



ENVIRONMENTAL
HEALTH & SAFETY

Mold Management Program

Department of Environmental Health & Safety

Version 1.0 | Issued September 2025

Table of Contents

Record of Revisions.....	2
Background & Introduction.....	3
Purpose & Scope.....	3
References.....	3
Responsibilities.....	4
Definitions.....	6
Mold & Biogrowth.....	7
What is Mold.....	8
Risks Associated with Mold.....	10
Health Hazards.....	10
Facility Damage.....	12
Prevention.....	13
Condensation Prone Areas.....	13
Moisture Controlled Areas.....	14
Remediation.....	16
Colony Classification.....	16
Remediation Planning.....	17
Types of Remediation.....	18
Considerations during Remediation.....	23
Employee Safety.....	25
General Safety.....	25
Remediation Safety.....	25
Communication.....	28
Exposure Notification.....	28
Task-Related Exposure.....	28
Training.....	29
Appendices.....	30

Record of Revisions

Version	By	Date	Description of Revision
1.0 (Original)	Missy Brunetta Director, EH&S	July 2025	New program

Next scheduled review: June 2028

Background & Introduction

This program provides awareness information and describes the procedures and training for Sonoma State University (SSU) employees who may be exposed to or required to handle or mitigate mold in the course of their employment.

Purpose & Scope

Although mold is not a regulated material like asbestos or lead, the university acknowledges that it may present a hazard if not managed responsibly. Both workers who are tasked with identifying and managing sites impacted by mold and the workers who work in areas where mold may be present could be subject to hazards associated with mold. This plan will outline those hazards and the steps the university and employees can take to protect themselves.

This plan applies to all employees and all university properties including the main campus and the preserves.

References

The requirement to protect employees from any hazards presented by the presence of mold in the workplace is covered by the general duty clause, Labor Code 6400, which requires employers to:

- identify and address workplace hazards, including those not specifically identified by OSHA
- correct identified hazards, and
- provide training to employees on job hazards and safety practices.

This plan also aligns with the university [Injury Illness Prevention Plan](#), which outlines the manner in which the university will ensure a healthy and safe workplace for employees and how injuries and accidents will be investigated and resolved.

This plan also references the university's [Respiratory Protection Program](#), which complies with Title 8 §5144.

Although OSHA does not specifically regulate the management of mold and other biogrowths, the following resources are used in the development and management of this plan.

1. [NIOSH Dampness and Mold Assessment Tool](#)
2. [NIOSH Guide to Preventing Occupational Respiratory Disease from Exposures Caused by Dampness in Office Buildings, Schools, and Other Non Industrial Buildings](#)
3. ANSI/IICRC S520-2024 Standard for Professional Mold Remediation (contact EH&S for reference material, guide is license protected)
4. [US Environmental Protection Agency: Mold Remediation in Schools and Commercial Buildings](#)
5. [National Institute of Environmental Health Sciences: Mold Resources](#)

Responsibilities

The following responsibilities apply to the prevention, identification, and remediation of mold and other biogrowth. Please note that the items below are numbered for reference purposes only and are not intended to represent importance or sequence of responsibilities.

General Responsibilities

General responsibilities related to this plan, as defined by Cal/OSHA, collective bargaining agreements, and systemwide and campus policies include:

Employer/SSU

1. Provide all employees with a safe work environment
2. Provide training to all employees expected to work around or remediate mold with appropriate training, resources, and PPE to safely perform assigned tasks
3. Prioritize remediation of mold hazards through cleaning, removal, or relocation of impacted employees
4. Undertake activities that reduce the likelihood of mold-related hazardous conditions
5. Communicate hazards to affected employees and provide information about how to protect themselves and/or seek restitution/reparation for harm caused by known hazards
6. Provide prompt support, medical care, and investigation of work related injury or hazardous condition exposure to any employee

Employees:

1. Report any visible mold to Facilities Management by entering a work order or through other appropriate means (workers not employed by Facilities Management should also report such conditions to their supervisor)
2. Clean up or report any significant spills that could damage property, cause injury, or contribute to the growth of mold without appropriate cleanup
3. Report conditions that may indicate presence of mold including excessive moisture, mold or musty odors, or other deterioration of surfaces caused by moisture or rot
4. Request training or information about assigned tasks if unfamiliar with proper procedures or guidelines
5. Notify supervisor or EH&S of unsafe working conditions or hazards identified on campus
6. Stop work and request assistance if unsafe work conditions or practices are present
7. Following the discovery or suspicion of mold exposure, report any related health issues, underlying health conditions that might increase impact (including asthma or other respiratory disease/condition, or unexplained issues with skin or eyes)
8. Participate in mold awareness training when required by your supervisor or EH&S

Residents¹

Students and other persons residing in the housing community are required to:

¹ "Residents" includes all persons who are authorized to reside in university housing including students, REACH employees, and employees and others with rental contacts in Cabernet Village.

1. Follow all general housekeeping requirements of their housing contracts, including the cleaning of mildew and initial mold colonies caused by common household sources (bathroom, window, or kitchen moisture, for example)
2. Report leaks or other unknown moisture sources to Facilities Management through the work order system
3. Report significant mold colonies to Facilities Management through the work order system

Departmental Responsibilities

In addition to these general and universal responsibilities, the following departments are responsible for these specific programmatic duties:

Environmental Health & Safety (EH&S)

Environmental Health & Safety is responsible for the following:

1. Establish and maintain the Mold Management Program
2. Provide consultation and training to departments as necessary
3. Consult with Facilities Management on the identification and remediation of mold on campus
4. Provide training as needed to Facilities Management/CPDC employees or other employees who may have occupational exposure to mold
5. Provide exposure notification, as appropriate, to employees who may have been exposed to hazardous mold conditions that could result in negative health conditions
6. Recommend and/or retain the services of an industrial hygienist or other subject matter expert and related services on mold related issues when appropriate
7. Monitoring regulations and best practices related to mold management and remediation and update the plan and training accordingly.
8. Recommend and support the temporary relocation of employees in an unsafe worksite
9. Make PPE recommendations for cleaning/removal/remediation of mold
10. Stopping work that is being conducted in a manner inconsistent with this plan or that is inherently unsafe

Facilities Management² and CPDC

- Performing or coordinating (or contracting out, as appropriate) all work related to the cleaning/removal/remediation of identified mold
- Ensuring all reports of mold are entered into the work control system and appropriately prioritized
- Identifying and remedying the source of all irregular moisture sources that are believed to have caused mold
- Identify the appropriate cleaning products for the cleaning of mold and ensuring employees are trained in its use
- Train all employees of the requirement and importance of reporting all mold and irregular moisture sources and leaks upon discovery

² For this plan, "Facilities Management" generally assigns responsibilities to the management members of that department, unless specifically assigned to all employees. Managers may delegate appropriate responsibilities to staff members and supervisors but retain ultimate responsibility for compliance.

- Schedule new employees for mold awareness training in coordination with EH&S (EH&S will offer training a minimum of once per year, or additionally as needed based on staffing needs)
- Ensuring all employees who are required to work with mold removal or remediation complete all requirements of the respiratory protection program
- Ensuring all facilities employees have access to the appropriate PPE based on this program, or other subject matter experts

REACH & Employee Housing Management

- Provide information to housing residents about mold prevention, cleaning, and water intrusion reporting
- Periodically inspect housing units and report mold issues, water intrusions, or unknown moisture sources to Facilities Management

Human Resources

- Manage the medical monitoring program
- Work with hiring managers and EH&S to identify employees who require medical monitoring and respirator fit testing through the respiratory protection program
- Facilitating the appropriate medical care and accommodations for employees who may have suffered mold related illness from workplace sources and/or require accommodations due to underlying health issues or sensitivities

Definitions

Air Sampling: The process of collecting air samples to identify and count mold spores in indoor environments.

Allergen: A substance that causes allergic reactions. Mold spores are common allergens.

Biocide: A chemical agent used to kill mold organisms.

Biogrowth: Biogrowth refers to the unwanted growth of biological organisms—such as mold, bacteria, algae, or fungi—on surfaces, materials, or within systems due to favorable environmental conditions, especially moisture and organic matter.

