Janitorial Fundamentals





TSAG 18232 102 Ave NW Edmonton Alberta, Canada T5S 1S7

Version 2 Created 2021

This document was created by the First Nations Technical Services Advisory Group (TSAG). All rights reserved. No part of this document may be reproduced in any form: traded, rented, or resold without written permission from the TSAG.

Disclaimer: The material in this presentation and manual is intended for educational purposes only. While every effort has been made to ensure the accuracy, reliability, completeness, and currency of the general and technical information presented, TSAG makes no representation or warranty, stated or implied, as to its accuracy, reliability, completeness, or currency.

The information and advice provided are so provided on the basis that users will be responsible for making their own assessment of the matters discussed. The information and advice provided do not necessarily reflect the views of TSAG or indicate their endorsement of said information and advice.

Contents

SECTION 1: JANITORIAL ROLES AND RESPONSIBILITIES	7
Introduction to Janitorial Fundamentals	8
Janitorial Fundamentals	8
Janitorial /Maintenance Tracking	8
Janitorial Standards	9
SECTION 2: SAFETY FIRST	11
INTRODUCTION	12
Common Site Hazards	12
Common Human Hazards	12
Personal Protective Equipment	13
Personal Hygiene	15
Ladder Safety	15
Safe Lifting	15
*Asbestos Awareness	16
Asbestos Facts	16
Covid 19 Protection and Protocol	17
*Lockout-Tagout Program	18
Lockout and Tagout Devices	19
Isolation Procedures	19
*Confined Spaces	20
Possible Hazards	20
Electrocution	20
Rotating Parts	20
Oxygen Deficiency	21
Flammable and Explosive Substances	21
Toxic Atmosphere	21
Confined Space Entry Permit	22
Multi-gas Detectors	22
Communications	23
Entry and Egress	23
*Hazardous Wastes	23
Hazardous Waste Classifications	24
*Chemical Safety	25
Labelling	25
Chemical Disposal	25
Safety Data Sheets	26

Needlestick and Sharps Safety	30
Blood Borne Pathogens	30
Handling Human Waste	30
Handling Mice and Mice Droppings	31
How Hantavirus Infections Occur	31
* Managing the Risk	32
SECTION 3: HAND TOOLS	35
INTRODUCTION	36
Tool Facts	36
Tightening	36
Units of Measure	36
Fasteners	36
Tool Types	37
Screwdrivers	37
Wrenches	37
Pliers	38
Hex Keys	38
Socket Set	38
SECTION 4: JANITORIAL SUPPLIES AND EQUIPMENT	39
Basic Cleaning Equipment and Supplies	39
The Janitorial Cart	40
Microfibre Cloths	41
Janitorial Work/Storage Area	42
SECTION 5: CLEANING YOUR FACILITY	43
Cleaning Your Facility	44
Green Cleaning	45
*Green Cleaning and Waste Diversion	47
The 4 R's	47
SECTION 6: DAILY CLEANING PROCEDURES	49
Restroom/Washroom Cleaning	50
Offices/Boardrooms/Workstations/Classrooms	51
Kitchens and Serving Areas	52
Hallways, Stairways, and Flooring	53
General Areas	54
Gymnasium	55
Building Grounds	55
SECTION 7: WEEKLY CLEANING PROCEDURES	57

Restrooms	58
Kitchens/Cafeterias	59
Offices/Conference Rooms/Classrooms/Staffrooms	59
General Areas	60
SECTION 8: ANNUAL JANITORIAL PROCEDURES	63
Deep Cleaning	64
Floor Stripping and Refinishing	64
Choosing the Proper Floor Pad	64
Rotary Floor Buffers and Automatic Scrubbers	64
Deep Carpet Cleaning/Extraction	65
Washing Exterior Windows	65
Cleaning the Windows	67
For Those Difficult to Reach Windows	67
Fire Extinguishers, Exit Signs and Alarm Panels:	68
Mid and High-Level Cleaning	68
SECTION 9: MOULD IDENTIFICATION AND REMEDIATION	69
How does Mould grow?	70
Signs of Mould Problems	70
Preventative Maintenance for Mould	70
Types of Mould	71
How to Detect Mould	72
Mould Remediation	73
Estimating the Extent of Mould	73
Getting Rid of the Mould	73
SECTION 10: TIME MANAGEMENT	77
Time Management	78
APPENDIX	81
Glossary	82
Asbestos Containing Materials	85
BIBLIOGRAPHY	87



