



San Diego Unified School District

LANDSCAPE

SAFETY

December 4, 2013

San Diego Unified School District

Landscape Safety

Landscape Technicians may encounter a variety of safety hazards. This manual provides guidelines and helpful hints that will increase job performance and greatly decrease the potential for accidents and possible injuries. In most cases the recommendations take only minutes to complete. A few moments of caution will avoid costly accidents. For specific code requirements regarding safe work practices or training assistance please contact the safety office at 858-627-7174 or visit our web site: <http://www.sandi.net/Domain/144>

Prior to assignment you should be aware of general safety procedures including site emergency procedures. Being made aware of what to do in the event of an emergency and where to go is critical for your safety & the safety of students & staff. Each site uses a standardized emergency template however there are elements to each plan that are unique to the individual location such as signaling methods, evacuation locations, & staff assignments.

Immediately notify your lead or supervisor of any unsafe condition. Reports of unsafe or hazardous conditions can also be reported to the safety office. The primary objective is to ensure the safety of students, staff, & visitors.

Landscape Storage Rooms

Storage and workrooms should be maintained in a clean orderly manner. For the safety of students and the security of equipment all storage rooms shall remain locked unless actively occupied.

Storage/equipment rooms should have the following safety items and meet these guidelines:

- Inventory all hazardous materials and maintain updated written inventory in the room.
- Maintain copies of Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) onsite, or provide written instructions where the MSDS/SDS can be found.
- Safety goggles or glasses for use when there is a risk of flying particles or liquids splashing. Face shields may also be required where goggles alone will not adequately protect the eyes & face from flying particles or splashing of hazardous substances.
- Rubber gloves to protect hands from chemicals, fertilizers, and herbicide products.
- Leather gloves for use with cutting equipment, hand tools, & other “dry” work.
- Hearing protection.
- Ladder(s) if none are available in Landscape storage room request the use of a site ladder from the BSS/POS.
- Approved containers for fuel storage. Approved flammable storage cabinets are required for areas storing more than 10 gallons of fuel.
- Limit storage of hazardous materials to quantities below the following levels unless given prior approval by the district Safety Office, (limits are for the entire site, not just Landscape):
 - 500 pounds of a solid substance
 - 55 gallons of a liquid
 - 200 cubic feet of compressed gas

San Diego Unified School District

Landscape Safety

Powered & Specialized Equipment Safety

Powered and specialized equipment can be harmful if used improperly or with incorrect techniques. Instruction on the safe operation of equipment must be received prior to use. Supervisors and Leads should review equipment owner's manuals prior to training staff.

Powered equipment includes gas, electric, battery, and pneumatic powered equipment.

Powered equipment can be bulky and heavy. In addition landscape duties involve frequent pushing/pulling motions while holding/using tools and equipment. Know your personal physical limitations and take breaks or rotate tasks to avoid fatigue which can lead to injuries and accidents. Personal safety & the safety of others must always be our primary concern.

Infrequently used Specialized Equipment

This document does not cover infrequently used equipment such as wood chippers, aerator's, and riding sweepers. Please consult with your Lead or Supervisor as well as the owner's manual prior to using any piece of powered equipment not listed in this manual.

Always inspect all tools & equipment prior to use. If damage is found or the tool/equipment does not work as designed do not use it! Damaged tools/equipment must be taken out of service immediately. Place a tag on broken equipment stating that it is out of service & notify your lead or supervisor. All installed guards must be used and kept in good condition.

Work Site Inspection Always inspect the area prior to commencing landscape work. Pay special attention to obstructions that could damage equipment or become propelled in the air. Always inspect overhead work areas for the presence of electrical wires. Ensure that you maintain a buffer zone around the work area so that students, staff & visitors are not exposed to potential hazards.