Black Mold: A common misnomer for *Stachybotrys chartarum* or other toxic molds, a greenish-black mold that grows on water-damaged cellulose-rich materials. It is associated with the production of mycotoxins and has been linked to respiratory irritation and other health concerns, especially in sensitive individuals.

Clearance Testing: Conducted after remediation to ensure the area is free from elevated mold spores and is safe for reoccupation.

Colonization: The establishment and growth of mold on a surface. This occurs when mold spores settle in a suitable environment and begin to spread.

Containment: A strategy used during remediation to prevent mold spores from spreading. May involve plastic sheeting, negative air machines, and sealed zones.

Dust Mask: type of disposable facepiece designed to provide comfort and relief from non-toxic airborne particles like dust, pollen, and other common irritants; is not NIOSH approved and does not require participation in the respiratory protection program or proper fit testing.

HEPA Filter: High-Efficiency Particulate Air filter used to capture microscopic particles like mold spores during remediation and air cleaning.

Immunocompromised: Refers to individuals with weakened immune systems who are at higher risk for mold-related health effects.

Industrial Hygienist: Industrial hygienists are scientists and engineers committed to protecting the health and safety of people in the workplace and the community. They anticipate, recognize, evaluate, and control workplace conditions that may cause workers' injury or illness.

Mildew: A form of surface-level mold, typically white or gray and powdery, commonly found on damp organic materials.

Mold: A type of fungus that grows in multicellular filaments. It thrives in moist, humid environments and can cause structural damage and health problems.

Mycotoxins: Toxic secondary metabolites produced by certain molds. These can pose health risks including respiratory and neurological symptoms. Molds containing mycotoxins are commonly referred to as "toxic molds."

N95 Mask: Type of respiratory protective device designed to achieve a very close facial fit and efficiently filter airborne particles, specifically able to remove at least 95% of airborne particles, including dust, droplets, and aerosols; must be NIOSH approved.

Nuisance Mask: see Dust Mask

Remediation: The process of removing mold and restoring healthy conditions. May involve cleaning, replacement of materials, and fixing moisture sources.

Spore: Microscopic reproductive unit of mold, released into the air and capable of forming new mold colonies when conditions are right (moisture, warmth, organic material).

Surface Sampling: Techniques such as swabbing or tape-lifting used to detect mold on physical surfaces.

Toxic Mold: Informal term for mold species that produce harmful mycotoxins, such as *Stachybotrys chartarum*.

Mold & Biogrowth

The term biogrowth refers to the unwanted growth of biological organisms, including mold, but may also include bacteria, algae, or fungi. Biogrowth can be found on surfaces, materials, or within systems due to favorable environmental conditions, especially moisture and organic matter.

Mold is a type of fungus made up of tiny organisms that grow in multicellular filaments called hyphae. It is a natural part of the environment and plays an important role in breaking down dead organic material. However, when it grows indoors, especially in moist or water-damaged buildings, it can present health and facility concerns.

This plan focuses on the management of mold. However, the presence of other biogrowth should be considered since it is not always possible to discern mold from other types of biogrowth. At SSU, the most common biogrowth present, other than mold, will be algae.

What is Mold

Mold is a microorganism and type of fungus that thrives in wet places. In nature, it forms on damp materials and in decaying organic matter. Outdoor mold reaches its highest levels in the summer and fall. Inside, it can spread on damp surfaces, like the paper surface of wet drywall. Flooding, leaky pipes, humid conditions, and poor ventilation contribute to the growth of mold in our buildings and homes.

Mold is commonly used to make medicine, is found on rotting food, and serves the purpose of recycling decaying organic matter. Mold is found in all indoor and outdoor locations and is constantly present in varying levels in the air we breathe.

Mold requires oxygen, moisture, and food to live and create colonies. Mold consumes organic material as food. Organic material may include, but is not limited to:

- Drywall (gypsum board)
- Wood and wood products
- Ceiling tiles
- Wallpaper and wallpaper glue
- Insulation with natural fiber content
- Carpet and carpet padding
- Upholstered furniture
- Mattresses and pillows
- Curtains and drapes
- Books and paper documents
- Cardboard boxes
- Rugs, blankets, and linens
- Clothing (especially cotton, wool, or leather)
- Houseplants and soil
- Foods including bread, grains, fruits, and vegetables

As mold spores are constantly present in both indoor and outdoor air, the appearance of mold is the main indicator that a mold colony is, in fact, present. In addition to the appearance of the mold, the following should be considered strong indicators that mold is present:

- A musty, earthy smell
- Any darkening or odd staining on walls, ceilings, or furnishings.

- Surface deterioration seen in bubbling paint, warped wood, or crumbling drywall.

Mildew

Mildew is a type of mold. Just like all other molds, it starts as tiny spores that generally require a similar environment to flourish, making it easy to confuse with mold. However, mildew is generally far less hazardous and less likely to cause damage to facilities (aside from staining). Both mold and mildew grow on organic materials but mildew does not grow as aggressively into the material and tends to remain on the surface.

Characteristics specific to mildew include:

- Mildew has a gray, white or light brown color
- Generally rests flat on the surface of a moist area
- Powdery appearance
- Typically appears first as small dots and grows in an outward pattern

Risks Associated with Mold³

Mold spores are constantly present in the air we breathe, both indoors and outdoors, and spore levels will vary depending on the temperature, moisture present, and other conditions. Most people are not impacted by mold spores. However, people with mold sensitivity or underlying health conditions are more likely to be impacted. However, the presence of significant mold colonies and the presence of toxic mold may increase the likelihood of impacts to any person from mold exposure. Additionally, when mold colonies are identified early and remediated promptly, facility damage, aside from addressing potential cosmetic issues, will be limited or not present.

Health Hazards

Health hazards caused by mold may be acute, sudden and from limited exposure, or chronic, longer term from ongoing exposure. Mold related illness is not common in facilities that are properly maintained.

Individuals with underlying, pre-existing medical conditions may be more sensitive to mold. These conditions include, but are not limited to:

- Asthma and other respiratory conditions (may include COPD, bronchitis, emphysema, restrictive airway disease)
- Seasonal or mold allergies
- Weakened immune systems (immunocompromised) (may be due to HIV/AIDS, cancer, organ transplant recipients, those on immunosuppressive drugs such as steroids)
- Very young or elderly persons (due to underlying conditions or delayed immune responses)
- Chronic sinus or lung conditions (may include sinusitis, cystic fibrosis)

Along with sensitive persons, any person may be negatively affected by mold exposure under the following conditions:

- Exposure to high mold concentrations (due to significant infestations)
- Living or working long term in damp environments without proper ventilation or air handling
- Exposure to mycotoxin producing mold (toxic mold)

Mycotoxins

Mycotoxins are toxic chemical substances produced by certain types of mold. Mycotoxins are not living, but a byproduct of mold designed to protect the colony. They can be harmful to humans, especially when exposed for extended periods of time, often in one's home. Non-toxic

³ Although mildew is a form of mold and can cause minor respiratory problems, it is not as invasive or troublesome as mold, both from a medical and facilities perspective. The following information regarding hazards should be considered primarily outside the context of common mildew colonies.

mold can cause allergic responses, while mycotoxins can damage organs, disrupt the immune system, and in rare long-term exposure cases, cause cancer.

In small amounts, mycotoxins will not generally cause illness. However, because the potential for more serious illness exists and toxic and non-toxic mold grow in the same environments and cannot be visually discerned, it is imperative that we prioritize the proper treatment of all mold colonies to avoid such impacts.

Mold-related Illness

Illness in sensitive or healthy persons may present differently, depending on the individual and the type of mold they have been exposed to. Symptoms/conditions may include:

- Respiratory symptoms such as coughing, chest tightness, shortness of breath
- Sore throat
- Sneezing, runny nose, itchy eyes
- Skin rashes or hives
- Worsened symptoms of existing symptoms from primary health condition
- Headaches, fatigue

The following symptoms/conditions are specifically associated with exposure to mycotoxin containing molds:

- Inflammation
- Neurological issues
- Liver stress
- Immune disruptions
- Hormonal imbalance

Any employee who believes they have been exposed to mold and believe they are experiencing mold-related illness must report to Human Resources.