SECTION 1: JANITORIAL ROLES AND RESPONSIBILITIES

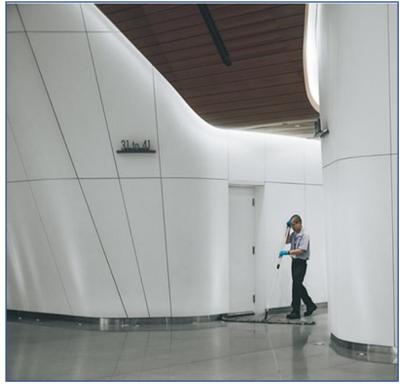


Image by Free-Photos from Pixabay

By the end of Section 1, you will:

- 1. Explain the Association of Physical Plant Administrators (APPA) 5 levels of clean.
- 2. Compare APPA cleaning standards to those in your facility.
- 3. Discuss the basic responsibilities of a Janitor/Custodian.

Introduction to Janitorial Fundamentals

TSAG, in conjunction with Indigenous Services Canada, created the Janitorial Fundamentals course to offer training to First Nations janitorial and maintenance employees that will assist them with their roles. This manual, in conjunction with the hands-on training provided, will provide participants some sound recommendations to assist them as they complete tasks within their buildings. Janitorial maintenance plays a large part in ensuring that your nation's assets continue to function and last to their full life expectancy. Keeping this manual within arms reach will also save your Nation thousands of dollars!

Note: Additional resources (including manufacturer's operation manuals, industry best practices, etc.) should always be utilized for all buildings and professional resources should be accessed when required.

Janitorial Fundamentals

Janitors/Custodians are the front-line workers at any organization and in many ways are responsible for the health and wellness of the occupants. General responsibilities can include:

- Lawn, yard, and sidewalk maintenance
- Cleaning floors: vacuuming, sweeping, scrubbing, and mopping
- Cleaning and polishing work surfaces such as tables desks and counters
- Dusting
- Cleaning windows, mirrors, doors
- Restocking washroom products such as toilet paper, paper towels, deodorizers, and soap
- Emptying waste baskets
- Unlocking and locking the building
- Seasonal inspections
- Light maintenance duties such as changing light bulbs and completing minor repairs

Although there is no formal training necessary to be a janitor, the following training is extremely important to have:

- WHMIS
- Occupational Health and Safety
- Blood Borne Pathogens
- Sharps Safety

- Safe Lifting Practices
- Ladder Safety
- Chemical Safety
- Hantavirus Safety

Janitorial /Maintenance Tracking

To ensure that all janitorial and maintenance tasks are completed and to keep concise records of all additional maintenance the following is recommened:

- All assets should be properly inventoried, logged and tagged.
- Keep a file on each piece of equipment which contain any servicing notes, servicing dates and the names of any individuals or companies that completed the servicing).
- Keep a copy of all building blueprints
- Track information on warrantees (this ensures they won't expire)
- Information on items ordered

Remember to track all maintenance completed by yourself or a hired professional. Keep these records in a file for each component of your building (e.g., the building envelope, HVAC, plumbing)

Janitorial Standards

To achieve a level of cleanliness you must have standards to adhere to. Two organizations that have created standards for the janitorial industry are:

International Sanitary Supply Association (ISSA)

ISSA is a non-profit organization that provides, tools and products, as well as industry standards for the cleaning industry. They promote

"a greater public awareness and understanding of sanitary maintenance principles, while contributing to improved public health and environmental awareness in Canada" 1

Association of Physical Plant Administrators (APPA)

"APPA is *THE* association for facilities professionals (custodial, maintenance, grounds) to network, learn, and propel their profession forward. We do this through our educational programs, publications, regions and chapters, as well as our webinars, town halls, and credentialing program."²

For information on APPA membership please see https://www.appa.org/membership/

APPA has created the appearance level rating system for buildings to assist in setting their goals and expectations for their level of cleanliness. Please see the following page for this rating system.

¹ https://issa-canada.com/en/issa-canada-en/about-issa-canada-en

² APPA

Level 1 - Orderly Spotlessness

- Floors and base mouldings shine and/or are bright and clean; colours are fresh. There is no build-up in corners or along walls.
- All vertical and horizontal surfaces have a freshly cleaned or polished appearance and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam and are odour-free. Supplies are adequate. Trash containers and pencil sharpeners hold only daily waste, are clean and odour-free.

