

Standard Operating Procedure

Document Number	Document Revision	Document Title
FS-GRO-002	B	Integrated Weed Management Plan (IWMP)

1.0 Regulatory Authority

California Code of Regulations, Title 3, Division 6, Chapters 1 - 3 (Pesticide Regulatory Program). This regulation provides guidelines for the protection of employees and the environment for facilities which apply herbicides to private and public property. The agency regulating this standard is the California Department of Food and Agriculture (CDFA).

2.0 Plan

It is the goal of California State University, Channel Islands (CSUCI) to reduce the use of herbicide application when possible for weed abatement purposes. CSUCI follows integrative pest management (IPM) strategies in the management of the campus landscape. IPM strategies address pest issues while minimizing potential risks to people and the environment. This IPM plan establishes the intent to use the following pest management strategies before relying on synthetic chemical control:

- A. Mechanical Control (pulling weeds, placing wood chips/mulch)
- B. Biological Control (promoting/introducing beneficial insects, predator/pest balance)
- C. Cultural Control (acceptable pest levels, landscape design, irrigation practices)

Alternative organic methods of weed and pest management are always considered first and practiced before any other chemical methods are used. Organic methods such as mulching, rock salting, and mechanical pulling of weeds in landscape areas are commonly used on the CSUCI campus. In the event chemical application is necessary, all efforts will be made to procure the lowest toxicity product available for effective control of pests. When using chemical herbicides/pesticides, responsible application and protecting employees and the public from occupational exposure is our highest priority. The overall safety of faculty, staff, students, the general public and vulnerable pollinator populations is the main focus of the program to not subject them to avoidable risks and/or accidental injury or illness. No employee or student will be required to perform any task that would be considered unsafe or unreasonably hazardous.

To accomplish this, each area that uses herbicides will be provided with the proper materials, equipment, and training in accordance with federal, state and local requirements. The campus will also develop standards and procedures for the use of herbicides specific for each independent area on campus.

Facilities Services at CSUCI is responsible for the implementation and regulation of these programs for the campus. The immediate responsibility rests with the supervisory personnel who are responsible for herbicide use in their work area. Furthermore, each employee working with herbicides in their normal occupational setting is responsible for ensuring the safe use of herbicides for themselves and others. This applies to CSUCI employees and to contractors who

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work on the CSUCI campus. The herbicides or hazardous materials label information and safety data sheets will be the basic requirement for regulating use of these materials for all persons at California State University, Channel Islands.

3.0 Purpose

This process is to establish the standard pest and weed management procedures followed on the grounds of CSU Channel Islands. The plan outlines the hierarchy of pest and weed management solutions, always beginning with alternative organic methods before relying on chemical inputs. This plan will also outline the use of proper safety measures and emergency response information related to chemical herbicide application. This program will establish regulatory authority and responsibility of persons designated to implement and manage this program and will assist in safeguarding the overall health and safety of employees and provide for protection of the environment.

4.0 Scope

This process applies to all grounds owned and managed by, or on behalf of, CSU Channel Islands. Alternative organic methods such as mulching, rock salting, and mechanical pulling of weeds in landscape areas will always be the first strategies employed to prevent and manage weeds and other pests. In the event chemical applications are used, applicators will follow the guidelines set forth in this process for the use of herbicides at CSU Channel Islands.

In the event chemical applications are used, then the scope of the herbicides management program at CSU Channel Islands focuses on the employees of the following departments involved with pesticide application:

- CSUCI Facilities Landscape Services Gardening Specialists

While the above department applies herbicides in variety of methods, Facilities Services will be included under individual licenses maintained by CSUCI Facilities Landscape Services Gardening Specialist Staff. All portions of this program must be adhered to by each department and contractors working on the grounds of CSU Channel Islands.

5.0 Definitions

Handle - the mixing, loading, or applying of herbicides or maintaining, servicing, repairing or cleaning of contaminated equipment used in these activities.

Institutional use - use within the confines or on the property of CSUCI.

QAC - (Qualified Applicator Certificate Holder) - Any person who has successfully passed the California State Pesticide Laws and Regulations exam, and qualified in one or more pest control

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categories and may therefore apply restricted materials, supervise pesticide applications, but who is not entitled to supervise the operations of a control business.

QAL - (Qualified Applicator License Holder) - Any person who has successfully passed the California State Pesticide Laws and Regulations exam, and qualified in one or more pest control categories and may therefore apply restricted materials and supervise the pesticide applications/operations made by a licensed pest control business

Herbicide - any substance or mixture of substances that is defined in the Food and Agricultural Code.