Means of Exposure and Entry

Mold has to enter or contact the body in order to create a health hazard. This occurs through any of the following means of entry and may vary based on the type of mold:

- Inhalation (most common): Airborne mold spores are inhaled from the air through the nose or mouth
- Ingestion: swallowing contaminated food or drink
- Skin contact (rare): mold can cause skin rashes or other reactions when contacted, even when skin is intact

Work related exposure is most commonly associated with inhalation during disruption of mold colonies. Disruption can occur during removal or clean up of mold or even by strong movement of air from air handling systems, fans, or other air disruptions. Mold inside of walls is generally not a threat since it is not airborne or exposed to workers in the room.

Evaluation and Treatment of Mold-related Illness

The determination that symptoms someone is experiencing are mold related illness can be difficult since the symptoms can mirror other, sometimes common, conditions. The

determination that someone is experiencing mold related illness must be determined by a medical professional. The determination will likely be made considering the person's medical history, clinical symptoms, and evaluation of the mold exposure.

Any employee who believes they are experiencing mold related illness related to their worksite must report to Human Resources so a proper evaluation may be conducted, including a survey of the worksite to determine if there is mold present.

Facility Damage

Mold presents a significant maintenance issue for buildings. It is estimated that mold accounts for \$3 - \$7 billion in structural and property damage annually in the United States. Damage caused by mold can vary from cosmetic to structural damage and can damage building contents as well. Since mold ingests the surfaces that it settles on, it can degrade the integrity of floors, walls, roofs, and other surfaces. Additionally, since mold will grow in wet conditions, the underlying water sources can also cause significant damage.

In institutional settings, mold most commonly impacts:

- Drywall/gypsum board
- Flooring
- Ceiling tiles
- Insulation
- Carpet
- Building contents
- Air handling components

While mold can often, safely, be cleaned, removing cosmetic damage, it is important to assess any damage to the underlying surfaces when mold has been allowed to form significant colonies. Additionally, the condition of the air handling system may need assessment. These steps are discussed in detail in the [Remediation](#) section of this plan.

Workers must also consider secondary hazards associated with areas with high moisture levels and where mold has colonized, as the conditions and odors associated with mold attract nuisances including rodents, termites, and cockroaches.

Prevention

As previously emphasized, mold requires three elements for survival and growth - oxygen, moisture, and organic matter. With mold spores and oxygen present in virtually all settings and organic material prevalent in both natural and manmade environments, only moisture can be easily controlled to prevent the colonization of mold in indoor settings. Some indoor settings are inherently moist, while others should remain relatively dry. This section will consider each of those settings and how to prevent mold accordingly.

Condensation Prone Areas

The following types of spaces are prone to condensation and consistently higher than average moisture levels:

- Bathrooms
- Locker rooms
- Laundry rooms
- Custodial closets
- Kitchens
- Crawl spaces, basements
- Indoor pools/spas
- Saunas
- Greenhouses

Control Strategies

Because significantly reducing the moisture levels or humidity in these spaces is either impractical or not preferred, improved airflow, regular cleaning, and maintenance of mold-prone areas is the best approach to reduce the likelihood of mold colonization.

Improve Airflow & Circulation

- ☐ Improve ventilation: Use exhaust fans in bathrooms, kitchens, and laundry rooms.
- ☐ When available, maximize air handling to increase circulation and reduce humidity
- ☐ Use fans in stagnant areas
- ☐ Avoid blocking vents or placing furniture directly against walls.
- ☐ Use dehumidifiers in spaces that do not require high moisture levels for functionality (goal is to maintain indoor humidity levels below 50%)

Surface Treatment

- ☐ Use mold-resistant materials such as mold-resistant drywall (e.g. green board), paints, caulks, mold-resistant engineered wood products, insulation, non-organic material such as PVC, metal and vinyl
- ☐ Avoid carpeting in high-moisture areas
- ☐ Clean regularly
- ☐ Wipe condensation from windows and tiles promptly

- ☐ Apply antimicrobial coatings on walls, ceilings, or ducts where mold may form (such as Microban or Lysol)

Monitor & Detect

In addition to inherently present high moisture levels, such spaces are especially prone to mold colonization from leaks and other unusual moisture sources. Unusual moisture sources include:

- leaks from plumbing and plumbing fixtures
- windows
- beverage dispensers
- spilled liquids
- appliances such as dishwashers and refrigerators/freezers
- high groundwater levels

To protect against increased mold risk from these influences and the natural conditions of these spaces:

- ☐ Use humidity sensors and water intrusion/flood alarms
- ☐ Watch for discoloration on walls/ceilings or other visual indications of mold
- ☐ Check for smells indicative of mold (musty, earthy, stale, or damp odors)
- ☐ Check seals around sinks, tubs, and showers
- ☐ Inspect piping and plumbing fixtures for cracks, damage to gaskets and seals, or other irregularities
- ☐ Check for spills or leaks accumulation on surfaces
- ☐ Be aware of soft/spongy floors, walls, or ceiling surfaces

Moisture Controlled Areas

Most spaces on campus are considered moisture controlled areas - spaces where spills and leaks are not usually present and humidity is controlled through air handling. These areas are subject to mold colonization when moisture is introduced and uncontrolled, usually through plumbing or structural leaks.

Control Strategies

When leaks or other water intrusions occur, identifying the source and controlling moisture **within 24-48 hours**, is key to avoiding mold colonization.

Stop the Source

- ☐ Identify and repair cause of leaks; turn off water when leak cannot be repaired
- ☐ Seal/repair structural leaks; if repair is not possible, identify means to cover the leak or capture water and keep away from permeable surfaces⁴

⁴ Permeable surfaces include concrete, wood, drywall, fabric, and carpeting.

Dry the Area Quickly (Within 24–48 Hours)

- ☐ Use wet/dry vacuums, mops, or towels to soak up water.
- ☐ Use fans, dehumidifiers, and open windows to dry air and surfaces. Exercise caution when using heat as it will increase humidity and improve conditions for mold growth.
- ☐ Remove wet carpets, insulation, furniture or other contents that can't be dried quickly.
- ☐ Open walls or flooring if water seeped behind them (especially drywall).
- ☐ For severe flooding, consider professional water extraction services.
- ☐ Consider the use of a moisture meter⁵ to confirm that materials are acceptably dried out before painting or otherwise covering building materials.

Clean and Disinfect

- ☐ Clean surfaces to remove debris.
- ☐ Disinfect (see Remediation section for details)

Remove and Replace Damaged Materials

- ☐ Porous materials like drywall, ceiling tiles, and insulation that were soaked should be discarded. (Drywall can be dried in place if there is no swelling and no disruption to seams.)
- ☐ Carpet padding should almost always be replaced.
- ☐ Use mold-resistant replacements where possible.

Treat Surfaces with Antimicrobials

- ☐ Apply mold-preventive coatings (like Microban, Zinsser Mold Killing Primer) to exposed framing, subfloors, or drywall before closing the area back up.

Monitor for Mold Signs

Perform follow up inspections to including checking for:

- ☐ Musty odors
- ☐ Discoloration on walls/ceilings
- ☐ Warped or soft materials
- ☐ Use moisture meters or humidity sensors to track risky spots.

Improve Ventilation and Waterproofing

- ☐ Install exhaust fans, sump pumps, or vapor barriers as needed.
- ☐ Make sure gutters and downspouts are directing water away from the building.
- ☐ Seal around windows, doors, and exterior walls to prevent future leaks.

⁵ Moisture meters must be properly maintained and calibrated pursuant to the manufacturer's recommendations/requirements. In lieu of internal moisture meter use, the services of an industrial hygienist or professional mold remediation contractor may be retained to perform this service.

Remediation

Remediation is the identification and correction or mitigation of the moisture source (when possible), drying of the area, removal of the mold and any digested materials, and restoration of the space, potentially with improvements to reduce the risk of mold in the future.

Once a mold colony is identified, remediation should be prioritized to reduce the risk of growth and development of harmful airborne spore distribution. Remediation may be accomplished through removal of the mold through cleaning or removal of the impacted material.

Generally, remediation should not be considered complete as long as the source remains. If there is a leak, repair or remediation of the underlying problem should be completed.