Level 2 - Ordinary Tidiness

- Floors and base mouldings shine and/or are bright and clean. There is no build-up in corners or along walls, but there can be up to two days' worth of dust, dirt, stains, or streaks.
- All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable upon close observation. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam and are odour-free. Supplies are adequate. Trash containers and pencil sharpeners hold only daily waste, are clean and odour-free.

Level 3 - Casual Inattention

- Floors are swept or vacuumed clean, but upon close observation there can be stains. A build-up of dirt and/or floor finish in corners and along walls can be seen.
- There are dull spots and/or matted carpet in walking lanes. There are streaks or splashes on base melding.
- All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints. Lamps all work and fixtures are clean.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odour-free.

Level 4 – Moderate Dinginess

- Floors are swept or vacuumed clean, but are dull, dingy, and stained. There is an obvious build-up of dirt and/or floor finish in corners and along walls.
- There is a dull path and/or obviously matted carpet in the walking lanes. Base melding is dull and dingy with streaks or splashes.

All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks.

- Lamp fixtures are dirty, and some (up to 5 percent) lamps are burned out.
- Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked.
- Trash containers smell sour.

Level 5 – Unkempt Neglect

- Floors and carpets are dull, dirty, dingy, scuffed, and/or matted. There is a conspicuous build-up of old dirt and/or floor finish in corners and along walls. Base moulding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.
- All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, all of which will be difficult to remove. Lack of attention is obvious.
- · Light fixtures are dirty with dust balls and flies. Many lamps (more than 5 percent) are burned out.
- Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour

SECTION 2: SAFETY FIRST



Image by <u>Clker-Free-Vector-Images</u> from <u>Pixabay</u>

By the end of Section 2, you will:

- 1. List common site hazards.
- 2. Note common safety hazards in your facility and determine how they should be managed.
- 3. Discuss what personal protective equipment (PPE) is necessary for a variety of situations.
- 4. Explain the necessity of Lockout-Tagout protocols.
- 5. Recognize possible sources of asbestos.
- 6. Evaluate the level of chemical safety on your premises and note any corrective action needed.
- 7. Recognize the dangers of entering a confined space and list the safety measures required to mitigate the danger.

INTRODUCTION

Janitorial/Custodial work requires access to areas and equipment where mandatory safety training, personal protective equipment (PPE) and other safety precautions are required. Janitorial/Custodial workers must protect themselves and others from:

- Swallowing or breathing chemicals
- Splashes in the eyes or contact on the skin
- Corrosive chemicals or infectious substances
- Accidents

Some of the most common causes of incidents and significant losses in any industry are:

- Inadequate identification of hazards
- Inadequate documentation
- Inadequate assessment of risks
- Lack of communication
- Inadequate work-planning

Common Site Hazards

Some common site hazards include:

- Chemical and biological hazards
- Electrical
- Heat and cold
- Lifting and carrying
- Uneven terrain (steps, ladders, grates, etc.)
- Confined spaces
- Tool and equipment

Common Human Hazards

There are additional types of hazards that can affect you and your co-workers. They are:

- Violence and aggression
- Stress
- Bullying and harassment
- Fatigue
- Pranks and horseplay
- Absent team members
- Untrained staff
- Mental health or personal problems that cause difficulty concentrating.

Most Accidents are Preventable!

You have done it a thousand times...

It comes naturally to you....

You know what you are doing....

It is what you have been trained to do...

Nothing could go wrong...

Think again!!!

Personal Protective Equipment

Personal Protective Equipment (PPE) includes safety gear or clothing designed to protect people from injury due to workplace hazards. The use of proper PPE creates a barrier between a hazard and the worker.

Janitors/Custodians often perform work in areas, situations and with products that are hazardous. These areas, situations and products include, but are not limited to the following:

- HVAC Mechanical Areas
- Shop or Garages
- Biohazards: human waste, blood
- Public Washrooms
- Using cleaning chemicals
- Handling sharps such as needles
- When infectious diseases or viruses are present

Do not compromise personal safety. Always wear proper PPE!

PPE Facts

- Your employers must be aware of all hazards and do everything they can to eliminate or reduce a hazard.
- To be effective PPE must fit right, be appropriate for the situation, be worn properly and in good condition.
- Each province has specific Occupational Health and Safety Regulations (OHSR) and requirements around when, where and what type of PPE you must wear. Ensure you are familiar with the regulations for your province.
- When you use any chemicals read the WHMIS product labels and MSDSs so that you use the appropriate PPE.
- All tasks that require the use of PPE should be written down. Additionally, include instructions on how workers should use the PPE.

