



STANDARD OPERATING PROCEDURE PESTICIDE USE

1.0 GENERAL

- a. The City of Thousand Oaks (City) Public Works staff perform work activities associated with handling, mixing, and applying pesticides, rodenticides, herbicides, insecticides and any other pesticide-related products to protect and preserve the landscape, infrastructure, and urban forest within the City. Staff potentially affected by pesticide-related product use reside at the Municipal Service Center (MSC) or the Hill Canyon Wastewater Treatment Plant (HCTP) including the Landscape Division, Streets Division, Wastewater Division, and Operations staff at HCTP.
- b. The intention of these work procedures is to establish safety centric procedures for performing work activities associated with handling, mixing, loading and spraying of pesticide-related products in a manner which will protect workers from exposure. These procedures have been prepared in accordance with regulations and guidelines outlined in the California Code of Regulations (CCR) Title 3 Section 6724, and the MSC Pesticide Use Administrative Policy.

2.0 DEFINITIONS

Cal-OSHA

California Division of Occupational Health and Safety Administration, protects workers from health and safety hazards on the job in almost every workplace in California through its research and standards, enforcement, and consultation programs.

Decontaminated

The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Label

Legal written, printed, or graphic matter on, or attached to, the pesticide or device or any of its containers or wrappers providing directions on how to mix, apply, store, and dispose of a pesticide product.

Personal Decontamination

The process of thoroughly washing one's face, hands and assigned re-usable PPE.



Personal Protective Equipment (PPE)

Protective clothing, hard hats, safety eyewear, hearing protection, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by PPE include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

Pest

Any living organism that is invasive or prolific, detrimental, troublesome, noxious, destructive, or a nuisance to either plants or animals, human or human concerns, livestock, human structures, wild ecosystems, etc.

Pesticide

Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

Safety Data Sheets (SDS)

Written or printed material concerning a hazardous chemical that is prepared in accordance with the Hazard Communication regulation.

Signal Word

Found on pesticide product labels, and they describe the acute (short-term) toxicity of the formulated pesticide product. The signal word can be either: CAUTION, WARNING, or DANGER.

- CAUTION means the pesticide product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation
- WARNING indicates the pesticide product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation
- DANGER means that the pesticide product is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. Alternatively, it may be highly toxic if eaten, absorbed through the skin, or inhaled. If this is the case, then the word "POISON" must also be included in red letters on the front panel of the product label



Work Practice Controls

Controls that reduce the likelihood of exposure by defining the manner in which a task is performed (e.g., PPE, not applying during certain weather conditions, etc.)

3.0 EQUIPMENT

The following tools and equipment are required when handling, mixing, loading, or applying pesticides:

- a. City truck
- b. Skid plate sprayer (attached to vehicle)
- c. Weed whips
- d. Tractors
- e. Mowers
- f. Carbon monoxide blower
- g. Injection gun
- h. Backpack sprayer
- i. Trash receptacle
- j. Mixing and measuring tools
- k. Scale
- l. Miscellaneous tools (spoon, cup, etc.)
- m. Cones
- n. Appropriate signage
- o. Barrier caution tape
- p. City-issued iPhone
- q. Towels for drying reusable tools and equipment after disinfection process.
- r. Hand washing equipment
- s. 3-gallons of clean water per person available for sanitation
- t. 16 ounces of clean water per person for eye flushing
- u. Puncturing tool

4.0 PERSONAL PROTECTIVE EQUIPMENT

The following personal protective equipment (PPE) is required for the work site in accordance with this SOP:

- a. Uniform
- b. Tyvek suit (full or sleeves)
- c. Safety vest (Not required when wearing a Tyvek suit)
- d. Respiratory protection up to or equal to an N95 dust mask (label dependent, optional comfort)
- e. Apron (required for mixing and loading only)
- f. Chemical resistant hand protection (leather gloves, disposable gloves, etc.)



- g. Safety eyewear (e.g., glasses with brow guard or goggles)
- h. Safety shoes (e.g., slip-on rubber boots with steel toes).
- i. Hand sanitizer

Note: All reusable PPE and equipment must be disinfected and cleaned prior to removal.

Note: All PPE worn is dependent on the direction provided by the product's label and signal word.

