

The success of the company's hearing conservation program depends on an accurate knowledge of the existing noise environment. Accurate surveys define areas within acceptable guidelines for noise exposure and those areas where potentially harmful noise exposure exists. Effective noise exposure measurement prevents possible loss of hearing by detecting work areas where employees must wear hearing protectors and must be tested.

Detailed noise surveys have been performed for the following areas or processes:

Area/Process	Date
Wastewater Plant Headworks	
Wastewater Plant Dewatering Room	
Wastewater Plant – Biosolids Processing – Blower Room	
Wastewater Plant – Biosolids Processing – Shop	
Wastewater Plant – Biosolids Processing – Basement	
Wastewater Plant – Septage Receiving	
Wastewater Plant – Control Building – Blower Room	
Wastewater Plant – Control Building – Basement	
Wastewater Plant – Control Building – Mechanical Room	
Wastewater Plant – UV Disinfection – Process Water Room	
Water Plant – Old Treatment Room	
Water Plant – Generator Room	
Maplewood Avenue Booster Pump Station	
418 RT 7 South, Wastewater Pump Station	
155 Catamount Drive – Wastewater Pump Station	
Jetter Vac Operations	
Backhoe Operations	
Bobcat Operations	
Lawn Care & Landscaping	

These surveys were conducted using Extech Model 407736 Digital; Sound Level Monitor. The sound level monitor was placed in each location long enough to establish a conservative average noise exposure. All effected employees have been notified regarding these results.

Copies of these measurements are included in Appendix A of this program.

Additional monitoring will be conducted whenever changes in work practices or methods may change workplace noise exposures including addition of new equipment or a change in the workplace layout.

HIGH EXPOSURE AREAS OR JOBS

Based on the results of the noise exposure measurements, the following areas/jobs have been designated as "High Exposure". "High Exposure" refers to work areas or jobs where employees' noise exposure may exceed the action level of (85 dBA).

Area/Job	Hearing Protection
<><>Describe areas or jobs where noise monitoring has demonstrated exposure above the Action Level or Permissible	<><>Indicate here whether hearing protection will be

Exposure Level. Note: These jobs/areas will require implementation of the Hearing Conservation Program including hearing protection and audiometric testing.<><>	"Encouraged" or "Required",*

*Monitoring results above the action level (85 dBA) indicate areas where hearing protection is "encouraged" and monitoring results above the Permissible Exposure Limit (90 dBA) indicate areas where hearing protection is "required".

AUDIOMETRIC TESTING PROGRAM-Not currently required per 29 CFR 1910.95(c)(1)

The objective of this hearing conservation program is the preservation of the hearing of employees. In order to achieve this goal, an effective audiometric testing program has been implemented.

Audiograms and evaluations are conducted by:

<><><>ENTER NAME OF COMPANY THAT PERFORMS AUDIOGRAMS AND YEARLY COMPARISONS TO BASELINE AUDIOGRAMS<><><>

(Note: Audiograms and comparisons must be conducted by an audiologist or physician or someone working under a licensed audiologist or physician.)

This program includes:

- Audiograms at time of hire for all employees working in "High Exposure" areas or jobs.
- Baseline audiograms for existing work force working in "High Exposure" areas or jobs.
- Annual audiograms for all employees working in "High Exposure" areas or jobs.

The success of the hearing conservation program with regard to each individual employee is evaluated by comparing annual audiograms to the baseline audiogram. This procedure, among others, helps to determine the effectiveness of the hearing protection program, and, as a result, ensures the protection of employees' hearing.

<><>ENTER NAME OF RESPONSIBLE PERSON OR JOB TITLE<><> is responsible for reviewing the recommendations of the audiologist or physician.

EMPLOYEE EDUCATION

All employees working in "High Exposure" areas or jobs are trained before initial assignment and at least annually on the following topics:

- Effects of noise on hearing
- Purpose of hearing protectors
- Advantages and disadvantages of various types of hearing protectors

- Proper use, selection, fit, and care of hearing protectors
- Purpose and procedures of audiometric testing
- Company requirements for "High Exposure" jobs or areas
- Use of specific hearing protectors provided by the company

The Water & Wastewater Safety Committee Coordinator is responsible for scheduling this training on an annual basis.

<><>NAME OR JOB TITLE OF EMPLOYEE OR CONTRACTOR<><> is responsible for conducting the training and providing documentation to the program administrator.

ENGINEERING AND ADMINISTRATIVE NOISE CONTROLS

The Town of Milton recognizes the desirability of controlling the existing noise levels by engineering and/or administrative controls. Therefore, the feasibility of such controls is carefully considered including possible redesign of existing machinery, the building of partial or total enclosures, and other engineering noise control procedures for reducing the existing noise levels. Due to the complexity of some machinery used by the company and in view of economic limitations, some noise levels cannot currently be reduced to below acceptable limits.

Within the limitation of work schedules and employee skills, administrative controls have also been considered. Where feasible, over-exposed employees are rotated to other areas or jobs having noise levels below the required levels. In addition, operational procedures are modified as necessary so that during any one twenty-four hour period the allowed exposure times will not be exceeded.

Engineering and administrative controls are being considered and implemented where feasible on a continuing basis.

PERSONAL HEARING PROTECTION

Until such time as engineering and/or administrative controls reduce the amount of noise exposure to or below the allowed limits, appropriate personal hearing protective devices are made available and issued to employees working in "High Exposure" jobs or areas. It is recognized that the use of these devices is considered a temporary solution to the problem of overexposure until feasible controls are provided.

While there is no "High Exposure" jobs or areas as identified in 29 CFR 1910.95(c)(1), the wearing of hearing protection in the following areas or jobs is mandatory:

<><>ENTER AREAS OR JOBS WHERE HEARING PROTECTION IS MANDATORY<>

In addition, hearing protection is recommended for use by all employees when noise levels exceed 80 dB.