Colony Classification

This plan outlines four levels of mold development and remediation plans. The level of the case will contribute to the determination of the type of work to be performed, who may perform the work, and steps to be taken to ensure the safety of the worker and those around them.

Level	Size	Moisture Source	Appearance	Damage
1 - Cosmetic	< 10 sq ft	Expected	Flat	Stain only
2 - Minor	< 100 sq ft	Expected or unexpected	Flat or raised	Stain only
3 - Moderate	< 100 sq ft	Expected or unexpected	Flat or raised	Yes
4 - Major	> 100 sq ft	Expected or unexpected	Flat or raised	Yes

Level 1 - Cosmetic

A Cosmetic case is one where less than 10 square feet are affected, generally on non-porous surfaces, where the moisture source is known and/or expected and the mold growth rests flat on the surface. Cosmetic cases are **consistent with mildew** and are likely to be found in areas like residential and non-residential bathrooms and locker rooms.



Level 2 - Minor

A Minor case is a small to medium colony where less than 100 square feet is affected and where there is no evidence of facility damage other than surface staining. The mold may rest flat on the surface or have outward growth but should be relatively new. Minor cases may include larger colonies of mildew or mold colonies in locations where a moisture source is known and may be expected, like in a residential bathroom, or unexpected, like in a location with an identified leak.



Level 3 - Moderate

A Moderate case is a small to moderate colony where less than 100 square feet is affected but there is indication of property damage. Damage may be limited to peeling or swollen drywall or paint or may indicate deterioration of wood structures, colonies located on surfaces that cannot be cleaned (including porous materials like carpet or ceiling tiles). Moderate cases may occur in places with expected and constant moisture, but are most common in locations with unexpected moisture, such as those with leaks.



Level 4 - Major

Major cases are large colonies of more than 100 square feet. It is not common for spaces impacted by colonies of this size to not be impacted by facility damage. *SSU employees do not remediate Level 4 cases. The university will retain the services of a licensed contractor certified to perform mold remediation work under the supervision of Facilities Management or CPDC.*



Remediation Planning

It is critical to develop a plan before starting work to ensure the correct people, equipment, and precautions are taken prior to disruption of the colony. Planning should not cause unnecessary delays, but will allow the work to be completed safely and efficiently.

Once it is determined if the work will require cleaning or removal and replacement of materials, then the following can be determined:

- What tools and equipment/materials are needed to perform the work
- What personal protective equipment (PPE) is required
- Which classification or specific employees will perform the work (based on labor restrictions, training, and ability to wear appropriate PPE)
- How the work will impact building occupants/campus operations

Once these matters are considered, then a work plan should be developed. Work plans may include, but are not limited to:

- ☐ Communication to building occupants
- ☐ Work schedule
- ☐ Other hazards present (asbestos, hot work, roof work, etc.)
- ☐ Tools/equipment/materials necessary
- ☐ PPE requirements
- ☐ Need for containment, changes to air handling, or other safety measures
- ☐ Need for pre-work and/or clearance testing (in consultation with EH&S)
- ☐ Restoration plan, if applicable

Types of Remediation

There are various means to remove or mitigate mold, depending on the size and condition of the colony. This section reviews the various strategies and considerations of each and the following section will apply each strategy to each level. Strategies are based on the EPA's "Mold Remediation in Schools and Commercial Buildings Guide."⁶

The first strategy considered for Level I (Cosmetic) and Level II (Minor) mold colonies should be cleaning. **The type of cleaning will depend primarily on the type of surface, not the type or condition of the mold.**

Level 3 and 4 cases will generally involve a combination of removal and restoration and cleaning.

The EPA guide identifies three means of treating mold:

- Wet vacuum
- Damp wipe
- HEPA vacuum
- Physical removal

These options are not listed in preference order and should be considered based on the situation.

Appendix F provides the EPA recommended method based on the material, along with appropriate PPE and containment recommendations.

Method 1: Wet Vacuum

Wet vacuums are vacuum cleaners designed to collect water. They can be used to remove water from floors, carpets and hard surfaces where water has accumulated. They should **not** be used to vacuum porous materials, such as gypsum board/drywall.

They should be used only when materials are still wet – wet vacuums may spread spores if sufficient liquid is not present. The tanks, hoses and attachments of these vacuums should be thoroughly cleaned and dried after use since mold and mold spores may stick to the surfaces.

Wet vacuums vary in their ability to extract moisture. Consideration should be given into the ability to fully dry a surface treated by a wet vacuum to ensure lingering moisture does not further encourage mold growth.

Wet vacuum **is effective:**

- Immediately after water intrusion (prior to confirmed mold colonization):
 - It's useful for removing standing water from carpets, floors, and other hard surfaces before mold has a chance to grow.
 - Best within the first 24–48 hours after flooding or leaks.
- Post-cleaning rinse:

⁶https://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide-chapter-3#Clean up_Methods

- After surfaces have been scrubbed with detergent or an antimicrobial cleaner, a wet vacuum can help suction up leftover liquid, reducing moisture that encourages future mold regrowth.
- On non-porous and semi-porous materials:
 - Works well on tiles, concrete, metal, and some plastics after they've been cleaned.

Wet vacuum is **not effective**:

- If mold has penetrated porous materials:
 - For things like drywall, ceiling tiles, and heavily contaminated carpets, vacuuming is not enough—these materials usually need to be removed and discarded.
- Dry mold spores:
 - Wet vacuums are not designed to remove airborne or dry mold spores. A HEPA vacuum is required after drying surfaces to capture any lingering spores.
- Without drying equipment:
 - Using a wet vacuum without following up with dehumidifiers and fans can leave residual moisture, which may encourage further mold growth.

Process for remediation using a wet vacuum:

- ☐ Stop the source of water.
- ☐ Use a wet vacuum to remove standing water quickly.
- ☐ Clean surfaces with detergent or antimicrobial solutions.
- ☐ Vacuum the excess liquid with the wet vac.
- ☐ Thoroughly dry the area with fans and dehumidifiers.
- ☐ Use a HEPA vacuum on dry surfaces to remove spores.

See appendix B for a detailed checklist for use of a wet vacuum to remove mold.

Method 2: Damp Wipe

Whether dead or alive, mold is allergenic, and some molds may be toxic. Mold can generally be removed from nonporous (hard) surfaces by wiping or scrubbing with water, or water and detergent. It is important to dry these surfaces quickly and thoroughly to discourage further mold growth.

Instructions for cleaning surfaces, as listed on product labels and/or on product safety data sheets (SDS), should always be read and followed.

Porous materials that are wet and have mold growing on them may have to be discarded. Since molds will infiltrate porous substances and grow on or fill in empty spaces or crevices, the mold can be difficult or impossible to remove completely.

The manager for custodial services is responsible for identifying the best chemical products for cleaning mold. The information below is based on EPA recommendations and is advisory.

When damp wipes⁷ **are effective**:

- Cleaning hard, non-porous surfaces:
 - Ideal for glass, metal, plastic, tile, sealed countertops, and similar surfaces.
 - Wipes can physically remove mold colonies and spores from the surface when used properly.
- Small, localized mold growth
 - Useful for areas less than 10 square feet (e.g., bathroom tiles, window sills, refrigerator gaskets).
- Post-cleaning final wipe-down
 - After using a detergent or cleaner, wet wipes (especially disinfecting wipes) can remove residual mold particles and microbial residue.

When wet wipes are **not effective**:

- Porous or absorbent materials:
 - Items like drywall, ceiling tiles, unsealed wood, carpet, and insulation can't be adequately cleaned with wipes.
 - Mold in these materials typically grows beneath the surface and must be removed entirely.
- Heavy mold contamination:
 - Wipes are not suitable for large infestations or for mold that has caused structural damage or strong odor.
 - Larger areas require scrubbing, HEPA vacuuming, drying, and possibly material removal.

Process for remediation using damp wipes:

- ☐ Use disinfecting or antifungal wipes if available.
- ☐ Wipe in one direction only to avoid spreading spores.
- ☐ Discard each wipe after use—never reuse.
- ☐ Follow up with drying and ventilation.
- ☐ Use gloves and a mask during cleaning.