5.0 MONITORING

The use of pesticides is on a case-by-case basis. Prior to considering the application of pesticides several steps of consideration must be applied. The Landscape Supervisor or designee, who possesses a Qualified Applicator Certificate (QAC), will advise whether pesticides will be applied, which type of pesticide is suitable for the eradication of the identified targeted pests, and no other alternative is viable. The QAC will perform the following:

- a. Diagnose the problem by determining if there is a pest infestation that requires treatment or control.
- b. If an infestation is found, it will be evaluated for type and size, along with determining the applicable industry method of control would be the best alternative.
- c. Methods of control potentially utilized are:
 - Biological: Use of natural enemies of pests (parasites, pathogens, and predators)
 - Mechanical: Use of machines (weed whips, tractors, mowers, and carbon monoxide blowers)
 - Manual: Use of physical means (pulling weeds)
 - Chemical: Use of pesticide chemicals (i.e. Round-Up, etc.)

6.0 MIXING AND LOADING

The following procedure for mixing and loading a pesticide product is to be conducted in accordance with this SOP, Product Label, and the MSC Pesticide Use Administrative Policy.

- a. Know the product(s) you will be working with.
- b. Obtain and read the corresponding label and/or Safety Data Sheet (SDS) for the product(s) for the following:
 - Signal word
 - i. WARNING & DANGER require a QAC for handling
 - PPE requirements
 - Mixing ratios
 - Incompatibilities
- c. Inspect all the equipment ensuring there are no leaks, malfunctions, or other mechanical defects.
- d. Service Container Labeling



- Name and address of the person or firm responsible for the container
- Identity of the pesticide in the container
- Signal word "DANGER," WARNING," or "CAUTION" from the label of the original container
- e. Know the location for emergency medical care.
- f. Know who to contact in case of a spill.
- g. Apply the appropriate PPE. A protective apron is required during all mixing and loading scenarios.
- h. Prepare and secure the work area.
 - When mixing and loading in the field, be sure to establish a work zone warning the public, or unauthorized individuals from not to enter.
- i. Proceed with the mixing and loading process.

Tanks

- a. When mixing a tank, perform the following procedure:
 - Add water to the tank and start the agitator
 - Make slurry with wettable powders prior to adding to the tank
 - Ensure the correct order of adding materials to the tank as follows:
 - i. Wettable powders (slurry)
 - ii. Water dispersable granules
 - iii. Soluble liquids and flowable formulations
 - iv. Emulsifiable concentrates
 - Use an approved box cutter or scissors to open bags and break seals to avoid violent movements that can cause contamination
 - Mix only the amount to be used. Do not store mixed chemicals unless environmental conditions prevent their use
 - Use only proper mixing and measuring tools. Liquids are measured by volume in ounces, and dry materials by weight in pounds (scale)

Backpack Sprayer

- a. When mixing a backpack sprayer, perform the following procedure:
 - Close the sprayer and pump to ensure pressure prior to adding chemicals
 - Partially fill backpack with water
 - Measure and add chemical to water using appropriate measuring device
 - Clean measuring spoons, cups, etc., adding rinsate to the backpack
 - Fill to the line with water. Never allowing water to overflow onto the ground
 - Close sprayer, agitate gently, and pump to pressurize
 - Rinse off outside of backpack to remove any chemical that may have spilled on outside of tank
 - Check for leaks once more before placing pack onto your back to begin spraying



7.0 APPLICATION

Application of any pesticide product shall be conducted in accordance with this SOP, Product Label, and the MSC Pesticide Use Administrative Policy. The following procedure is:

- a. Environmental conditions, such as weather, has been verified and approved for applying products.
 - Application process is prohibited:
 - i. During rain events
 - ii. Within one day of an anticipated rain event forecasted to be greater than a 0.25 inch
 - iii. After a rain event where water is leaching, running, or when is running off-site
 - iv. Windy conditions. Seek advice from QAC for approval during windy conditions
 - v. Spraying into the wind
 - vi. Material drifting
 - vii. Spraying into mud puddles or standing water
 - viii. Walking through previously sprayed areas
- b. Check your surrounding area for hazards (i.e. slip/trip/falls, etc.)
- c. Know location for emergency medical care.
- d. Know who to contact in case of a spill.
- e. Ensure application area is free from disturbances.
 - Application process is prohibited when the following is present:
 - i. People and/or pets
 - ii. Any non-targeted organisms of environmental significance (i.e. bees)
- f. Adhere to the product's label and/or SDS requirements for PPE to be worn during application process.
- g. Arrange emergency clean water (3 gallons per person) so it is reachable and obtainable.
- h. Ensure the personal 16 ounces of clean water (per person) is on your person for emergency eyewash.
- i. Verify equipment functionality including checking for leaks.
- j. Proceed with product application.