All supervisors properly enforce hearing protection requirements. Continuing failure of an employee to properly wear the protection provided could result in the termination of employment with the company.

<><>NAME OR JOB TITLE OF EMPLOYEE <><> is responsible for issuing and fitting hearing protection. This individual has been trained by and is under the supervision of an audiologist or physician. (The preceding is not required by 29 CFR 1910.95(c)(1))

The following hearing protection devices are provided for employees. Ear plugs and Muffs may be used simultaneously to reduce noise level exposures below 80 dB:

Type of Hearing Protection	Noise Reduction Rating (NRR)
Peltor H10A	30 dB
Condor Economy	26 dB
E-A-R Classic Earplugs	29 dB

Note: Employers are required to make at least two "TYPES" of hearing protectors available to employees. Types include self-molding, pre-molded, custom molded, and ear muffs.

RECORDKEEPING

The Water & Wastewater Division Safety Coordinator is responsible for maintaining exposure measurement records. These records will be appended to this written program as Appendix A and maintained for a minimum of two years from the measurement date.

<><>NAME OR JOB TITLE OF EMPLOYEE <><> is responsible for maintaining audiometric test results for all employees working in "High Exposure" jobs or areas. These records will be maintained for the duration of the employment of the affected employee. (The preceding is not required by 29 CFR 1910.95(c)(1))

All records related to this program will be provided upon request to employees, former employees, or representatives designated by the individual employee.

PERMIT REQUIRED CONFINED SPACE WRITTEN PROGRAM

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TOWN OF MILTON WATER & WASTEWATER DEPARTMENT
PERMIT REQUIRED CONFINED SPACE WRITTEN PROGRAM

1.0 POLICY

The Town of Milton, Water & Wastewater Department is committed to provide a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following written program is in place to first identify any Permit- Required Confined Spaces (PRCS) and to eliminate or control hazards associated with PRCS operations. This program is in accordance with the Occupational Safety and Health Administration's (OSHA) Permit-Required Confined Spaces Standard, Title 29, Code of Federal Regulations 1910.146.

2.0 RESPONSIBILITIES

2.1 Overall Program Responsibility

The Water and Wastewater Superintendent is responsible for the overall implementation and maintenance of any written program or any certification concerning the requirements of the Permit-Required Confined Space Standard at our facility.

2.2 Permit-Required Confined Space Evaluation

The Water & Wastewater Superintendent is responsible for evaluating the workplace to determine if any permit spaces are present.

The Water & Wastewater Superintendent will be responsible for determining if a PRCS program is required, or if the permit space can be reclassified as a non-permit space, or if alternative procedures can be used.

2.3 Training

The Water & Wastewater Superintendent is responsible for ensuring that all affected personnel are properly trained and that refresher training is given. Personnel who may be included are any authorized entrants, attendants, entry supervisors, on-site rescue team members, and employees who may potentially enter the space.

2.4 Initial Contacting For Rescue Services

The Water & Wastewater Superintendent will ensure that rescue and emergency services have been informed of any permit-required confined spaces at Town of Milton, Water & Wastewater Department and have been given access to the spaces for drills, training, etc.

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2.5 Equipment

The Water & Wastewater Superintendent will ensure that all equipment needed for safe entry into any permit spaces and non-permit spaces is available and in proper working order.

3.0 PERMIT SPACE IDENTIFICATION

3.1 The Water & Wastewater Superintendent has evaluated the workplace and determined

(Check appropriate box)

- No Permit-Required Confined Space(s) Exist at the Workplace.
 Permit-Required Confined Space(s) Have Been Determined to Exist.

As a reminder, a confined space is a space which:

- A) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- B) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, manholes, vaults, and pits are spaces that may have limited means of entry.); and
- C) Is not designed for continuous employee occupancy.

A permit space is a confined space which has one or more of the following characteristics:

- A) Contains or has a potential to contain a hazardous atmosphere;
- B) Contains a material that has the potential for engulfing an entrant;
- C) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
- D) Contains any other recognized serious safety or health hazard. (i.e., electrical, mechanical, etc.).

If no permit spaces are identified, no further action is required.

! Note to the Employer: Develop a list of all permit-required confined spaces including their locations and identified hazard(s) which qualify it as a permit space. Though not mandated by the standard, it would be wise to develop a second list of all non-permit confined spaces in the event that these spaces are reclassified in the future.

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3.2 The location(s) and hazard(s) posed by these permit spaces are listed below:

LOCATION	HAZARD
All sewer manholes with a depth of four feet or more.	Atmospheric & fall hazard. Limited means of ingress/egress.
PRV Vault US Route 7 South & Catamount Drive	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Woodbriar MHP & US Route 7 South	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Birchwood Manor MHP & West Milton Road	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Bert’s MHP & US Route 7 South	Atmospheric, engulfment, limited means of ingress/egress.
Wet Wells 1 & 2 – Wastewater Lift Station 418 Route 7 South	Atmospheric, engulfment, limited means of ingress/egress, Fall hazard
Meter/PRV Vault – Meadow Road & Hobbs Rd.	Atmospheric, engulfment, limited means of ingress/egress.
PRV Vault – 33 River Street	Atmospheric, engulfment, limited means of ingress/egress.
Wet Well – Wastewater Lift Station - 33 River	Atmospheric, engulfment, limited means of ingress/egress.
Dry Pit – Wastewater Lift Station – 33 River Street	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Basement (former wet well) – Maplewood Avenue Booster Pump Station	Atmospheric, limited means of ingress/egress.
Wet Well – Wastewater Lift Station Kendra Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station- Water Plant – 80 Westford Road	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Aluminum Sulfate Storage Tank – Water Plant	Atmospheric, limited means of ingress/egress, chemical.
Aluminum Sulfate Storage Tank – Wastewater Plant – 145 Lamoille Terrace	Atmospheric, limited means of ingress/egress, chemical.
500,000 gallon water tank – Water Plant – 80 Westford Road	Atmospheric, limited means of ingress/egress, engulfment.
Meter Pit – North Rd & Rowe Road	Atmospheric, limited means of ingress/egress, engulfment.
PRV Vault – Oglewood Drive	Atmospheric, limited means of ingress/egress, engulfment.
Old Chemical Waste Storage Tank – Water Plant, 80 Westford Road next to shop doors	Chemical, Atmospheric, engulfment.
650,000 gallon water tank – Water Plant – 80 Westford Road	Atmospheric, limited means of ingress/egress, engulfment.