Herbicide Release - a sudden release or spill which may pose a threat to human health and/or the surrounding environment.

Protective clothing - clothing which minimizes human body contact with pesticides and is separate from or in addition to normal wearing apparel. Protective clothing may include work clothing, chemical resistant boots, gloves, hat, and chemical resistant apron.

Regularly handle - the employee is handling herbicide during any part of the day more than six calendar days in any 30 consecutive day qualifying period beginning on the first day of handling.

Restricted Materials Permit - CSUCI herbicide application license granted by the Ventura County Agricultural Commissioner's Office. This license prescribes the type of materials allowed for application and designates applicators.

Toxicity Category I - herbicide products which are required to display "Danger" on the label.

Toxicity Category II - herbicide products which are required to display "Warning" on the label.

Toxicity Category III - herbicide products which are required to display "Caution" on the label.

6.0 Responsibilities

6.1 CSU Channel Islands Facilities Services

- A. Develop and maintain the Herbicide Management Program. Provide copies of the program to affected departments.
- B. Provide assistance to individual departments concerning implementation of the program.

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- C. Ensure each department maintains records for training and herbicide use.
- D. Provide consultation regarding herbicide spills and clearance for re-occupation of affected area. Provide incident follow up and reporting information to the appropriate agencies.
- E. Provide personal protective equipment to herbicide applicators.
- F. Maintain herbicide use, training, and medical records. Conduct periodic inspections of use areas. Serve as liaison to the CDFA.
- G. Pick up and arrange for waste herbicide disposal.

6.2 Department Supervisors and Managers

- A. Ensure procedures prescribed herein are followed by affected employees.
- B. Provide specialized training to affected employees.
- C. Report herbicide releases to EHS
- D. Conduct inspections of herbicide storage areas and associated equipment to ensure compliance.
- E. Maintain and forward herbicide use records to EHS monthly.

7.0 General Safety Procedures

Alternative Organic methods on herbicide management are always considered first and practiced before any other chemical methods are used. Organic methods such as Mulching, Rock salting, and mechanical pulling of weeds in landscape areas, are commonly used on Channel Islands University Campus. In the event chemical applications are used, then general safety precautions shall be employed to ensure the safety of employees, the public, and the environment from unnecessary exposure to herbicides. Special attention should be given to ensure application equipment is calibrated and in proper working condition and that proper personal protective equipment (PPE) is used. Safe work procedures are to be developed by each area that use herbicide.

Some herbicide labels require the licensed and/or certified applicator to be present during application. This means the QAL/QAC must be within line of sight of the applicator.

7.1 Posting of Emergency Procedures

Emergency procedures are required to be posted in a common area such as a change area or break room. These procedures will include the following information:

- A. Name of responsible persons, address and telephone number of herbicide use facility.
- B. Name of physician or emergency medical facility, address and telephone number.
- C. General safety information regarding proper PPE, changing and washing facilities, eating and drinking around herbicides, laundering of clothes, and storage and disposal of herbicide.

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D. Information regarding workers' rights, first aid procedures, worker's compensation information, and reentry interval should be readily available.

E. Contact numbers for the Agricultural Commissioner's office and Cal/EPA.

7.2 Washing Facilities and Change Area

Personal hygiene is essential in minimizing the potential for employee exposure to herbicide. The employer shall provide clean water, soap, and drying towels for routine washing. Employees are required to wash their hands and face before eating. Employees who regularly handle herbicide shall be provided an area for decontamination and changing of clothes.

7.3 Safe Work Practices for Herbicide Application

A. Herbicide Application Equipment

Alternative organic methods for weed and pest management are always considered first and practiced before any other chemical methods are used. In the event chemical applications are used, then the equipment used for application of herbicide operations shall be in safe working condition and calibrated appropriately. Maintenance records should be kept for each piece of equipment.

The use of heavy equipment such as tractors, trucks or hand spray applicators play an important role in the application of herbicide. An evaluation is required of the spray area and surrounding environment as it relates to the public and the environment. Following proper safety procedures should always be the rule when working with equipment. Working alone is discouraged. If it isn't possible to work with a team, check in with your supervisor periodically via radio or telephone.

B. Holding Tanks

Application holding tank less than 50 gallons should have proper tank covers and sight gauge. Herbicide holding tanks of 50 gallons or more should have proper tank covers, gauge and shut off devices in place prior to use. All containers shall have the following information:

1. Name of hazardous materials (Product).
2. Hazard indicator label.
3. Date material was placed in container.
4. Name and telephone number of responsible person.