Cleaning agents most effective for mold removal:

- Hydrogen peroxide (3–10%)
- White vinegar
- Quaternary ammonium compounds (QUATs): such as Clorox® Pro Quaternary Disinfectant Cleaner or Lysol® Professional Disinfectant Spray
- Sodium hypochlorite (bleach): 1 cup bleach/1 gallon water is effective for mold removal; stain treatment may be used up to 10% concentration with proper precautions

⁷ The term “wet” or “damp wipe” does not exclusively refer to a wipe that is pre-moistened with a cleaning agent, rather may refer to the use of any liquid cleaning agent applied to a surface or a wipe to clean a surface with mold.

In addition to the above cleaning agents, mold-inhibiting coatings may be considered after cleaning to avoid future mold growth. These include treating surfaces with antimicrobial or fungistatic paints/sealants to prevent regrowth.

See appendix C for a detailed checklist for use of damp wipes to remove mold.

Method 3: HEPA Vacuum

HEPA (High-Efficiency Particulate Air) vacuums are recommended for final cleanup of remediation areas after materials have been thoroughly dried and contaminated materials removed. HEPA vacuums are also recommended for cleanup of dust that may have settled on surfaces outside the remediation area. Care must be taken to assure that the filter is properly seated in the vacuum so that all the air must pass through the filter. When changing the vacuum filter, remediators should wear PPE to prevent exposure to the mold that has been captured. The filter and contents of the HEPA vacuum must be disposed of in well-sealed plastic bags.

When HEPA vacuuming **is effective**:

- After mold has been physically removed
 - HEPA vacuums are effective after visible mold growth has been cleaned or removed (via scrubbing, sanding, wire brushing, etc.) to:
 - Capture residual mold spores.
 - Remove dust and debris that may contain spores.
 - Prevent the spread of spores during cleanup.
- On non-porous and some semi-porous surfaces
 - Metal, glass, plastic (non-porous).
 - Sealed wood or concrete (if fully dried and mold-free after scrubbing).

HEPA vacuuming is not effective on porous materials like drywall, carpet, or ceiling tiles. These materials usually need to be removed and discarded.

See appendix D for a detailed checklist for use of HEPA vacuums to remove mold.

Method 4: Physical Removal

Mold growth on porous materials (e.g., drywall, carpet, insulation, ceiling tiles, mattresses, upholstery) usually cannot be cleaned effectively, as the mold penetrates below the surface. These items should be discarded to prevent regrowth. Additionally, surfaces that are heavily contaminated may have additional underlying damage that requires additional abatement or removal to ensure the structural integrity of the space and to avoid continued growth.

It is important to package mold-contaminated materials in sealed bags before removal from the containment area to minimize the dispersion of mold spores throughout the building. Bagged materials may be disposed of as general waste, unless there are other hazardous materials, such as asbestos or lead, present.

See appendix E for a detailed checklist for the physical removal of mold impacted materials.

Considerations during Remediation

Testing

The EPA (U.S. Environmental Protection Agency) generally does not recommend testing mold colonies under most circumstances. Mold is ubiquitous and is found everywhere. Testing for mold will almost always yield a positive finding.

Once mold can be seen or smelled, mold is present and needs to be identified and removed. Identifying the type of mold does not change the remediation process or urgency.

In addition to the constant presence of mold, the EPA identifies the following additional reasons why testing is not necessary for identified mold colonies:

Similar health risks:

- Although some molds are believed to be more hazardous with the development of mycotoxins, the health risks for most people are similar across different mold types.
- The health effects of mold exposure vary from person to person (e.g., asthma, allergies), but no standard exists linking specific health effects to specific mold species.
- The safety measures involved in remediation are not different for non-cosmetic cases, even when “toxic” types of mold are present

No federal limits or standards:

- There are no federal exposure standards for mold spores, which means testing results cannot be compared to a regulatory limit to determine safety.
- Levels will often vary significantly based on the environment, weather, and other location-specific factors.

EH&S will consider testing under the following circumstances:

- Complaints of or investigations into unexplained health symptoms consistent with mold-related illness
- In response to a claim or other action related to mold-related illness
- When mold is found to have been present for a lengthy period of time (more than 6 months) in a location where workers may have been exposed on a frequent or regular basis
- When confirming the success of remediation

Since there is no standard “acceptable level” of mold in the air or on surfaces, testing will, at the advice of a registered industrial hygienist, focus on the variance in the mold spore level in the specific location as compared to unimpacted areas and natural environmental levels (generally outdoors) and the presence or absence of mold species identified as possessing the ability to produce mycotoxins (toxic mold).

Decisions to perform air testing or surface testing to determine the level and/or species of mold should not delay remediation of the mold.

Temporary Safety Measures

If mold is determined or believed to have a significant presence, EH&S will determine if the space is suitable for continued occupancy and what safety measures should be taken prior to remediation. This may include:

- Temporary relocation of employees with environmental sensitivities
- Temporary relocation of all employees
- Restricted access to spaces for essential duties only
- Respirator or mask requirements
- Containment of affected surfaces
- Air scrubbing/purification of the space

Moisture Sources

Mold is a symptom of a moisture problem. When planning remediation, control of the moisture source must be prioritized. Remediation of mold while a moisture problem persists will likely lead to new mold colonies.

Refer to the [Prevention](#) section of this plan for moisture control and remediation measures.

Employee Safety

Employees involved in the remediation of mold are most likely to be exposed to mold spores as they are disturbed and must take appropriate precautions to ensure their safety. Others who discover mold should take basic precautions to protect themselves and those around them.

General Safety

The first step to protect people from potential negative health effects from mold is to report any known excessive and unexpected water sources or mold right away.

If mold is discovered indoors:

- Do not touch mold or moldy items with bare hands
- Do not get mold or mold spores in your eyes
- Do not disrupt mold colonies; doing so increases the presence of airborne mold spores
- Do not use fans in areas where mold colonies are visible
- Do not eat or drink in areas where mold spores are being disrupted or remediated

Remediation Safety

When working to remove mold, whether through cleaning or removal, efforts should be made to reduce the disruption of dry mold spores, which will become airborne. Additionally, personal protective equipment (PPE) should be used to reduce the impact to the worker.

Reducing the impacts of disruption of the colony is generally accomplished through two means: use of the wet method and containment.

Wet Method

The wet method involves spraying or lightly misting moldy surfaces with water or a wet detergent solution before removal. Doing so weighs down the mold spores, reducing spread. Wet methods should be used whenever possible, even when the contaminated surface is being removed, as vibration from removal tools will significantly disturb mold colonies.

Containment

Containment physically isolates the work area, generally using plastic sheeting. Containment may be passive/limited containment, where air pressure is not controlled, or using negative air pressure.

Limited containment is a configuration where the mold-affected area is physically sealed off using barriers (e.g., 6 mil plastic sheeting, zip walls, taped doorways), but without the use of negative air machines or air scrubbers to create negative pressure inside the containment area. Limited containment is generally effective at preventing mold spores from drifting to unaffected parts of the building when disruption will be limited by both the size of the colony and the use of the wet method (as described above).

Limited containment should also consider means to restrict the movement of air from the containment area into the HVAC system, either through air controls or physical barriers around intake vents.

Additional guidelines for the design and use of limited containment can be found in Appendix G.

Full containment involves the use of HEPA-filtered exhaust systems (e.g., negative air machines or air scrubbers) to pull air from the work area and vent it outside or through filters, creating lower air pressure inside the containment zone compared to adjacent spaces. This technique is necessary for large colonies where there will be significant amounts of airborne spores as a result of the remediation process.

SSU employees do not perform work requiring full containment/negative air pressure control measures per EPA guidelines. Facilities Management or CPDC will coordinate contracted services with professional remediation contractors as needed.

Personal Protective Equipment (PPE)

The primary function of Personal Protective Equipment (PPE) is to protect a worker while remediating or working around mold to avoid inhaling mold and mold spores and to avoid mold contact with the skin or eyes.

Gloves are required to protect the skin from contact with mold allergens (and in some cases mold toxins) and from potentially irritating cleaning solutions. The glove material should be selected based on the type of materials being handled. If you are using a biocide (such as chlorine bleach) or a strong cleaning solution, you should refer to the SDS for PPE requirements.