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LOCATION	HAZARD
WWTF – Headworks – Grit Removal Tank	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – SBR Basins 1,2 & 3	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Chemical Treatment Building – Alum & Sodium Hydroxide Storage Tanks	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Biosolids Processing Building – Sludge Holding Tanks 1 & 2.	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Biosolids Processing Building – Septage Holding Tank	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – In Plant Sewage Lift Station – Wet Well	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – UV Disinfection Building – UV Channel & Process Water Holding Tank	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
Wet Well – Wastewater Lift Station Maplewood Avenue	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station Allen Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station Centre Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.

4.0 PREVENTION OF UNAUTHORIZED ENTRY

4.1 If permit spaces are identified at our worksite, the Water & Wastewater Superintendent will inform exposed or potentially exposed employees of their existence and hazards. The method(s) that will be used will be:

- X Posting of danger signs at each permit space reading “Danger--Permit-Required Confined Space-Do Not Enter”
- X Listing all permit spaces in their appropriate O&M Manuals, tie books, & etc...

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! Note to the Employer: The standard allows any other equally effective means of informing employees of the presence of any permit spaces. For whatever method is chosen, OSHA will check to ensure that the method is effective.

4.2 It has been determined by the Water & Wastewater Superintendent that the following permit spaces identified at our worksite will not be entered by our employees.

LOCATION	HAZARD
None	N/A

The following measures have been taken to prevent employees from entering these spaces: _____

Notification by Supervisor.

It has been determined by the Water & Wastewater Superintendent that the following permit spaces identified at our worksite may be entered by employees of our workplace:

LOCATION	HAZARD
All sewer manholes with a depth of four feet or more.	Atmospheric & fall hazard. Limited means of ingress/egress.
PRV Vault US Route 7 South & Catamount Drive	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Woodbriar MHP & US Route 7 South	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Birchwood Manor MHP & West Milton Road	Atmospheric, engulfment, limited means of ingress/egress.
Meter Vault – Bert’s MHP & US Route 7 South	Atmospheric, engulfment, limited means of ingress/egress.
Wet Wells 1 & 2 – Wastewater Lift Station 418 Route 7 South	Atmospheric, engulfment, limited means of ingress/egress. Fall hazard

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LOCATION	HAZARD
Meter/PRV Vault – Meadow Road & Hobbs Rd.	Atmospheric, engulfment, limited means of ingress/egress.
PRV Vault – 33 River Street	Atmospheric, engulfment, limited means of ingress/egress.
Wet Well – Wastewater Lift Station - 33 River	Atmospheric, engulfment, limited means of ingress/egress.
Dry Pit – Wastewater Lift Station – 33 River Street	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Basement (former wet well) – Maplewood Avenue Booster Pump Station	Atmospheric, limited means of ingress/egress.
Wet Well – Wastewater Lift Station Kendra Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station- Water Plant – 80 Westford Road	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Aluminum Sulfate Storage Tank – Water Plant	Atmospheric, limited means of ingress/egress, chemical.
Aluminum Sulfate Storage Tank – Wastewater Plant – 145 Lamoille Terrace	Atmospheric, limited means of ingress/egress, chemical.
500,000 gallon water tank – Water Plant – 80 Westford Road	Atmospheric, limited means of ingress/egress, engulfment.
Meter Pit – North Rd & Rowe Road	Atmospheric, limited means of ingress/egress, engulfment.
PRV Vault – Oglewood Drive	Atmospheric, limited means of ingress/egress, engulfment.
Old Chemical Waste Storage Tank – Water Plant, 80 Westford Road next to shop doors	Chemical, Atmospheric, engulfment.
650,000 gallon water tank – Water Plant – 80 Westford Road	Atmospheric, limited means of ingress/egress, engulfment.
WWTF – Headworks – Grit Removal Tank	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – SBR Basins 1,2 & 3	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Chemical Treatment Building – Alum & Sodium Hydroxide Storage Tanks	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Biosolids Processing Building – Sludge Holding Tanks 1 & 2.	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – Biosolids Processing Building – Septage Holding Tank	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – In Plant Sewage Lift Station – Wet Well	Atmospheric & fall hazard. Engulfment. Limited means of ingress/egress.
WWTF – UV Disinfection Building – UV	Atmospheric & fall hazard. Engulfment. Limited

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Channel & Process Water Holding Tank	means of ingress/egress.
Wet Well – Wastewater Lift Station Maplewood Avenue	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station Allen Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.
Wet Well – Wastewater Lift Station Centre Drive	Atmospheric, engulfment, limited means of ingress/egress, electrical.

! Note to the Employer: The measures used to prevent entry could include permanently closing the space; use of barriers; specialized tools, under management’s control, to open the space (s); and supplementing these measures with training and signs. The steps taken by the employer must be effective in preventing employee entry into the permit space(s).