Standard PPE for Janitors/Custodians

PPE which Janitors/Custodians should utilize daily include:

- Safety Glasses
- Nitrile, vinyl, or latex Gloves (nitrile are best to use because they are chemical and puncture resistant)
- Safety Shoes

Additional PPE for biohazards and with the preparation of chemicals include:

- Aprons
- Face shields
- Respirator/Masks
- Hand Sanitizers

To prevent cross contamination and the spread of germs or bacteria, gloves must be removed and changed often, especially after cleaning a restroom/washroom.

^{*}Some material for this PPE section retrieved from TSAG Hazardous Waste Course

The type/amount of PPE varies depending on the task you are doing.

Examples of I	Personal Protective Equi	pment
Hard Hats		Hard hats should be worn in mechanical rooms, crawl spaces, and areas with low ceilings/roofs/access hatches.
Safety Goggles		Safety goggles/glasses should always be worn when performing any building maintenance, especially in mechanical areas, working with chemicals and areas with a potential rodent infestation.
Reflective Vests		Reflective vests should be worn to alert others of your whereabouts. Vests increase your visibility and can reduce the risk of accidents
Respirators/ Masks		Respiratory apparatuses should be worn in crawl spaces while using boiler chemicals, janitorial chemicals & supplies, around potential rodent infestation areas, and in Indoor Air Quality (IAQ) problem areas.
Proper Clothing		Wearing protective overalls protects your body and your clothing from chemicals. They also add a layer of warmth and can help protect your body from injury.
Gloves		Gloves should be worn when working with any sharp objects or tools, as well as any hazardous chemicals to protect your hands.
Fall Protection Equipment.		Fall protection is a part of safety equipment used to make working at heights safer. Image purchase from Shutterstock
Steel Toed Boots		Steel toe boots should always be worn to protect your feet from punctures, chemical spills, falling objects, electrical hazards, extreme weather, as well as slips, trips, and falls.
Hearing Protection	242	Wearing hearing protections prevents exposure to loud noises that cause hearing loss. They can also prevent infections by keeping dirt from getting into the ears. Image by succo from Pixabay

Personal Hygiene

Because of the nature of janitorial work and the exposure to biohazards and chemical hazards, it is critical to maintain personal hygiene. Some best hygiene practices are:

- Wash often throughout the day.
- Wash your hands before eating or smoking when working with hazardous wastes.
- Change work clothes at work so that any hazardous waste material on work clothes is not taken home.
- > Clean work clothes often.
- When handling hazardous materials, always dispose of the Tyvek coveralls you wore.
- > Wear proper PPE. Check your PPE prior to each use.



Ladder Safety

Ensure that for any high or elevated work that all personal have received **certified ladder safety training** and are following all proper safety procedures for ladders, including:

- Placing an extension ladder 1 foot away from the base of the building for every 4 feet you are climbing.
- Ensure your extension ladder reaches 3 feet higher than the roof and is anchored to the building at the top.
- When working on roofs, stay a safe distance from any edge (2 meters or 6 feet) or wearing personal fall arrest protection equipment.
- Ensuring ladders are properly secured when in use.

Please see the Appendix for a list of companies that provide Ladder Safety training in Alberta.

Safe Lifting

Being able to lift an object safely is critical to maintaining your back health. Sudden falls, trips or lifting heavy objects improperly can cause injury and even permanent damage. To reduce the likelihood of back injury, follow the guidelines set by Canada Workplace Health and Safety:

- "If possible, completely eliminate repetitive work.
- As much as possible, automate jobs involving repetitive tasks.
- Use mechanical handling equipment, such as hand trucks, lift trucks and conveyors.



A Fall Protection course should be taken by anyone completing tasks that take them above ground.

- Reconfigure workstations to avoid awkward positions.
- Decrease the weight of objects handled.
- Add grips to objects being handled.
- Use personal protective equipment, such as belts, braces, leg guards and antifatigue matting.
- Learn and apply safe lifting techniques."³

The picture to the right demonstrates proper body position for lifting heavy objects.