Precautions to prevent Heat Illnesses

Condition yourself for working in hot environments. Start slowly then build up to more physical work. Allow your body to adjust over a few days. Drink plenty of liquids. Hydration is a continuous process, do not wait until you are thirsty, by then there is a good chance that you are already on your way to being dehydrated. Electrolyte drinks are good for replacing both water and minerals lost through sweating. Take frequent breaks in shaded or air conditioned areas, especially if you notice you are getting a headache, start feeling over heated, or begin to show any of the other symptoms of a heat related illness. When employees travel to undeveloped locations such as vacant lots during hot weather supervisors must ensure that shade is provided via the use of umbrellas, canopies or other portable devices. The portable shade devices shall be set up as close to the work location as possible. For specific requirements related to heat illness please consult the Districts Heat Illness Prevention Plan or contact the Safety Office.

San Diego Unified School District

Landscape Safety

Personal Protective Equipment, (PPE) Personal safety is an important consideration when using tools whether they are powered or not. Take a moment to plan your work and determine your equipment & safety needs. Consult with your supervisor or lead to determine appropriate PPE and/or to request new or additional PPE. The following guidelines will help you and your supervisor determine whether or not PPE is required and what type of protective devices to use.

- **Eye and face Protection:** required when there is a risk of eye injuries such as punctures, abrasions, contusions, or burns as a result of contact with flying particles, hazardous substances, projections or injurious light rays in the work environment. Eye and face protective devices must meet American National Standards Institute(ANSI), standard Z87.1
- **Hearing Protection:** refer to SDUSD Hearing Conservation Program for guidance.
- **Hand Protection:** required for employees whose work involves unusual and excessive exposure of hands to cuts, burns, harmful physical or chemical agents which are encountered and capable of causing injury or impairment.
- **Body Protection:** May be required for employees whose work exposes parts of their body, not otherwise protected, to hazardous or flying substances or objects. Clothing appropriate for the work being done shall be worn. Loose sleeves, tails, ties, lapels, cuffs, or other loose clothing which can become entangled in moving machinery/equipment/tools shall not be worn.
- **Foot Protection:** appropriate foot protection is required when employees are exposed to foot injuries from electrical hazards, poisonous substances, falling objects, crushing or penetrating actions, which may cause injuries or who are required to work in abnormally wet locations.
- **Head Protection:** required when there is a risk of receiving head injuries from flying or falling objects and/or electric shocks and burns. Head protective devices must meet the ANSI Z89.1 standards.

Mowers

- Read the owner's manual and follow all manufacturers' recommendations.
- Wear PPE: eye protection, trim-fitting pants and shirt, sturdy shoes, and ear protection.
- Check the machine for loose, broken, or damaged parts. Pay special attention to guards.
- Be sure the area to be mowed is visually inspected and free of hazards such as sticks, stones, or other objects which may damage the equipment or be propelled into the air by the blades.
- Keep students, staff, & visitors a minimum of 25 feet away from the work area.
- Mow advancing forward at all times so you can see where you are going and any hazards.
- Keep all body parts away from the blade housing and discharge chute.
- Pay attention to the discharge direction being particularly mindful of others in the area.
- Do not use riding mowers on steep slopes. Drive up & down minor slopes when using a riding mower, mow across a slope while using a walk behind mower.
- Do not operate gas powered units indoors.
- Refuel only with engine stopped and cooled down.
- Stop the machine & disconnect the spark plug wire prior to performing service.
- Store in a secure area that is inaccessible to students & untrained staff.