Employers who determine that their employees will enter a permit space must set up procedures to ensure safe entry. Because of the different types of permit spaces found in the work environment, the regulations allow options for employers to use to obtain this goal. Proper evaluation by the employer will determine which procedures can be used. Some permit spaces may be reclassified as non-permit spaces. Others may qualify for alternative procedures. Still others may require a full permit-required confined space program. It is the responsibility of the employer to determine which procedure is acceptable for the particular space of concern.

Permit-Required Confined Space Entry Procedures (Options)

- a) Alternative Procedures (Subsection 6.0)*
- b) Full Permit Space Entry Program (Subsection 5.0)*
- c) Reclassify as Non-Permit Space (Subsection 7.0)*

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5.0 PERMIT-REQUIRED CONFINED SPACE (PRCS)

! Note to the Employer: A written PRCS program is not required for:

1) Situations where alternative procedures are used for entry. The procedures outlined in paragraph (c) (5) (ii) are mandated and written verification is required by (c) (5) (i) (H). Appendix D can be used to document that the alternative procedures ensure safe entry.

2) Situations where a permit space is reclassified as a non-permit space and entry is not required to verify elimination of all the hazards. Paragraph (c) (7) (iii) requires employers to document that the hazards have been eliminated. Appendix E can be used for documenting that the reclassification allows for safe entry.

If procedures 1 or 2 cannot be used and if the employer determines that their employees will enter a permit space, then a written PRCS program (see Appendix F) is needed for each permit space and Section 5.1 must be completed. Keep in mind that a written PRCS program is different than an entry permit (see Appendix Q). A written PRCS program is a guidance document for employers and employees so they can develop and utilize the procedures required for safe entry into a permit space. An entry permit is basically a checklist to ensure all the steps for the safe entry have been taken prior to entry.

The program elements to be considered for a full PRCS are outlined in paragraph (d) of the standard and pages 9-14 of this document. This program must specify the potential hazards of the space and the procedures needed to correct them. These step-by-step procedures must include acceptable entry conditions, isolation methods needed, methods for eliminating or controlling hazardous atmospheres (i.e., purging, cleaning, ventilation), equipment needed, testing protocol, and duties of permit space team members.

5.1 Safe entry procedures have been developed for each permit space in our system. These procedures specify the proper methods and equipment necessary to conduct the entry operation in a safe manner. A Permit Space Entry Procedure Worksheet has been completed for each permit space by Water & Wastewater Superintendent and they are located at the Wastewater Treatment Facility Office, McGrath Reservoir Operations Room, and the Water & Wastewater Superintendent's Office at the Municipal Complex.

! Note to the Employer: Appendix F contains a Permit-Required Confined Space (PRCS) Program Worksheet which can assist in the development of such a program. Appendix F-1 contains an example of a completed written program.

A written PRCS Program addresses the following elements for each permit space entered:

- The methods used to prevent unauthorized entry.
- Identify and evaluate the specific hazards before entry.

PERMIT REQUIRED CONFINED SPACE WRITTEN PROGRAM

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- Establish measures for the safe control of identified hazards such as isolation, purging, inerting, ventilation, barricades, lockout/tagout, etc.
- Procedure to test the permit space and document results.
- Procedure to maintain acceptable conditions in the permit space.
- Identify duties of each employee required and provide training.
- Provide at least one attendant outside the permit space for the duration of the entry operations.
- Implement proper procedures for rescue.
- Establish a written system for preparation, issuance, use and cancellation of permits.
- Coordinate entry operations during multiple employer entries.
- Review entire entry program at least annually, unless previously reviewed at conclusion of a specific entry.

6.0 ALTERNATIVE PROCEDURES

6.1 The OSHA regulations allow permit spaces which have, as their only hazard, an actual or potential hazardous atmosphere to use alternative procedures for entry. These alternative procedures as discussed in Section I do not require the implementation of a full PRCS program. The following is a list of permit spaces at our workplace which currently qualify for alternative procedures:

LOCATION
Manholes and vaults less than 4 feet in depth may be entered without safety harness upon verification that no atmospheric hazards exist following normal testing protocols.

! Note to the Employer: Refer to Appendix D for a Worksheet which can be used to certify that alternative procedures can be used and that the space is safe for entry. For those employers who can demonstrate that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry, only the General Requirements--paragraph (c) (5) and Training--paragraph (g) are required. Remember, continuous forced air ventilation controls the hazard--it does not eliminate it.

7.0 RECLASSIFYING PERMIT SPACE TO NON-PERMIT SPACE

7.1 The OSHA regulations also allow permit spaces to be reclassified as non-permit spaces by the total elimination of all the hazards. A permit space can be reclassified as a non-permit space if there are no actual or potential atmospheric hazards and if all the other hazards within the space are eliminated without entry into the space. Information on reclassifying permit spaces to non-permit spaces is discussed in Section I. The following

PERMIT REQUIRED CONFINED SPACE WRITTEN PROGRAM

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is a list of permit spaces at our workplace that can be reclassified as non- permit spaces by the elimination of the hazards:

LOCATION

! Note to the Employer: Refer to Appendix E for a worksheet which can be used to certify that the hazards have been eliminated and the space is safe for entry. If an entry is needed to eliminate or verify the elimination of a hazard, then a full PRCS program is required. Once it has been determined that all the hazards have been eliminated, then the space can be reclassified.

8.0 PERSONNEL, DUTIES AND TRAINING FOR FULL PERMIT REQUIRED CONFINED SPACE ENTRY OPERATIONS

! Note to the Employer: Subsection 8.0 does not apply if a full PRCS program is not used. Note that subsection 12.0 contains the training requirements needed when reclassifying or alternative procedures are used.

8.1 Entry into any PRCS where a full PRCS program is mandated will require a specially trained and equipped team. Each team will consist of an:

- authorized entrant
- attendant
- entry supervisor
- rescue personnel

8.2 Each member of the team will receive initial and refresher training every three years. The training will be specific for the duties of each team member and include the procedures and practices necessary to protect them from the dangers of the permit space.