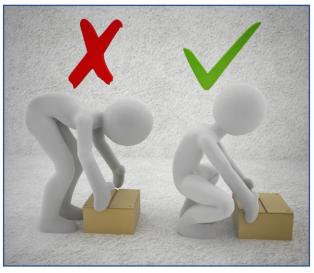


Photo purchased from Shutterstock: 200713802

*Asbestos Awareness

Asbestos is a fibrous silicate mineral found in veins of rock and is mined in open pits. All Asbestos Containing Material (ACM) is hazardous when its fibres are released into the air, which can then be inhaled. There are two types of asbestos:

- **1. Non-friable**: This is found in materials such as cement wallboard and pipe, gaskets, brake pads and vinyl floor tiles. These items contain asbestos fibres that are "bound." This means that asbestos fibres are not released unless they are cut, sanded, drilled, or damaged during repair, maintenance, renovation, and demolition activities, or compacting during final disposal.
- 2. Friable Friable ACMs disintegrate easily and can release asbestos fibres into the air; these materials are known as "friable". Friable asbestos is found in mechanical insulation, sheet vinyl flooring, spray-on popcorn ceilings, sprayed fireproofing, sprayed thermal insulation and vermiculite insulation. Friable asbestos crumbles easily or is in the form of dust.

Asbestos Facts

- Asbestos must be inhaled to cause disease.
- Asbestos materials in good condition (fibres nicely packed in binder matrix, no friability or damage) - are of no concern.
- Damaged asbestos materials (friable, delaminated matrix) must be immediately remarkated in the xpossure sectriable in AGM to an TEXT (Description Mediated).

³ https://www.canada.ca/en/employment-social-development/services/health-safety/reports/back.html

- Risk/Exposure assessment must be conducted by a competent person trained in asbestos work.
- Air monitoring for fibres will evaluate exposure potential.

Diseases Associated with Asbestos Exposure

- I. Asbestosis: Irreversible, fatal disease where lung scarring causes difficulty breathing & coughing
 - a. Symptoms: dry cough & shortness of breath
 - b. 10-20 years to develop
- II. Lung Cancer: Dependent on frequency and duration of exposure
 - a. 15 25 years to develop
 - b. 4 6 months may also be sufficient to cause lung cancer
 - III. Mesothelioma: Rare cancer of the membranes lining the lungs, chest cavity, or abdomen
 - Up to 35 years to develop
 - Time to develop NOT related to the amount of asbestos exposure

Note: there is NO TREATMENT OPTIONS FOR ASBESTOS RELATED DISEASES.

IV. Asbestos Corn: fibres could become lodged in the skin during handling, producing a callus or corn.

Please see the Appendix for a more complete list of ACMs.

For further information on Asbestos, please see the websites below:

https://en.wikipedia.org/wiki/Asbestos

https://www.canada.ca/en/health-canada/services/air-quality/indoor-air-contaminants/health-risks-asbestos.html

https://www.canada.ca/en/health-canada/services/chemical-

Covid 19 Protection and Protocol

"COVID-19 spreads from an infected person to others through respiratory droplets and aerosols created when an infected person coughs, sneezes, sings, shouts, or talks. The droplets vary in size from large droplets that fall to the ground rapidly (within seconds or minutes) near the infected person to smaller droplets, sometimes called aerosols, which linger in the air under some circumstances.

The relative infectiousness of droplets of different sizes is not clear. Infectious droplets or aerosols may come into direct contact with the mucous membranes of another person's nose, mouth, or eyes, or they may be inhaled into their nose, mouth, airways, and lungs. The virus may also spread when a person touches another person (i.e., a handshake) or a surface or an object (also referred to as a fomite) that has the virus on it, and then touches their mouth, nose or eyes with unwashed hands."⁴

COVID-19 has impacted janitorial standards. The Janitorial Manager website has sited the following impacts and changes to standards:

- 1. "More frequent cleaning
- 2. Focus on high-touch areas
- 3. Use EPA approved disinfectants
- 4. Use electrostatic sprayers to disinfect large areas
- 5. Enhance ventilation in rooms you have cleaned
- 6. Use disinfectant foggers to cover large areas with disinfectants
- 7. Implement better PPE practices
- 8. Increase hand-washing."5

Please see the TSAG standard operating procedures (SOP) for employee site visits in the Appendix if you require any assistance developing an SOP for any of your facilities. **Please note that these protocols are based on <u>Alberta Provincial Guidelines</u> and followed by all TSAG members as part of our internal SOP.**

For more information on these standards, please see

https://www.janitorialmanager.com/blog/janitorial-cleaning-standards-that-have-been-improved-due-to-covid-19/