San Diego Unified School District

Landscape Safety

Line Trimmers

- Read the owner's manual and follow all manufacturers' recommendations.
- Wear PPE: eye protection, trim-fitting pants and shirt, sturdy shoes, and ear protection.
- Check the machine for loose, broken, or damaged parts -- repair or replace as needed.
- Be sure the working area is free of hazards, which could hamper the use of the trimmer.
- Keep students, staff, & visitors a minimum of 50 feet away from the work area.
- Do not operate the trimmer near windows.
- Keep the trimmer close but not touching the ground. Angle the unit slightly to discharge trimmings away from your body.
- Hold the trimmer firmly with both hands in a properly balanced stance. Use a shoulder harness when needed.
- Keep the hot engine and exhaust away from your body.
- Use only monofilament string recommended by the manufacturer.
- Do not use the trimmer for any purpose other than manufacturer's recommendations.
- Never touch the string while in operation.
- Do not operate gas powered units indoors.
- Refuel only with engine stopped and cooled down.
- Stop machine & disconnect spark plug wire prior to performing service.
- Store in a secure area that is inaccessible to students & untrained staff.

Edgers

- Read the owner's manual and follow all manufacturers' recommendations. Familiarize yourself with the controls and ensure you know how to disengage and stop the machine quickly.
- Wear PPE: safety goggles or eye shield, ear protection, long pants, safety shoes, and gloves.
- Check the machine for loose, broken, or damaged parts -- repair or replace as needed.
- Fill the engine with fuel outdoors. Never fuel when the engine is running or not cooled down.
- Carefully survey the working area. Have students, staff, & visitors move a safe distance away.
- Never operate the engine inside a building in order to prevent deadly carbon monoxide buildup.
- Be sure the blade is disengaged before attempting to start the engine.
- Hold the edger with both hands in a comfortable, well-balanced stance.
- Keep your hands and feet well clear of the cutter blades.
- Direct discharge away from people, children, windows, etc.
- Disengage and stop the engine before adjusting or repairing. Wait for all parts to stop moving.
- Store in a secure area that is inaccessible to students & untrained staff.

San Diego Unified School District

Landscape Safety

Hedge Trimmers

- Read the owner's manual and follow all manufacturers' recommendations.
- Check the trimmer carefully for loose screws, bolts, and damaged or broken parts.
- Clear the working area of children, pets, and other bystanders.
- Inspect the shrubbery carefully for hidden objects such as wires, posts, or trash.
- Wear PPE: long pants, long-sleeved shirt, gloves, eye protection, and ear protection.
- Do not operate the trimmer above chest height. If trimming taller shrubbery, stand on a stepladder.
- Keep your hands and body away from the blades.
- Work slowly and deliberately. Plan your cuts prior to making them.
- Stop the engine before cleaning or adjusting.
- Refuel only with engine stopped and cooled down.
- Store in a secure area that is inaccessible to students & untrained staff.

Blowers

- Read the owner's manual to familiarize yourself with the machine.
- Check the machine carefully for loose, broken, damaged parts. Repair or replace before using.
- Wear tight-fitting, sturdy clothing to avoid having it sucked into the machine.
- Wear PPE: eye protection and hearing protection. Wear a dust mask in extremely dusty conditions.
- Fill the fuel tank with the engine cooled down.
- Keep students, staff, & visitors a minimum of 30 feet away from the work area.
- Do not start or run the engine inside a closed building.
- Never operate the blower without the tubing. Always direct the discharge of debris away from people, animals, glass, and solid objects that could cause material to ricochet.
- Do not use the blower on unstable surfaces.

Pole Saws

- Read owner's manual to familiarize yourself with the machine and associated components
- Check the equipment carefully for damaged, loose, or worn parts:
 - Examine the saws teeth for damage or breaks in the chain
 - Ensure all nuts and bolts are tight and none are missing
 - Check the cutting head for damage or loose parts
 - Be sure the chain is sharp, dull blades can get stuck during a cut
 - Check the chain tension before and periodically during operation
 - Check that the stop switch is properly functioning
 - Ensure that the chain is properly oiled(refer to owner's manual)
- Pre-work planning and work site inspection is essential
 - Ensure you have and wear all required PPE
 - Clear the work area of bystanders
 - Look for potential hazards in the work area such as overhead power lines, obstructions on the ground or in the tree, nails in the tree, and wires or cords
 - Ensure you have a flat/stable area to work from
 - Your work area should be off to the side of the branch you will be cutting
- Once the saw is running keep your hands away from the cutting area