! Note to the Employer: Provide a training program for employees using the information contained in this document, and use any other applicable resources. Make your training program specific to the particular permit space(s) to be entered. This training must give team members the understanding, knowledge and skills necessary for them to safely perform their assigned duties.

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8.3 The training program will include the duties of each team member as listed below:

Authorized Entrants

- Know the hazards associated with the permit space and their effects.
- Properly use the equipment required for entry.
- Maintain a continuous means of communication with the attendant.
- Alert the attendant in the event of an emergency.
- Evacuate the space if an emergency occurs.
-

Attendants

- Know the hazards associated with the permit space and their effects.
- Maintain an accurate account of the authorized entrants.
- Remain at their assigned station until relieved by another attendant or until the permit space entry is complete.
- Monitor conditions in and around the permit space.
- Summon rescue and applicable medical services in the event of an emergency.
- Perform non-entry rescue procedures.
- Perform appropriate measures to prevent unauthorized personnel from entering the permit space.
-

Entry Supervisors

- Know the hazards associated with the permit space and their effects.
- Verify that the safeguards required by the permit have been implemented.
- Verify that rescue services are available and that means for summoning them are operable.
- Cancel the written permit and terminate the permit space entry when required.
- Remove personnel who are not authorized to enter the permit space during entry operations.
- Periodically, determine that the entry operation is being performed in a manner consistent with the requirements of the permit space entry procedures and that acceptable entry conditions are maintained.

Rescue Personnel

- See Appendix P for information on rescue personnel.

8.4 Permit-Required Confined Space (PRCS) Program Training - If a full permit-required confined space program is required, training is needed on the following topics:

- Types of confined space hazards.
- Components of the written PRCS program.
- Components of the entry permit system.
- Components of the hot work permit.
- The need for prompt guarding of the entrance opening.
- Atmospheric testing equipment including its use, calibration, and maintenance.
- Atmospheric testing protocol:
 - oxygen, combustibles, toxics
 - pre-entry, frequent or continuous testing
 - check all levels of the space
- Methods for the control or elimination of any atmospheric hazards:
 - Inerting
 - Draining and rinsing
 - Purging and cleaning
 - Continuous forced air ventilation
- Procedures the employees must follow if they detect a hazard.
- The evaluation process to be used for reentry if hazards are detected.
- Train employees on the use of entry equipment (e.g., ladders, communication devices, etc.)
- Personal protective equipment required:
 - full body harness
 - respiratory protection
 - chemical protective clothing
 - eye and face protection
- Personnel and their responsibilities:
 - authorized entrant
 - attendant
 - entry supervisor

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rescue team

- On-site or Off-site rescue:
 - Rescue Plan
 - practice rescues
 - basic first-aid and cardiopulmonary resuscitation certification
 - full body harness with retrieval line attached to mechanical retrieval device
- Procedures for annual review of canceled permits
- Any other information necessary to ensure employee safety during a permit space entry operation.
- Documentation of the training.

! Note to the Employer: Again, the training required is dependent on the specific space to be entered and the procedures which are needed to protect entrants. The information provided in this training subsection is a generalization of the topics which must be covered during employee training. Additionally, document employees' training and refresher training. This certification simply requires the employees' names, the signatures or initials of the trainers, and dates of training. Appendix R has been added if additional space is needed to record employee training.

8.4.1 The following is a list of employees who have been equipped and trained to serve as authorized entrants at our facility:

Authorized Entrants	Trainer	Date of Training
Nathan Lavallee		
Roger Hunt		
Todd Blaisdell		
Randy Mathieu		

8.4.2 The following is a list of employees who have been equipped and trained to serve as attendants:

Authorized Entrants	Trainer	Date of Training
Nathan Lavallee		
Roger Hunt		
Todd Blaisdell		

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Randy Mathieu		

8.4.3 The following is a list of employees who have been trained to serve as entry supervisors:

Entry Supervisor	Trainer	Date of Training
Nathan Lavallee		
Roger Hunt		
Todd Blaisdell		
Randy Mathieu		

! Note to the Employer: Remember, training must be provided:

- *Before employees are assigned duties involving permit space entry.*
- *Whenever their assigned duties change.*
- *Whenever there is a change in a permit space that creates hazards for which they have not been notified.*

9.0 HOST EMPLOYER'S RESPONSIBILITIES WITH CONTRACTORS

9.1 When contractors are involved in permit space entry work at our workplace, the Water & Wastewater Superintendent will inform them of the following information and coordinate any entry operations:

- The location of the permit spaces at our facility and that entry into these spaces is only allowed through a permit space program or alternative procedures or space reclassification.
- Our rationale for listing the space as a permit space such as any identified hazards and our experiences with the particular space.
- Precautions that we have implemented to protect employees working in or near the space.
- The Water & Wastewater Superintendent will debrief the contractor at the completion of the entry operation, or during if a need arises, and if any hazards were confronted or created during their work.

! Note to the employer: Appendix G has been included to assist with the requirements of this subsection.

10.0 CONTRACTOR' S RESPONSIBILITIES WITH HOST EMPLOYERS

! Note to the Employer: Subsection 10 is required to be completed by a contractor when he/she is hired to perform work in a permit space.

10.1 When a Contracting Company is hired to perform work in a PRCS, the Contractor's Representative will obtain the following information from the host employer and ensure the following tasks are performed:

- Obtain any information on the hazards of the permit space and information from previous entry operations from the host employer.
- Determine if the host employer's workers will be working in or near the space.
- If the host employer will have employees working in or near the space during our entry operation, Name of Contractor's Representative will coordinate entry operations with the host employer's representative.
- Will inform the host employer of the permit space program that will be utilized.
- Hold a debriefing conference at the completion of the entry operation or during the entry operation (if needed) to inform the host employer of any hazards confronted or created.