To protect your eyes, use properly fitted **goggles**. Goggles must be designed to prevent the entry of dust and small particles. Safety glasses or goggles with open vent holes are not acceptable.

Respirators⁸ protect workers from inhaling airborne mold, mold spores and other construction related dust. The EPA recommends the minimum respiratory protection needed when mold colonies are disrupted, causing airborne spores, to be an N95 respirator. A half-face respirator equipped with a HEPA filter cartridge may also be used and is recommended for sensitive persons with respiratory illness or other risk factors.

Level	Skin/Eye Protection	Respiratory Protection
1 - Cosmetic	Nitrile or higher protecting glove	Dust/nuisance mask ⁹ or N95
2 - Minor	Nitrile or higher protecting glove	N95 or half face respirator
3 - Moderate	Nitrile or higher protecting glove	N95 or half face respirator
4 - Major	Not performed by SSU employees	Not performed by SSU employees

⁸ Only employees who are approved for the use of a respirator through EH&S and Human Resources are permitted to use an N95 mask or half face respirator.

⁹ A dust/nuisance mask may only be used when the wet method is also applied. A dust/nuisance mask is a non-sealing mask that is not a NIOSH certified respirator. Contact EH&S to confirm the correct style if needed.

Disposable protective clothing is recommended, but not required, during larger remediation projects, primarily those involving the removal or other significant disruption of mold colonies, to prevent the transfer and spread of mold to clothing and to eliminate skin contact with mold. Additionally, sensitive persons or employees with sensitive household members should consider disposable clothing for any exposure to airborne mold spores.

Communication

Exposure Notification

The university is responsible for timely, accurate, and relevant communication to employees impacted by any work related hazard. This includes:

- Exposure timeframe
- Type of exposure
- Nature of hazard
- Potential health impacts
- Immediate protection measures (if applicable)
- Employee rights
- Employer responsibilities

Additionally, the university is responsible for communicating exposure to hazardous materials, including significant mold exposures, to students. When mold exposure to residential students is deemed a result of residential student failure to maintain their residence appropriately, notice will be provided to ensure the resident understands the health issues associated with the exposure and any steps to be taken, but will identify the cause of the exposure appropriately.

Communication about employee and student exposure will be managed by EH&S, with information provided by Facilities Management or any other applicable campus partner.

Task-Related Exposure

Workers assigned remediation duties or who may otherwise be exposed to mold-related hazards are entitled to timely and accurate information about conditions and plans for remediation. From a communication perspective, this includes, but is not limited to:

- Location of mold-related hazard
- Remediation plan and work assignments
- Protective measures for employees (PPE, occupancy restrictions, etc.)
- How to report exposure related concerns

Training

EH&S will develop and deliver mold awareness training to any employee in Facilities Management who is assigned to work in areas that may be impacted by mold or are assigned mold remediation duties. The mold awareness training will be based on EPA recommendations and requirements and other industry best practices, as well as the university-specific guidelines contained within this plan. Topics will include, but are not limited to:

- Employee and employer responsibilities and obligations
- Information about the biology of mold and its basic characteristics
- Hazards associated with mold, both biological and physical
- How to identify mold
- Mold prevention
- Mold remediation guidelines
- PPE

All employees are expected to participate in training assigned by their appropriate administrator. Additionally, employees are expected to request additional information, training, and support from their appropriate administrator if assigned work or exposed to a hazard with which they are unfamiliar.

Training for the following designated Facilities Management employees is required prior to being assigned remediation or significant exposure or within one year of employment. Appropriate Administrators may request training for additional employees as appropriate.

Refresher training is required every three years or when repeated/remedial training is required due to safety related deficiencies as related to plan content.

Appendices

The following appendices follow the plan to provide for additional information, checklists, and tables intended to assist in the operationalization of this plan. These tools are not intended to replace the plan detail or the source references.

Appendix	Title
Appendix A	Mold Identification Guide
Appendix B	Mold Removal Checklist - Wet Vacuum
Appendix C	Mold Removal Checklist - Wet Wipes
Appendix D	Mold Removal Checklist - HEPA Vacuum
Appendix E	Mold Removal Checklist - Physical Removal
Appendix F	Mold Remediation Tables
Appendix G	Limited Containment Guidelines
Appendix H	Training Materials
Appendix I	Mold Report Workflow

Mold Identification Guide

Growth Stages

Mold growth typically occurs in four distinct stages, which are influenced by moisture, temperature, and nutrient availability. Understanding these stages can help in early detection and remediation.

Stage 1: Dormancy/Spore Stage

During this stage, mold spores are microscopic, airborne reproductive units that are always present in the environment. Spores settle on surfaces but remain dormant until conditions favorable for reproduction and life are present. These conditions are moisture, oxygen, and organic material for food. The conditions that are considered favorable vary depending on the type of spore.

Mold is not visible to the naked eye at this stage.

Stage 2: Germination Stage

Once the conditions are favorable, the spores will grow, forming filament structures called hyphae (pronounced hi-fee), which are microscopic thread or tube structures that will ultimately form the texture of the visible mold colony and act as a sort of root for the emerging mold colony.

Mold is not visible to the naked eye at this stage.

Stage 3: Colonization Stage

During this stage, the hyphae develop into a network called mycelium, creating anchors to the surface and spreading. At this time, mold will become visible in patches, and a musty odor caused by digestion is generally noticeable. The colony will begin to release spores into the air and may begin producing mycotoxins, the toxic chemical substance produced by certain types of mold.

Mold is visible to the naked eye at this stage.

Stage 4: Sporulation (Reproduction) Stage

During this stage, the mold continues to grow and release more spores into the air. Mold will continue to grow and reproduce until one of the three elements required for life (oxygen, moisture, and organic matter) is disrupted.

Mold is visible to the naked eye at this stage.

Appearance

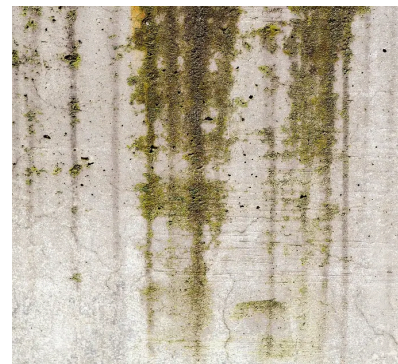
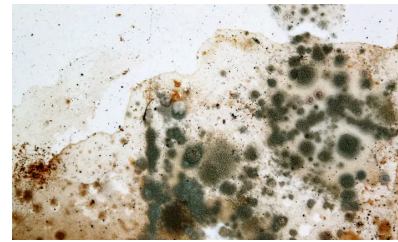
Mold can take on many appearances, depending on the type, surface it's growing on, and the stage of its growth. It is not usually possible to determine the type of mold or its relative risk by

visible examination, however, the appearance of the material can help to determine if it is mold, how extensive a colony is present, and the potential for airborne contamination.

Mold is often perceived as being black or brown in color but actually is more commonly dark shades of green, blue, gray, brown, or black. Some types of mold appear as more bright colors including white, red, orange, or pink. These bolder colors may also be indicators of other types of biogrowth.

Mold grows in a number of different patterns that can help to identify the type of mold or the extent of the colony growth. Mold may take on any of the following appearance characteristics:

- Circular spots or clusters – often growth begins in small round colonies and spreads outward
- Streaks or stains – found along walls, behind wallpaper, or beneath leaks.
- Mottled or Patchy – Can appear inconsistent in color and texture.
- Hidden Growth – Behind walls, baseboards, or ceiling tiles; look for water stains, peeling paint, or musty odors.



In addition to the visual appearance and color of the mold, the texture can vary greatly and assist in assessing the type and relative risk. Mold may take on any of the textural characteristics:

- Fuzzy or cottony – this texture is especially common during early growth or certain types of mold are aggressively growing
- Slimy or Wet-Looking – texture generally indicates active growth and is especially common when moisture is present.
- Powdery or Dusty – Spores can dry out, making them easily airborne.
- Velvety – Some *Penicillium* and *Aspergillus* molds develop this appearance.