For an infographic on cleaning and disinfecting public spaces, please see:

https://www.canada.ca/en/public-health/services/publications/diseases-conditions/cleaning-disinfecting-public-spaces.html

*Lockout-Tagout Program

⁴ https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/main-modes-transmission.html#_How_COVID-19_spreads

⁵ https://www.janitorialmanager.com/blog/janitorial-cleaning-standards-that-have-been-improved-due-to-covid-19/

Equipment can suddenly start, stop, and release stored energy without warning. When working on or around equipment, janitors must lock and tag out equipment. Every facility must create a lockout program that outlines the procedure to isolate and relieve stored energy properly. They must ensure that all employees are aware of, understand how to use, and are professionally trained in Lockout Procedures. The lockout procedure outlines the steps to:

- Lockout the equipment
- Safely relieve stored energy
- > Tag equipment
- Ensure equipment is de-energized
- > Remove lockouts and tags

In working on or servicing any electrical fixture, device, or component, ensure that all safety precautions are followed. Ensure the power to the fixture, device or component is turned off and then checked again to confirm that the power is turned off and proper lockout-tagout procedures are followed.

Lockout and Tagout Devices

Locks, chains, valve locks, and tags are used to isolate, secure, block machines and energy sources from starting or releasing stored energy while a piece of equipment is being worked on. The equipment used for lockout and tag purposes must be:

- Specific to this use and not for other operational purposes
- Stored in a lockout area where it can be easily accessed
- > Standardized (for example, locks should be only one type and colour).

These features help with immediate identification that a piece of equipment has been locked out. Lockout tags should indicate a warning, which should include:

- 1. Do not operate
- 2. Do not start
- 3. Do not energize

When a lockout tag is used, you must document several important pieces of information, including your name, date, and the reason the equipment is locked out.

Isolation Procedures

If a piece of equipment requires maintenance, it needs to be shut off, locked out, tagged and its stored energy released. All employees working in the facility should be informed that the equipment will be locked out and maintenance started. Once the maintenance work is complete, the staff should be informed that the equipment will be returned to service.

*Lockout Tagout information retrieved from TSAG's Introduction to Water and Wastewater course. **Lockout-Tagout Procedure**

A lockout/tagout procedure should include the following six steps:

- 1. Preparation.
- 2. Shutdown.
- 3. Isolation.
- 4. Lockout/tagout.
- 5. Stored energy check.
- 6. Isolation verification.

*Confined Spaces

A confined space is a space that is not designed for human inhabitants. They typically have limited entry and exit. Some reasons why you may have to enter a confined space include maintenance, emergency repair or inspection. Some examples of confined space locations that a janitor or custodian may find himself in are:

- Manhole
- > crawl spaces
- Drainage culvert

The danger can be reduced in these confined spaces by opening a second exit point.

Possible Hazards

There are many different hazards or safety concerns that you must be aware of when entering a confined space including electrocution, rotating equipment, oxygen deficiency, flammable and explosive substances, and toxic atmospheres.

Electrocution

A janitor must be careful when working around electrical equipment, as there is a risk of electrocution. You must ensure extension cords and power tools are not damaged. An electrical device must be properly grounded and have a three-pronged plug.



Rotating Parts

Moving equipment can be extremely dangerous in a confined space. Rotating machinery can grab loose clothing or hair and cause serious injury or death. Safety guards should always be installed on equipment and must never be removed unless the equipment is turned off and locked out.



Oxygen Deficiency

Oxygen deficiency occurs when heavier or toxic gases displace the oxygen in the air. Air usually contains 20.9% oxygen. If this oxygen concentration is decreased to below 19.5%, a dangerous atmosphere is present. As the oxygen level decreases, the individual begins to stop thinking properly, act funny, and eventually suffocates and dies.



Flammable and Explosive Substances

Flammable substances can enter from spills, illegal dumping, or infrastructure breaks.

These substances can include gasoline, diesel, propane, natural gas, methane gas, and many other liquids or gases. A janitor should always wear a multi-gas detector that detects when these toxic products reach a dangerous level. The detector has a lower explosive limit (LEL) and an upper explosive limit (UEL). For a fire or explosion to occur, there must be enough oxygen. If the oxygen is too low or too high, combustion cannot occur. A multi-gas meter should always be used and will alarm if the LEL



reaches a limit of 20%. A fire or explosion can occur when the LEL is between 20 and 100%.