! Note to the Employer: For clarification, refurbishing of the existing equipment and space is considered maintenance; reconfiguration of the space or installation of new equipment (as for a process change) is usually considered construction. Additionally, Appendix H can be used to assist the contractor with the standards requirements.

11.0 RESCUE AND EMERGENCY SERVICES

! Note to the Employer: This subsection is not required if the permit space has been reclassified as a non-permit space or if alternative procedures are used.

11.1 The precautions and procedures outlined in our written PRCS program are designed to ensure that our employees are safe while working in permit spaces. Under no circumstances do we expect our employees to enter a permit space where hazards have not been eliminated or effectively controlled.

Additionally, we recognize that unexpected situations might arise that prevent entrants from self-rescue. In response, the following rescue and emergency action plan has been developed and will be strictly enforced:

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The Town of Milton has decided to utilize:

(Check all that apply)

- On-site rescue services which include:
- non-entry rescue procedures
 - entry rescue procedures
- Off-site entry rescue services.

! Note to the Employer: Employers who choose to use off-site rescue services need not complete subsections 11.2, 11.3, and 11.4, but must complete 11.5. Additionally, a non-mandatory letter (Appendix N) has been included to notify off-site rescuers (e. g., local fire department) of the potential hazards associated with the space. This form should be sent well in advance of any entry operation. This advanced information provides outside rescue services with the time to develop appropriate rescue strategies and practice rescue techniques.

! Note to the Employer: Each permit space must be individually evaluated to determine whether entry or non-entry rescue procedures can be used to remove incapacitated entrants. Non-entry rescue is the desired method because it is not necessary to place the rescuer at risk to remove the injured employees. Non-entry retrieval systems, such as full body harness with retrieval line, must be used whenever an authorized entrant enters in to a permit space, except in situations where the retrieval system would increase the risk of entry or would not contribute to the rescue.

11.2 The Water & Wastewater Superintendent will ensure that each member of the Department's Rescue Service is appropriately trained. Refer to Appendix P for rescue plan and training requirements.

11.3 The Water & Wastewater Superintendent will ensure that each member of the Department's Rescue service will receive basic first aid and cardiopulmonary resuscitation (CPR). At least one of these members must hold current certification in first aid and CPR.

11.4 The Water & Wastewater Superintendent will ensure that the Department's Rescue team members will practice rescue techniques at least annually from the actual or similarly configured space(s).

! Note to the Employer: Simulated rescue operations must include dummies, manikins, or actual persons from the actual or from representative permit spaces. Actual rescues during the 12-month period may also substitute for a practice rescue.

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11.5

The Water & Wastewater Superintendent has made arrangements with the Milton Fire & Rescue Departments for off-site rescue and emergency services and they have consented to provide this service.

The Water & Wastewater Superintendent has informed Milton Fire & Rescue Departments of the hazards they may encounter if they are summoned. The Water & Wastewater Superintendent has also provided access to the rescue service so they can evaluate the permit spaces to develop appropriate rescue plans and practice rescue operations. If rescue and emergency services are needed, the following procedures will go into effect:

! Note to the Employer: Describe the procedures that will be used for summoning the rescue and emergency services. Include the name, location, and telephone numbers of the rescue services in this program and also on the entry permit. Train employees on the specific procedures for summoning the rescue and emergency services.

Milton Fire & Rescue: Telephone Number - **911**
Location – 39/41 Bombardier Road
Approximate Response Time - < 10 Minutes

The specific procedures for summoning rescue and emergency services for our workplace is outlined as follows: **Call 911 immediately and follow the dispatcher's instructions!**

12.0 TRAINING

12.1 Training must be given to each employee who has access or potential access to a permit space. The amount and type of training needed will depend on the individual's duty assignment. For example the Milton Fire & Rescue Departments, some employees may only be required to know the existence, location, and danger posed by a permit space. Others would need considerably more training if they are members of a PRCS team. Still others would need training as it pertains to the type of entry procedures used (i.e., alternative procedures or reclassifying to non-permit space procedures). The overall intent of this training is to give employees the understanding, knowledge, and skills necessary for the safe performance of their assigned duties in relation to the permit spaces of concern.

12.2 Four basic categories have been set up to train employees based on duties and potential exposure.

12.2.1 **Awareness Training**- Awareness training for employees potentially exposed to permit spaces can be satisfied by providing them with the specific information contained in subsection 3 and 4 located on pages 72 and 73.

12.2.2 **Training Required for Using Alternative Procedures**-If the space qualifies for alternative procedures, training on the following topics is warranted:

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- A major point concerning the use of alternative procedures is that these procedures can only be used when a hazardous atmosphere is the only hazard of concern.
- The harm associated with the atmospheric hazards of concern including their acceptable entry levels and symptoms of overexposure.
- Awareness training to recognize other potential hazards in or around the space.
- Any conditions which may make it unsafe to remove the entrance cover.
- The need for prompt guarding of the entrance opening.
- Atmospheric testing equipment including its use, method of calibration, and maintenance.
- Atmospheric testing protocol for oxygen, combustibles, toxics
- Pre-entry, frequent or continuous testing of the permit space.
- Check all levels of the space for atmospheric hazards.
- Atmospheric controls
 - inerting
 - draining and rinsing
 - purging
 - continuous forced air ventilation including type, proper use and placement, and its limitations
- Procedures the employee must follow if a hazardous atmosphere is detected.
- The evaluation process to be used for reentry if a hazardous atmosphere is detected or the individual vacates the space and returns some time later.
- Train employees on the use of entry equipment used including ladders and intrinsically safe lighting.
- Personal protective equipment (e.g., gloves, hard hats, boots, etc.), its use, limitations, and required maintenance.
- A review of the completed written certification form (Appendix ID) with the employee prior to entering the space.
- Any process which may introduce a hazard (e.g., welding, cleaning with chemical solvents, etc.) which would prohibit use of alternative procedures.
- The requirements of paragraph (c) (5) must be reviewed with the employee.
- Any other information needed to ensure the safety of the employee.