8.0 DECONTAMINATION AND PERSONAL HYGIENE

All equipment, materials, and PPE used to perform the spraying shall be properly disposed of or disinfected and wiped down. This shall be performed prior to leaving the designated work zone(s). Personal sanitation shall take place prior to getting into vehicles after the task completion.

Equipment Decontamination:

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Maintained by: Landscape Division

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- a. Separate all tools utilized during the clean-up for sanitizing.
- b. Discard all disposable tools into the appropriate waste receptacle.
- c. Clean and sanitize all re-usable tools with soap and water or a prepared disinfectant solution:
 - Spray or wipe down the individual tool
 - Solution shall stay on the equipment for 3 to 5 minutes
 - Dry off the equipment
 - Remove and ready the equipment for storage and transport

Equipment Rinsing:

- a. All equipment (tank, hose, gun, and/or wand) shall be rinsed with either water or NutraSol at the MSC or HCTP.
- b. If NutraSol or rinse cannot be utilized during the next application event, treat as if it is a pesticide and properly spray into some weeds per the product label or SDS.
- c. All equipment containers that held less than 28 gallons of a diluted liquid pesticide, and are set for disposal shall be handled by:
 - Rinsing the inside of the container by filling it up ¼ with clean water, placing the cap on the container, and shaking it vigorously
 - Pouring the rinse solution into the spray tank and repeating twice
 - If container is set for disposal, punctured it several times and properly dispose of into the appropriate waste receptacle
- d. Never crawl inside a tank or stick your head inside a tank to clean it.

PPE Decontamination:

- a. Prior to removing PPE, if respiratory protection was chosen or determined to be worn during the clean-up, it shall remain worn during cleaning/decontamination process.
- b. When removing PPE such as a Tyvek suit, gloves, etc., always start from the top working your way down while removing from inside out.
- c. Remove in the following order:
 - Tyvek suit
 - Respiratory protection
 - Gloves
- d. Discard all PPE into the appropriate waste receptacle.
- e. All re-usable PPE shall be sanitized with soap and water or a prepared disinfectant solution:
 - Spray or wipe down the individual PPE
 - Solution shall stay on the PPE for about of 10 to 15 minutes
 - Dry off the PPE
 - Remove and ready the PPE for storage and transport

Personal Sanitation:



- a. Workers shall maintain personal hygiene by washing their hands, face, and other areas of exposed skin using a designated hand-wash station or something similar.
- b. Hand sanitizer can be used in lieu of soap and water for the hands only.

9.0 STORAGE AND DISPOSAL OF PERSONAL ITEMS

- a. All storage containers, and mixing & application equipment, that are less than 55 gallons in capacity, must be stored in the designated placard storage area at the Municipal Service Center (MSC) or at the Hill Canyon Wastewater Treatment Plant (HCTP).
- b. The designated storage area for the MSC is Building "A", and for HCTP is the Gravity Belt Thickener Building.
- c. PPE shall not be stored in the same room or area where pesticides are stored.
- d. Stored equipment shall be labeled identifying the division/facility responsible for the equipment.
- e. Refer to the Decontamination and Personal Hygiene Section of this SOP for proper equipment disposal.

10.0 SPILLS

It is important that a spill is responded to quickly, but carefully. In the event of a spill, follow the below minimum procedure:

- a. Isolate the area:
 - Use cones and Caution tape to surround the spill
 - Keep people away
 - Block off or barricade isles
- b. Ventilate the area:
 - Do not breathe vapors
 - Open all doors and windows
 - Set up portable fans if available
 - Close return grills on air conditioners or heating system
- c. Keep fire sources away:
 - Avoid using electrical equipment until spill is contained

After performing the above actions, it is important to contact the appropriate personnel and obtain the additional detailed safety information to aid in the clean-up process:

- d. Contact your Supervisor or Crew Leader, and 911 (if needed)
- e. Obtain the corresponding Label/SDS for the products spilled
- f. Notify Water Quality



11.0 RECORDKEEPING

- a. Fill out the City's Pesticide Use Report and provide document to appropriate staff to be entered on the Ventura County Agricultural Commission website.
- b. Retain City's Pesticide Use Report for 2 years.

12.0 TRAINING

Personnel shall attend the City's annual Pesticide Use training course prior to partaking in activities described in this SOP in accordance with California Department of Agriculture Title 3 Section 6724.

All pesticides that have a signal word of either WARNING or DANGER shall only be handled and applied by City staff who possess a QAC for the application of such product.