7.4 Training

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Alternative Organic methods of weed and pest management are always prioritized when maintaining the grounds of the CSU Channel Islands campus. All responsible personnel are trained on proper pest management protocol, including the hierarchy of pest management strategies. In the event chemical applications are used, then supervisors/managers shall ensure that every employee who works with or handles pesticide will undergo training annually that, at a minimum, covers the following information:

- A. Hazards associated with the acute and chronic exposure to herbicides.
- B. The label information and safety data sheet information.
- C. Labeling requirements.
- D. Proper personal protective equipment (PPE).
- E. Safety procedures.
- F. Application laws and regulations.
- G. Decontamination and emergency spill procedures.
- H. Symptoms of herbicide poisoning & emergency medical treatment.
- I. Record keeping.

Individual training by the supervisor, manager, or their designator shall be completed and documented before they are allowed to handle pesticides or herbicides. Initial training may be waived if the employee is a QAL/QAC holder and appropriate documentation is maintained.

7.5 Accidental Discharge to Water

Contamination of sanitary sewers, flood control channels, or any open water must be avoided. In the event of an accidental spraying or spill, please take the following steps.

- A. Stop all application processes and assess the situation.
- B. Prevent any further contamination to the water source.
- C. Mark the area where the spill or spraying took place.
- D. Call Environmental Health & Safety at extension x 3550 to immediately report the spill and to receive advice regarding clean-up.

8.0 Herbicide Storage, Disposal and Transportation

8.1 Storage

Herbicide storage facilities shall meet the criteria required by federal law for primary and secondary containment for herbicide materials. These facilities shall prevent release of herbicide material into the surrounding environment and to workers in the area. All storage facilities shall be secured and locked when not in use.

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8.2 Storage Facility Posting

All doors and entrances will be posted with warning signs that will state at least the following:

DANGER
POISON STORAGE AREA
Unauthorized Persons Keep Out
Keep Door Locked When Not in Use

These signs will be posted in English and Spanish. They will include the name, address, and telephone number for the nearest emergency medical facility.

8.3 Storage Containers

Herbicide containers shall be the original or a specialized container with the proper label. No container shall be placed on the floor for storage. All bag containers are required to be enclosed in a secondary container to prevent possible spillage or leakage. All service containers will be triple rinsed after use. Old original metal or other containers that are in poor condition shall be contained in plastic trays or as appropriate for that material. Another option is to properly dispose of these containers following the procedures outlined in section 8.4.

8.4 Herbicide Waste Disposal

Waste herbicide and associated containers will be handled in compliance with hazardous waste regulations. Herbicide restate from equipment clean-up and expired waste concentrates make up the bulk of the herbicide waste stream. The minimization of these wastes is of the highest priority and steps to accomplish this should be routine. The use of reinstates (Herbicide rinse) will reduce herbicide waste (see Section 8.6).

8.5 Waste Minimization Procedures

The collection and use of herbicide restate and good planning reduces the amount of herbicide needed for the job. These herbicides also reduce the amount of herbicide waste.

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The sharing of unwanted herbicides with other departments also reduces waste. Consult EHS at extension x 3550 before sharing herbicides. If surplus material does exist and can be used at a later date, it must be stored in a properly labeled container. The container label information will include the following:

- A. Product Name
- B. Hazard type symbol
- C. Name and telephone number of responsible person

Limit purchases of herbicide to what is needed to do the job. This will avoid unnecessary storage and disposal problems.

8.6 Herbicide Reinstatement

Reinstatement is created from the following triple rinsing procedure:

- A. Containers of 5 gallons or less, fill container with water approximately 1/4 the container volume. Containers of more than 5 gallons, fill container with water 1/5 the container volume.
- B. With the minimum amount of rinse medium in the container close cap securely and agitate container.
- C. Completely drain solution into the mix tank. Allow 30 seconds for solution to drain.
- D. Repeat steps twice for a total of three rinses.
- E. After triple rinses have been completed contain and store reinstatement for disposal or reuse. Empty containers should be disposed of properly. (see Section 8.7)

8.7 Disposal Procedures

The proper procedure for disposal of waste is as follows:

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1. Fill out a Hazardous Waste Disposal Request for herbicide waste. (SEE Attachment B: EHS Hazardous Waste Disposal Request).
2. Call Environmental Health & Safety to schedule a waste pickup. Before EHS will pick up a container of waste the container must have a label attached with the following information (SEE Attachment C: CSUCI Hazardous Waste Disposal Label):
 1. Name of responsible persons and department.
 2. Waste Classification obtained from SDS.
 3. Accumulation Start Date.
 4. Name of Material.
 5. Quantity and /or percent volume.