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- The documentation of the training.

12.2.3 Training Required for Using the Reclassifying Permit Space

Procedures-If the permit space can be reclassified as a non-permit space, the following items must be discussed:

- Documentation of the elimination of the hazards. If the elimination of the hazards or verification of elimination requires employees to enter the space, then a full PRCS program is needed.
- Train employee on the hazards associated with the space (i.e. mechanical, chemical, atmospheric) and the methods needed to eliminate the hazards such as:
 - Lockout/Tagout
 - Disconnection and misalignment of pipes
 - Double block and bleed
 - Blanking and blinding
 - Removal of engulfment hazards
 - Elimination of hazardous atmosphere by draining, inerting, purging, cleaning, venting
- Train employees on the use of entry equipment used including ladders, ground fault circuit interrupters for electrical equipment, etc. Personal protective equipment (e.g., gloves, hard hat, boots, etc.) including its use, limitations, and required maintenance.
- A review of the completed written certification form (Appendix E) with the employee entering the space.
- The requirements of paragraph (c) (7) must be reviewed with the employee(s).
- Inform employees that any procedures such as welding, cleaning with a chemical, etc. would negate the reclassification and convert the space back to a permit space.
- Any conditions which may make it unsafe to remove entrance cover.
- The need for prompt guarding of the entrance opening.
- Atmospheric testing equipment including its use, method of calibration, and maintenance.
- Atmospheric testing protocol
 - oxygen, combustibles, toxics
 - pre-entry, frequent or continuous testing
 - check all levels of the space

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- Procedures the employee will follow if a hazard is detected
- The evaluation process to be used for reentry if a hazard is detected or the individual vacates the space and returns some time later.
- Awareness training to recognize other potential hazards in or around the space.
- The documentation of the training.

12.2.4 **Training Required for using full Permit-Required Confined Space Procedures (see subsection 8.4)**

! Note to Employer: The training required depends on the specific permit space to be entered and the procedures which are needed to protect entrants. The information provided in this training subsection is a generalization of the topics which must be covered during employee training.

13.0 PERMIT-REQUIRED CONFINED SPACE PROGRAM REVIEW

! Note to the Employer: This subsection is not required if the permit space has been reclassified as a non-permit space or if alternative procedures are used.

13.1 Within one year of any entry operation, Water & Wastewater Superintendent will conduct a review of the program using the cancelled entry permits to identify any deficiencies in our program. A review will be conducted sooner if there is reason to believe that the program does not adequately protect our employees. Any corrective measures will be documented by a revision of the program. Employees will be trained on any changes. Additionally, employees who note any inadequacies with the program can contact Water & Wastewater Superintendent

If no permit space entry operations are conducted during the year, no review is needed.

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APPENDIX A

PERMIT SPACE ENTRY PROCEDURES

- A.1 A Permit Space Entry Procedure form for each Permit Required Confined Space (PRCS) will be maintained.
- A.2 The forms will be created and maintained by the Water & Wastewater Superintendent. A new form will be created each time a PRCS is identified.

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PRCS ENTRY PROCEDURE

Location _____ Date _____ Time _____

Entry Supervisor _____ Phone _____ Call # _____

Mark the appropriate column: <u>X</u> Yes, <u>X</u> No, <u>X</u> N/A Not Applicable		Yes	No	N/A
1.	Is a "DANGER – CONFINED SPACE" sign posted to identify the site as requiring a confined space entry permit to occupy the area?			
2.	Have all entrants been provided training and acquired the understanding, knowledge and skills necessary for the safe performance of their duties while occupying this confined space?			
3.	Have all attendants been provided training and acquired the understanding, knowledge and skills necessary for the safe performance of their duties while attending the entrant while this confined space is occupied?			
4.	Have all entry supervisors been provided training and acquired the understanding, knowledge and skills necessary for the safe performance of their duties while supervising the confined space entry?			
5.	Is the only hazard an actual or potential hazardous atmosphere? If yes, than the space may not be a PRCS. If no, the space is a PRCS and the remainder of this form must be completed for this space.			
6.	Has the permit space been isolated?			
7.	Is monitoring available to verify that conditions are acceptable for entry throughout the duration of an authorized entry?			
8.	Are Employees trained on how to maintain and properly use testing and monitoring equipment?			
9.	Is ventilating equipment needed to obtain acceptable entry?			
10.	Is communication equipment necessary and available for use between attendant and entrant?			
11.	Are entrants provided and trained in the use of the proper personal protective and safety equipment to enter this space?			
12.	Does the space have adequate lighting?			
13.	Are barriers and shields available to secure the area from pedestrian, vehicles and other external hazards?			

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PRCS Entry Procedure for (Location)

(Cont.)

SAFETY EQUIPMENT CHECKLIST

The following safety equipment is required to enter this space:

- | | |
|---|---|
| <input type="checkbox"/> Safety Harness with Lifeline | <input type="checkbox"/> Ear Protection |
| <input type="checkbox"/> Retrieval Lift/Fall Protection | <input type="checkbox"/> Foot Protection |
| <input type="checkbox"/> Respirator Type _____ | <input type="checkbox"/> Protective Clothing |
| <input type="checkbox"/> Hard Hat | <input type="checkbox"/> Resuscitator |
| <input type="checkbox"/> Eye Protection | <input type="checkbox"/> Communications Equipment |
| <input type="checkbox"/> Hand Protection | <input type="checkbox"/> Gas Tester with Alarms |

Other (specify): _____

Fixed gas monitor Calibration Record

Name: _____

Make: _____

Serial Number: _____

Last Calibration Date: _____

Last Calibration Date: _____

Last Calibration Date: _____

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PRCS Entry Procedure for (Location)

(Cont.)