Other Organisms

While mold is the most common microorganism that may present a hazard to workers, other microorganisms may be present and may appear similar to mold, often present in similar environments with similar conditions. These organisms, along with mold, may be referred to as “biogrowth” or “biofilm.”

Biogrowths and biofilms are not covered by this plan and are generally not hazardous. The information in this section is intended for educational purposes only, to aid in the identification of materials that may grow alongside or be misidentified as mold. The handling and mitigation of any potential hazards described below should be addressed in consultation with EH&S.

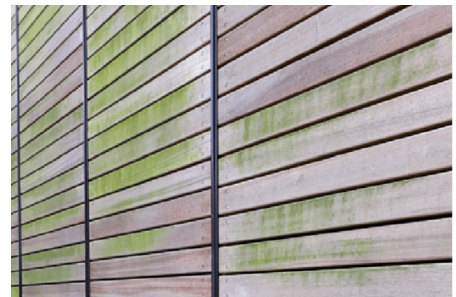
Algae

Algae are a diverse group of photosynthetic organisms that thrive in moist or wet conditions. Most algae are not harmful, excepting some harmful algae blooms that can release toxins harmful to humans and marine life. Algae creates energy through photosynthesis, like plants do. They do not ingest organic building materials like mold colonies do.

Most commonly, the university will deal with algae in bodies of water and, more commonly associated with mold, on the exterior of buildings. Facilities are most commonly impacted by the following algae types.

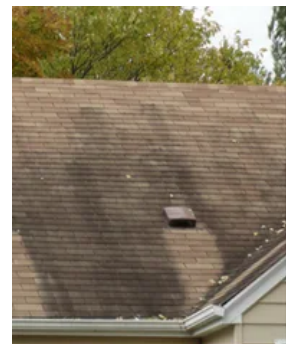
Green algae:

- Appears as green streaks or patches on siding, roof shingles, bricks, or concrete surfaces
- Thrives in areas with constant moisture, including north facing walls, shaded concrete, or roofs under trees
- No health hazard but will create slip/fall hazards when wet



Blue-green algae (technically a bacteria, not an algae):

- Appears as black or dark colored streaks
- Commonly found on asphalt shingles and siding
- Thrives in humid, shaded conditions
- Commonly mistaken for mildew, but rarely grow indoors due to inadequate light
- May produce toxins called cyanotoxins, that when dried and aerosolized can be harmful, may also present slip/fall hazards



Red or brown algae:

- Appears as reddish or brown discoloration, often in combination with green algae or lichen
- Most common in tropical or coastal environments with high salt content
- No health hazard but will create slip hazards when wet



Lichen

Lichen form when a fungus, like mold, creates a symbiotic partnership with algae. Both components are necessary for lichen to grow and thrive. Lichen look like crust, leaves, or a branching structure. They are most commonly found outdoors on tree bark, soil, and structure walls and roofs. They often grow alongside moss but are not symbiotic with moss.

Because lichen includes a photosynthetic property through algae, the mold present does not generally consume organic material, so, therefore, does not damage facilities. Lichen, however, can cause a slip/fall hazard.



Protozoa

Protozoa are single celled microorganisms found in water, soil, and other living organisms. They are found in moist environments, in water, or within other biofilms. They are rarely found indoors due to incompatible conditions, however, may thrive alongside mold and other biofilms in ideal indoor conditions.

Most protozoa are harmless and often beneficial for the ecosystem, however, some protozoa present significant health hazards and cause serious diseases including malaria, giardia, dysentery, toxoplasmosis, and meningoencephalitis. Protozoa are most likely to enter the human body through ingestion, but may also rarely enter through broken skin or be inhaled when aerosolized.

Mold Removal Checklist - Wet Vacuum

Use this checklist to safely and effectively remove mold with the help of a wet vacuum. This guide assumes the mold-affected area is under 100 square feet. Larger colonies require professional remediation.

Step 1: Safety First

- ☐ Identify and obtain PPE: gloves, N95 respirator, goggles, and protective clothing (optional).
- ☐ Ventilate the area, if possible (open windows/doors).
- ☐ Consult with BSE to determine if the HVAC should be powered down or isolated to prevent spore spread.

Step 2: Stop the Moisture Source

- ☐ Identify and fix the leak, flood source, or condensation issue.
- ☐ Ensure no additional water is entering the area.

Step 3: Remove Standing Water

- ☐ Use a wet vacuum to extract all visible standing water.
- ☐ Focus on hard, nonporous surfaces and carpets or upholstery (only if salvageable).

Step 4: Clean Contaminated Surfaces

- ☐ Scrub hard surfaces with soap or a commercial mold cleaner.
- ☐ Use a stiff brush for textured or porous surfaces like concrete.
- ☐ Let the cleaner sit for a few minutes before rinsing (refer to manufacturer's instructions)

Step 5: Wet Vacuum Again

- ☐ Use the wet vacuum to suck up rinse water and cleaner residue.
- ☐ This helps prevent moisture buildup and discourages mold regrowth.

Step 6: Dry the Area Thoroughly

- ☐ Use high-powered fans, dehumidifiers, and open windows to dry the space.
- ☐ Drying should begin within 24–48 hours to prevent mold regrowth.

Step 7: Final Cleanup with a HEPA Vacuum

- ☐ Once the area is dry, vacuum all surfaces with a HEPA-filtered vacuum.
- ☐ This removes any remaining dry mold spores or debris.

Step 8: Dispose of Contaminated Materials

- ☐ If items like drywall, insulation, or carpeting are moldy beyond cleaning, double-bag and discard.
- ☐ Seal the bags before moving them through the facility.
- ☐ Bags may be disposed of as general waste unless they include secondary hazardous materials like asbestos or lead.

Optional: Treat stains and/or apply mold-resistant treatments

- ☐ Spray mold-resistant sealants or antimicrobials to cleaned and dried surfaces if desired

Mold Removal Checklist - Wet Wipes

Use this checklist to safely and effectively remove small patches of mold using wet wipes. This method is best suited for hard, non-porous surfaces and minor mold contamination (under 10 square feet).

Step 1: Safety Precautions

- ☐ Wear protective gear: gloves, N95 respirator or P100 mask, goggles, and long sleeves.
- ☐ Ensure the area is well-ventilated.
- ☐ Turn off HVAC systems to prevent mold spore spread.

Step 2: Identify Suitable Surfaces

- ☐ Confirm the surface is non-porous (e.g., glass, tile, metal, sealed countertops).
- ☐ Do not use wet wipes on porous materials like drywall, wood, or fabric.

Step 3: Pre-Clean if Needed

- ☐ If visible grime or dirt is present, pre-clean with mild soap and water before using disinfecting wipes.

Step 4: Wipe the Mold-Affected Area

- ☐ Use disinfecting or antifungal wet wipes.
- ☐ Wipe in one direction to avoid spreading spores.
- ☐ Use a new wipe for each section or as it becomes soiled.

Step 5: Dispose of Used Wipes

- ☐ Place used wipes in a sealed plastic bag and discard in the trash.
- ☐ Wash hands thoroughly after handling used wipes.

Step 6: Dry the Area Completely

- ☐ Use fans or open windows to dry the cleaned area completely.
- ☐ Monitor for any signs of moisture or mold regrowth.

Optional: Follow Up with HEPA Vacuuming

- ☐ For extra precaution, once the area is dry, vacuum nearby surfaces with a HEPA vacuum to remove any residual spores.