The proper procedure for the disposal of herbicide waste containers is the following:

1. Triple rinse the container.
2. Puncture plastic or metal containers; glass containers should have their tops removed or should be crushed.
3. All container labels shall be defaced and dated.
4. Containers can now be disposed of as regular trash.

8.8 Transportation

In the event chemical applications are used, then transportation of herbicides on public highways is prohibited unless permission is obtained through the Department of transportation. However, herbicides can be transported throughout the campus following these precautions:

- A. Never carry herbicides in the passenger compartment of any vehicle.
- B. All herbicide containers should be secured in the cargo area of the vehicle.
- C. Never allow children, adults, or animals to ride in the area where herbicides are carried.
- D. Do not leave herbicides unattended in a vehicle unless they are inside a locked compartment.

A current inventory of all herbicides, along with SDS for each herbicide to be transported,

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should be available.

9.0 Labeling and Warning Signs

The herbicides product label provides the user with the information required for safe and proper use of the material. The label should contain directions that are easily understandable and clearly explain the application process, along with information regarding the adverse effects associated with the product. The label should explain toxicity, proper personal protective procedures, and proper storage and disposal methods associated with the product.

9.1. Labeling & Safety Data Sheets (SDS)

The basic labeling & SDS information requirements for herbicides shall include:

- A. Product identification.
- B. Hazardous chemical warning.
- C. Information regarding the chemical test mixture.
- D. Identified carcinogens in excess of 1%.
- E. The materials physical and chemical characteristics (i.e., such as vapor pressure, specific gravity, flammability, or explosion potential).
- F. Health hazards associated with the material.
- G. Primary route of entry into the body.
- H. The OSHA permissible exposure limit. (PEL).
- I. Application methods and/or any safe handling procedures. Descriptions of engineering controls and proper personal protective equipment required for use of the material.
- J. Practical measures for working with contaminated equipment and spill cleanup procedures.
- K. Emergency and first aid procedures.
- L. Name, address and emergency telephone number of the manufacturer or supplier along with the SDS preparation date.

9.2 Toxicity Category Warning Signs

Pesticide labels will identify the toxicity as a category defined by the following:

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- A. TOXICITY CATEGORY I - These will have the icon of the skull and crossbones and are labeled as "DANGER", "POISON" or both.
- B. TOXICITY CATEGORY II - These will have the word "WARNING".
- C. TOXICITY CATEGORY III - These will have the word "CAUTION".

All toxicity categories will contain information regarding the systemic effects for inhalation, ingestion, and dermal contact. Containers will have the statement "KEEP OUT OF REACH OF CHILDREN".

10.0 Personal Protective Equipment

CSU Channel Islands Facilities Services is responsible for providing personal protective equipment through the maintenance store warehouse. The department shall ensure that this equipment is properly maintained and cleaned as necessary to ensure proper function of this equipment. Storage of this equipment shall be a designated area or locker facility in the department. Proper PPE includes such items as clothing, eye protection, hand & foot protection, respiratory protection, and head protection.

10.1 Protective Clothing

The protective clothing required to apply pesticide shall remain the property of the employer. Protective clothing includes but is not limited to one piece tyvek suits (Saranex 23-P), waterproof coats or aprons and pants, full body chemical resistant rain suit, chemical resistant aprons etc. When the herbicide materials label or SDS requires use of these protective clothing the University shall provide these to the employee at no cost. Applicators will use full body chemical resistant or waterproof suits when recommended by the pesticide product label or SDS. The exception would be in the case that ambient air temperature exceeds 80 F during normal daylight working hours, or 85 F at night.

Employees who work with regular or closed application systems, mix sealed water-soluble packets, or who mix herbicide in service tanks, hoppers, or lines are required to wear chemical resistant protective wear.

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10.2 Protective Eye Wear

Eye protection is required for the application or use of all hazardous chemicals. The type of eye protection will be determined by the label instructions. In case there are no specific eye protection guidelines, eye protection shall consist of one of the following:

- A. Safety glasses with front brow and temple protection
- B. Safety goggles
- C. Face shield

10.3 Protective Footwear

Protective footwear (shoes, boots, or rubber shoe covers) is determined by the type of application method and manufacturer recommendations. These shoes or boots should have non-skid soles and steel-capped toes, if possible.

All footwear should be kept in a clean condition by washing with soap & water at the end of the day. This should be sufficient to remove most toxic materials and minimize possible absorption through the shoe or boot.

10.4 Hand Protection

Gloves shall be worn except when specified. Herbicide product information shall determine the type of hand protection required for use of the product. In the case where specific hand protection is not specified one of the following shall be worn:

- A. Rubber gloves
- B. Neoprene gloves
- C. Any other chemical resistant glove material.