RESCUE AND EMERGENCY SERVICES

1. The Town of Milton does not have an in house Confined Space Rescue team.
2. Rescue and Emergency Services are provided by the Town of Colchester Technical Rescue and they can be notified by calling **911** or by radio call to the Public Works or Town of Milton Radio Base.

Public Works Department – 893-6030
Town Manager’s Office – 893-6655

IF A PHONE IS AVAILABLE CALL 911 in an emergency!

Attendants are reminded that they SHALL NOT enter a confined space to rescue an entrant!

3. Attendants should use non-entry rescue equipment when in use, but should not attempt to remove the entrant from the retrieval line or safety harness. This should be performed by trained rescue personnel only.
4. Rescue Equipment Available:
 - Chest/full Body Harness
 - Retrieval Line, Lift & Tripod

Additional notes for this space:

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APPENDIX B

CONFINED SPACE ENTRY PERMIT

To be completed before and during each confined space entry.

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Reserved for confined space permit page 1

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Reserved for confined space permit page 2

VOSHA
Written Programs
Matrix

Question #	DEPARTMENT <i>LIKELY</i> TO HAVE EXPOSURES THAT REQUIRE WRITTEN PROGRAMS / POLICIES /PROCEDURES	Administration	Code Enforcement	Public Works	Water / Waste Water	Recycle	Parks & Rec.	Law Enforcement	Fire	EMT / Ambulance	Health & Safety Manual (page number)	Policy and/or Training Documents Attached
	HAZARDS											
HZ - 2	Hazard Communications (employee right to know)	X	X	X	X	X	X	X	X	X	35	
HZ 3	Lockout/Tag out (control of hazards energy)		X	X	X	X	X		X	X	7	
HZ 4	Permit and non-permit Confined Space		X	X	X	X			X		31	
HZ 5	Blood borne Pathogens	X	X	X	X	X	X	X	X	X		X
HZ 6	Excavation, trenching and flagging, work zone safety		X	X	X						25 - 30	
HZ 7	Ergonomic issues - Office & Shop - stretching, soft tissue injuries	X	X	X	X	X	X	X	X	X		X
HZ 8	Emergency Action Plans Internal & External Emergencies	X	X	X	X	X	X	X	X	X		X
HZ 9	Respiratory Protection Program			X	X	X			X		18	
HZ 10	Personal Protection Equipment (PPE)	X	X	X	X	X	X	X	X	X	15 - 18	
HZ 11	Fleet Driver Safety Program	X	X	X	X	X	X	X	X	X	32- 33	
	ADDITIONAL WRITTEN PROGRAMS or THESE HAZARDS ARE ADDRESSED IN OTHER PLANS/POLICIES											
HZ 12	Chainsaw Safety			X			X		X		22 - 23	
HZ 13	CPR/First-Aid	X	X	X	X	X	X	X	X	X	34	
HZ 14	Cylinder-Comp, gasses			X	X	X			X	X	21 - 22	
HZ 15	Electrical Safety	X	X	X	X	X	X	X	X	X	20	
HZ 16	Fall Protection		X	X	X	X			X		16 - 17	
HZ 17	Hand / Power Tool Safety		X	X	X	X	X		X		19 - 24	
HZ 18	Hearing Protection			X	X	X			X		17	
HZ 19	Housekeeping	X	X	X	X	X	X	X	X	X	10 - 11	
HZ 20	Ladder Safety		X	X	X	X			X		23	
HZ 21	Machine Guarding			X	X	X	X		X		20 - 24	
HZ 22	Powered Industrial Lift Trucks - forklift			X	X	X					N/A	
HZ 23	Snow and Ice Removal - (Slips, Trips & Falls)	X	X	X	X	X	X				10	
HZ 24	Snowplowing - included in the Tewa Winter Operations Plan			X								X
HZ 25	Work zone Safety			X	X			X	X	X	25 - 30	
HZ 26	Welding/Torch Safety			X	X						21 -22	
HZ 27	Workplace Violence	X	X	X	X	X	X	X	X	X		X
	All forms of Harassment / Hostile Work Environment	X	X	X	X	X	X	X	X	X		X
	Physical Fitness - Do you encourage physically active employees to meet voluntary fitness standards			X	X	X	X	X	X	X		X
HZ 30	Use of Force, updated to include Tazers if appropriate							X				X
HZ 31	High Speed Pursuit / Emergency Response							X	X	X		X
HZ 32	Domestic Violence Calls	X	X	X	X	X	X	X	X	X		X
HZ 33	Physical Training Activities - Structured to include safety considerations							X	X	X		X
	DEPARTMENT SPECIFIC WRITTEN PROGRAMS											
	Buildings & Grounds Department											
	Weed Wacker/Trimmer Safety Plan										Section XIV	
	Highway Department											
	Excavation Safety Plan										Section XIV	
	Hazard Communication Program										Section XIV	
	Sewer Vac-Truck Operator Safety Plan										Section XIV	
	Standard Operating Procedure - Dump Truck Plow Frame										Section XIV	
	Tree Clearing, Trimming and Chipping Plan										Section XIV	
	Work Zone Safety and Traffic Control Plan										Section XIV	
	Water/Wastewater Department											
	Control of Hazardous Energy: Lockout/Tagout Procedure										Section XIV	
	Excavation Safety Plan										Section XIV	
	Hazard Communication Program										Section XIV	
	Noise and Hearing Conservation Guide										Section XIV	
	Permit Required Confined Space Written Program										Section XIV	