Toxic Atmosphere



Toxic gas warning

A toxic atmosphere in a confined space can come from many sources. The most common toxic gas encountered is hydrogen sulphide (H2S), but others such as carbon monoxide (CO), carbon dioxide (CO2), ammonia (NH3), and chlorine gas (Cl2) can be encountered.

Hydrogen sulphide is created from the anaerobic decomposition (the process where microorganisms break down organic matter in an oxygen free atmosphere) in a wastewater system. It is heavier than air and has a rotten egg odour. At higher concentrations, olfactory (related to smell) fatigue occurs, and a person loses their sense of

smell. Due to the risk of olfactory fatigue, you must wear a multi-gas detector when working in locations where toxic gases could be present. **Extremely high levels of hydrogen sulphide can knock a person unconscious and cause death within seconds**.

Carbon monoxide and carbon dioxide can occur if a truck is left running and is parked too close to a manhole or underground structure. **Never** run a fuel-operated generator or pump inside a confined space. The carbon monoxide and carbon dioxide fumes displace the oxygen within the space.

*Confined Spaces information retrieved from TSAG's Introduction to Water and Wastewater Course.

Confined Space Entry Permit

Note: The following is a more formalized approach to Confined Space entry. It is a suggested practice.

To enter a confined space, a <u>Confined Space Entry Permit</u> must be completed. This permit provides information on the dangers and the precautions that need to be taken to enter the space safely. Individuals entering a confined space should have proper training and be aware of all the dangers present. Emergency procedures and equipment must be used.

The information contained on a permit should include:

- Specific entry procedures
- Safety training required
- Safety equipment needed
- Trained supervisor onsite
- Trained safety spotter available
- Rescue plan
- Emergency contact numbers
- Atmospheric monitoring
- Warning signs and barriers installed
- PPE required

TSAG employees do not perform any investigations or inspections where confined space, or above ground inspections are required as part of our internal policy and procedure manual.

Multi-gas Detectors

A confined space should be continuously aerated when entering, and you should wear a personal monitor or multi-gas detector. Multi-gas detectors should have an audible and a visual alarm. These safety devices should be capable of detecting oxygen deficiency, explosive conditions, and toxic atmospheres. Multi-gas detectors should be calibrated regularly to ensure that they sound an alarm when a dangerous situation is encountered.

The monitors must be turned on in a fresh environment and not in a confined space. The air should be tested at all levels of the confined space. Conditions can be much different at the surface than at the bottom of a space. The confined space must be tested continuously, and the meter must be turned on while in a confined area. Conditions can change as work is performed, wastewater flows, sludge is disturbed, or oxygen is used.

If a multi-gas detector goes into alarm mode, you should calmly, quickly, and safely exit the confined space.

Communications

While in a confined space, there must be continuous contact between the person inside the space and the safety watch individual outside (spotter). You must exit the space if contact is lost for any reason. Explosion-proof communication devices should be the only devices used. Cell phones should not be taken into a confined space, as they could become an ignition source if explosive gases are present

Entry and Egress

There are hazards associated with entering and leaving a confined space. Tripods, safety lines, winch, and parachute-type harnesses must be used to enter a confined space. The equipment must be inspected regularly and be in good working order with no damaged or frayed components.

*Hazardous Wastes

Hazardous wastes may be solid, liquid or a compressed gas. They are defined as those wastes that are flammable, reactive, corrosive, or toxic.

- 1. Flammable burn easily (painting wastes, degreasers, and other solvents).
- Corrosive eat away surfaces and skin (rust removers, alkaline cleaning fluids, and old batteries).
- Reactive/Explosive react violently when mixed with other chemicals, under pressure or heat (e.g., aerosols).
- 4. Toxic/Poison poisonous or cause damage to living organisms (includes materials containing heavy metals like mercury, lead or cadmium).

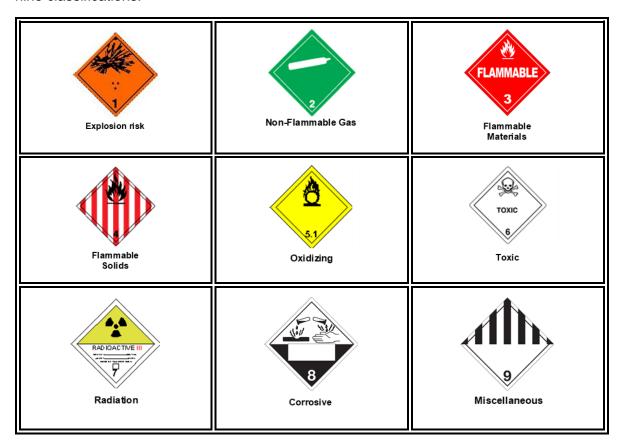


Because of these dangerous characteristics hazardous wastes should not be emptied into sewer systems. The contents and containers could harm people or the environment without special handling and treatment. They can cause skin damage on contact, pollute the groundwater, surface water, and ground matter because of leaching (seeping or oozing) into the environment.