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Disposable gloves are to be disposed of in hazardous waste containers after use. All other gloves are to be cleaned after use with soap and water. Previously used gloves are to be inspected prior to use for holes or tears that may compromise their integrity.

10.5 Head Protection

Protective hoods shall be worn for all fogging or misting procedures unless otherwise recommend by the herbicide application label instructions or SDS. These head coverings should be made of a chemical resistant material.

Cloth hats are discouraged unless otherwise recommended by the herbicide manufacturer. Cloth like materials tend to absorb potentially hazardous chemical compounds.

11.0 Emergency Response Procedures

11.1 Exposure Routes and Emergency Medical Care

The four major routes of entry for herbicides are:

- A. Dermal - skin, eye, ears, nose, mouth contact.
- B. Ingestion - eating, chewing and/or swallowing.
- C. Inhalation - breathing of dust or vapors.
- D. Injection - piercing or puncturing of the skin.

Personal hygiene is very important in reducing the risk factors for exposure. Based on the absorbency rates of chemicals, toxicity of certain chemicals may vary.

The following steps are to be followed in the event of overexposure:

- A. Remove the person from the area.
- B. Dial 911 and provide the following information:
 - 1. Type of incident
 - 2. Number of persons involved
 - 3. Name of herbicide and amount used
- C. Decontaminate the victim using fresh water. Avoid

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- contaminating yourself.
- D. Transport victim to an emergency care facility.

11.2 Herbicide Spill Response

In the event of a release, EHS will implement the CSUCI Cleanup Plan. The Cleanup Plan outlines spill response procedures, dictates necessary corrective measures, and provides a communications base for coordinating response efforts.

After witnessing or being notified of an incident, steps for response include but are not limited to:

- A. Gather as much information regarding environmental conditions, circumstances of surrounding the incident, material spilled, and possible personnel exposures. Review the material safety data sheet for spill containment measures.
- B. Notify EHS. For large concentrated spills or medical injury call 911.
- C. Stop exposure of all persons in the area, barricade the area to the public and contain the spill.
- D. EHS shall determine whether area is safe to allow work to continue or if the area should remain closed off until further notice.

11.3 Incident Follow-Up

The Environmental Health & Safety Office will be responsible for the appropriate follow-up to hazardous material incidents. EHS shall:

- A. Stay in contact with the department and regulatory agencies involved. Report to regulatory agencies within the designated time frames.
- B. Arrange with Human Resources for follow-up medical monitoring of

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affected individuals.

- C. Develop an emergency response plan, detailed incident report, and a proactive follow-up plan available for review by governmental regulatory agencies.
- D. Investigate and review the incident with the affected employees. Make recommendations as to how to avoid these incidents from occurring in the future.

12.0 Research and Experimental Herbicide Use

Herbicides used for research which include restricted materials must be approved by the EHS office. Application of these herbicides must adhere to all aspects of this program, with the exception use reporting, provided herein.

13.0 Record Keeping

The Environmental Health & Safety Office and the use areas will maintain the proper records as required by law. The EHS office shall act as the liaison of these records for the county agriculture department. Herbicide users with the exception of the will provide EHS with copies of these records for review. Campus herbicide applicators will use the State of California Department of Pesticide Regulation's Monthly Summary Pesticide Use Report included as Attachment D as a means of reporting restricted material usage to EHS. In turn, EHS will forward these records to the Ventura County Agricultural Office.

13.1 Herbicide User Records

The individual area users of herbicides will maintain usage records in their areas independently. Records shall contain the following information:

- A. Name of property operator
- B. Location of property area treated
- C. Applicator name & date of use
- D. Herbicide name & EPA number
- E. Herbicide amount used and concentration.
- F. Operator identification number and/or restricted materials user permit.

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13.1 Environmental Health & Safety Records

While copies of user records should be sent to EHS, the following shall be maintained by EHS for the campus user:

- A. A written training program for employees who handle herbicides.
- B. Maintain individual training records for individuals who handle herbicides.
- C. Maintain material safety data sheets (SDS) for all hazardous materials in use at CSUCI.
- D. Provide employees with a written hazard communication program and other public safety information.
- E. Manage the medical supervision program and maintain employees' herbicide user medical records.
- F. Manage and maintain all herbicide area user inspection records.

Records for herbicide use are required to be kept for a minimum of 3 years. Medical records are to be kept for 30 years.

14.0 Document Revision History

14.1	Revision	Date	Comments
	A	12-23-2019	Draft
	B	1-09-2020	Revised and Published

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