San Diego Unified School District

Landscape Safety

- Stand at a 45 degree angle to the branch being cut
- Begin your cut on the top side of the branch while maintaining a firm grip on the saw
- Make multiple cuts on longer branches starting at the end and working towards the tree trunk
- When cutting thicker branches make a wedge cut to avoid having the blade jam in the wood

Chain Saws

- Read the owner's manual carefully and follow all manufacturers' recommendations.
- Wear PPE: eye protection, trim-fitting pants and shirt, leather gloves, sturdy shoes, and ear protection. If work is being performed over head a hard hat is required.
- Check the machine for loose, broken, or damaged parts -- repair or replace as needed.
- Be sure the working area is free of hazards, which could hamper the use of the saw.
- Keep children, staff, & bystanders, away from the working area.
- Before starting the engine, set the saw on firm ground in an open area free of any obstacles or combustible materials, such as a fuel can or leaves. Make sure the chain brake is engaged (check the owner's manual for how to engage the brake). If the chain brake is not engaged, when the engine starts the engine speed may be fast enough for the clutch to engage the sprocket and turn the chain. If the bar touches any object, it may cause the saw to kick back toward you.
- Grip the front handlebar of the saw firmly with your left hand and press down. For saws with a C-shaped rear handle, put the toe of your right foot into the rear handle and press down. With your right hand, pull out the starter grip until you feel a definite resistance and then give it a brisk, strong pull.
- Wrap your fingers and thumbs around the handles. Grip the front handle with your left hand and the rear handle with your right hand, even if you are left-handed. With your hands in this position, you can best oppose and absorb the push, pull and kickback forces of the saw without losing control.
- Keep the hot engine and exhaust away from your body.
- Keep saw turned off when not actively in use.
- Do not operate gas powered units indoors.
- Refuel only with engine stopped and cooled down.
- Stop machine & disconnect spark plug wire prior to performing service.
- Store in a secure area that is inaccessible to students & untrained staff.

CHAIN SAW KICKBACK, PUSHBACK, & PULL-IN

Kickback can occur when the tip of the cutting area contacts a solid object or is pinched causing the saw to fling up & back towards the operator. Although a safety chain can reduce the risk of kickback, the chain does not eliminate the hazard. Follow these safe practices to lessen the chance of kickback:

- Hold the saw firmly with both hands.
- Always be aware of the location of the guide bar nose.

San Diego Unified School District

Landscape Safety

- Never let the nose of the guide bar contact any object.
- Do not cut limbs with the nose of the guide bar.
- Do not overreach.
- Do not cut above shoulder height.
- Begin cutting and continue at full throttle.
- Cut only one log at a time.
- Use extreme caution when reentering a previous cut.
- Do not attempt to plunge cut if you are not experienced with these cutting techniques.
- Be alert for shifting of the log or other forces that may cause the cut to close and pinch the chain.
- Stand to the side of the cutting path of the chain saw.
- Properly maintain the saw chain.

Pushback occurs when the chain on the top is suddenly stopped when it is pinched or caught or encounters a foreign object in the wood. Pushback frequently occurs when the top of the bar is used for cutting. To avoid pushback, follow these safe practices:

- Be alert to forces or situations that may cause the log or branch to pinch the top of the chain.
- Do not cut more than one log at a time.
- Do not twist the saw when withdrawing the bar from an undercut because the chain can pinch.

Pull-in occurs when the chain on the bottom of the bar is suddenly stopped when it is pinched or caught or encounters a foreign object. The reaction of the chain pulls the saw forward and may cause you to lose control of it. Pull-in frequently occurs when the bumper of the saw is not held securely against the tree or limb and when the chain is not rotating at full speed before it contacts the wood. To avoid pull-in, follow this safe practice:

- Always start a cut with the chain rotating at full speed and the bumper in contact with the wood.