Mold Removal Checklist - HEPA Vacuum

Step 1: Preparation

- ☐ Wear proper PPE (personal protective equipment):
 - ☐ N95 or better respirator
 - ☐ Nitrile or rubber gloves
 - ☐ Eye protection (goggles or safety glasses)
 - ☐ Protective clothing (disposable coveralls or washable long sleeves/pants)

Step 2: Isolate the work area:

- ☐ Seal off with plastic sheeting and tape (especially doorways, vents, and HVAC returns)
- ☐ Post warning signs if in shared space
- ☐ Turn off HVAC systems to prevent mold spores from circulating
- ☐ Ensure good ventilation with negative air pressure and/or air scrubbers if available

Step 3: Gather materials:

- ☐ HEPA vacuum (certified)
- ☐ Plastic bags for waste
- ☐ Damp cloths and mild detergent (for pre-wipe if needed)
- ☐ Sealable container or bag for contaminated PPE

Step 4: Initial Cleaning (If Needed)

- ☐ Dampen surfaces slightly with a mild detergent solution if dust or debris is heavy
- ☐ Remove and discard porous materials if mold growth is embedded (e.g., carpet, drywall)

Step 5: HEPA Vacuuming Process

- ☐ Start from cleanest to dirtiest areas
- ☐ Use slow, overlapping strokes
- ☐ Focus on:
 - ☐ Hard surfaces (floors, walls, ceilings)
 - ☐ Furniture and contents (if salvageable)
 - ☐ Vents and ducts (if applicable and accessible)
- ☐ Use brush or crevice attachments for detailed areas
- ☐ Avoid aggressive scrubbing which can release spores

Step 6: Post-Vacuuming

- ☐ Wipe down surfaces with a damp cloth or appropriate disinfectant (if needed)
- ☐ Repeat HEPA vacuuming as a final pass if area was heavily contaminated
- ☐ Seal and dispose of vacuum contents carefully (follow manufacturer instructions)
- ☐ Clean and inspect HEPA filter (replace if necessary)

Step 7: Cleanup and Disposal

- ☐ Place all contaminated rags, disposable PPE, and debris in sealed plastic bags
- ☐ Remove protective clothing and wash exposed skin thoroughly
- ☐ Ventilate the area and run a dehumidifier to dry residual moisture
- ☐ Document work (photos, notes) if needed for insurance or compliance

Step 8: Final Steps

- ☐ Inspect area visually - no visible mold or residue should remain
- ☐ No musty odors should be detectable
- ☐ Air sampling (optional) for post-remediation verification
- ☐ Monitor area for signs of new moisture or mold over time

Mold Removal Checklist - Physical Removal

Step 1: Safety & Preparation

- ☐ Wear appropriate PPE: N95 respirator or better, gloves, goggles, disposable coveralls.
- ☐ Isolate the work area with plastic sheeting and tape.
- ☐ Turn off HVAC systems to prevent spore spread.
- ☐ Set up negative air pressure or air scrubbers if available.
- ☐ Gather tools and disposal supplies (e.g., utility knife, plastic bags, duct tape, disinfectants).

Step 2: Assess Materials for Removal

- ☐ Identify all visibly mold-impacted materials.
- ☐ Test for moisture content if needed using a moisture meter.
- ☐ Mark porous materials (e.g., drywall, carpet, insulation) for removal if mold is embedded.
- ☐ Check for structural damage in wood or framing materials.

Step 3: Remove Contaminated Materials

- ☐ Cut and remove affected drywall, insulation, or carpeting.
- ☐ Double-bag moldy debris in 6-mil plastic bags.
- ☐ Seal bags with duct tape or zip ties before removing from containment.
- ☐ Dispose of all non-salvageable porous materials.

Step 4: Clean Surrounding Areas

- ☐ HEPA vacuum all exposed surfaces after removal.
- ☐ Wipe surfaces with a damp cloth or mild detergent solution.
- ☐ Dry all cleaned areas thoroughly with fans or dehumidifiers.

Step 5: Post-Removal Actions

- ☐ Inspect for remaining mold or moisture before reconstruction.
- ☐ Replace materials only when the area is completely dry and mold-free.
- ☐ Continue monitoring humidity and ventilation to prevent recurrence.
- ☐ Consider post-remediation verification (visual inspection or air monitoring)

Mold Remediation Tables¹⁰

SSU Mold Case Levels

Level	Size	Moisture Source	Appearance	Damage
1 - Cosmetic	< 10 sq ft	Expected	Flat	Stain only
2 - Minor	< 100 sq ft	Expected or unexpected	Flat or raised	Stain only
3 - Moderate	< 100 sq ft	Expected or unexpected	Flat or raised	Yes
4 - Major	> 100 sq ft	Expected or unexpected	Flat or raised	Yes

SSU PPE Requirements by Level

Level	Skin/Eye Protection	Respiratory Protection
1 - Cosmetic	Nitrile or higher protecting glove	Dust/nuisance mask ¹¹ or N95
2 - Minor	Nitrile or higher protecting glove	N95 or half face respirator
3 - Moderate	Nitrile or higher protecting glove	N95 or half face respirator
4 - Major	Not performed by SSU employees	Not performed by SSU employees

SSU Containment Requirements by Level and Area

Level	Area	Containment Type
1 - Cosmetic	< 10 sq. ft.	None
2 - Minor	< 100 sq. ft.	None (wet method) or Limited Containment
3 - Moderate	< 100 sq. ft.	Limited Containment
4 - Major	> 100 sq. ft.	Full Containment (contractor only)

¹⁰ Tables a modified version of the EPA Mold Remediation table; adjusted for SSU practices. For the EPA table, visit <https://www.epa.gov/mold/pdf-version-table-2-mold-remediation-guidelines-mold-remediation-schools-and-commercial>.

¹¹ A dust/nuisance mask may only be used when the wet method is also applied. A dust/nuisance mask is a non-sealing mask that is not a NIOSH certified respirator. Contact EH&S to confirm the correct style if needed.

EPA Cleaning Guide¹²

Material	Level	Cleaning Method	PPE
Carpet and backing	2 - Minor 3 - Moderate	Wet Vacuum HEPA Vacuum	Nitrile or higher N95 or half face respirator
Concrete or cinder block	2 - Minor 3 - Moderate	Wet Vacuum HEPA Vacuum	Nitrile or higher N95 or half face respirator
Hard surface, porous flooring (linoleum, ceramic tile, vinyl)	1 - Cosmetic 2 - Minor 3 - Moderate	Wet Vacuum Wet Wipes HEPA Vacuum	Dust/nuisance (1 only) Nitrile or higher N95 or half face respirator
Non-porous, hard surfaces (plastics, metals)	1 - Cosmetic 2 - Minor 3 - Moderate	Wet Vacuum Wet Wipes HEPA Vacuum	Dust/nuisance (1 only) Nitrile or higher N95 or half face respirator
Upholstered furniture & drapes	2 - Minor 3 - Moderate	Wet Vacuum HEPA Vacuum	Nitrile or higher N95 or half face respirator
Wallboard (drywall and gypsum board)	2 - Minor 3 - Moderate	HEPA Vacuum	Nitrile or higher N95 or half face respirator
Wood surfaces	1 - Cosmetic 2 - Minor 3 - Moderate	Wet Vacuum Wet Wipes HEPA Vacuum	Dust/nuisance (1 only) Nitrile or higher N95 or half face respirator

¹² All Level 4 options are excluded and are at the discretion of the contractor. Additionally, removal is a suitable remediation method

Limited Containment Guidelines

Limited containment is generally recommended for areas involving between 10 and 100 square feet of mold contamination. The enclosure around the moldy area should consist of:

- a single layer of 6-mil, fire-retardant polyethylene sheeting
- slit entry and covering flap on the outside of the containment area

For **small areas**, the polyethylene sheeting can be affixed to floors and ceilings with duct tape.

For **larger areas**, a steel or wooden stud frame can be erected and polyethylene sheeting attached to it.

To minimize the migration of contaminants to other parts of the building, certain places within the containment area must be sealed with polyethylene sheeting, including:

- All supply and air vents
- Doors
- Chases
- Risers

Limited Containment Requirements

Moderate Mold Growth:

- ☐ Mold-contaminated area is greater than 10 sq. ft. but less than 100 sq. ft.
- ☐ There is no significant HVAC contamination, structural compromise, or occupant illness.

Work Area:

- ☐ The area can be isolated with plastic sheeting on floors, ceilings, and walls.
- ☐ Entryways can be sealed using a slit entry with a covering flap or zippered access.

Minimal Risk of Spread:

- ☐ Mold is not highly airborne or likely to be dispersed during cleanup.
- ☐ Negative air pressure is not required, but air circulation should be minimized.

Low-Risk Occupants:

- ☐ The area is not adjacent to sensitive populations, such as medical care, childcare, or immunocompromised individuals.
- ☐ No mold-related illness is currently affecting building occupants.

Appendix H: Training Syllabus

In development

Mold Report Workflow