^{*}Material for the Hazardous Waste section retrieved from TSAG's Household Hazardous Waste Course

Hazardous Waste Classifications

Hazardous wastes are classified with international symbols for dangerous goods. There are nine classifications.



To keep hazardous wastes from contaminating the environment:

- > Don't dump wastes on the ground,
- Don't pour waste down drains,
- > Don't burn waste in open fires, and
- > Don't store waste in containers or in areas that can cause spills



Always take leftover Hazardous Wastes and their containers to a Hazardous Waste Roundup or to a Waste Transfer Station.

Some examples of hazardous waste include:

- Abrasive cleansers
- Aerosol sprays
- Air fresheners (aerosol)
- · All-purpose cleaners
- Ammonia
- Ant/wasp spray
- Batteries
- Bleach
- Cleaning Products
- · Contact cement
- Degreasers
- Disinfectants
- Drain cleaners
- Floor wax strippers
- Fungicides
- · Furniture polishes and waxes
- Gas In Cans
- Glass cleaners
- Glues

- Insecticides
- Kerosene
- Liquid cleansers
- Lye
- Medicines And Sharps
- Mildew removers
- Muriatic acid
- Non-Paint Aerosol Cans
- Oils and Greases
- Oven Cleaners
- Paint thinners and strippers
- Paints, Spray Paints, And Solvents
- Poisons
- · Rug and upholstery cleaners
- Rust removers
- · Spot removers
- Toilet cleaners
- · Tub and tile cleaners
- Weed killers

*Chemical Safety

When using any cleaning chemical, always follow label directions for use or mixing on cleaning products and disinfectants. In addition, always ensure that any safety warnings on labels are followed.

Labelling

All chemicals must be clearly labelled, and incompatible (can't exist together) substances must be stored separately. Labelling from the manufacturer is not usually a problem unless the container is old or has become damaged by the weather. When a chemical is transferred from a bulk container to a smaller vessel, the new container **must be clearly** labelled with a workplace label. This label needs to include the chemical name, concentration, and first aid measures. Refer to your Safety Data



Sheet (SDS), (previously known as MSDS) for the information you need to include on the label.

Chemical Disposal

- Always refer to the SDS before cleaning up any chemical spill or residue.
- > Corrosive or toxic chemicals should not be poured down the sink. These chemicals should be disposed of according to the SDS sheet instructions.

^{*}Chemical Safety information retrieved from TSAG's Introduction to Water and Wastewater Course.

Safety Data Sheets

Understanding **Safety Data Sheets**: **SDS**, (previously known as Material Safety Data Sheets -MSDS), is vital to the health and safety of janitors/custodians who handle any type of chemicals. A complete inventory of Safety Data Sheets (SDS) for all cleaning chemicals used or located in any workplace is required by legislation to be kept on site. They should be kept in a well-labelled binder and placed in a location that everyone who uses the chemicals will have free and clear access to this information.

Each SDS contains the sections on the following pages. The more you know about the chemical you are working with, the more accidents and injuries in the workplace can be prevented.

SDS section and heading	Specific Information Elements	Example: Sodium Hypochlorite
1. Product and Company Information	Lists:Manufacturer's nameEmergency contact information, proper chemical name	
2. Hazard Identification	 the type of hazards the chemical possesses any precautionary statements. 	This chemical causes severe skin, eye, and respiratory tract damage. Precautionary statements: call the nearest poison centre if ingested and do not induce vomiting. If the chemical gets in the eyes, they should be rinsed and that contact lenses should be removed.
3. Composition	Lists: • The chemical name (listed again) • The concentration • Any common names that the chemical is known as	Sodium hypochlorite is sold in concentrations as low as 3% and as high as 20%. 6% is common for household bleach, and 12% is standard for industrial sodium hypochlorite. Sodium hypochlorite is also known as Bleach, Clorox, Javex, and Hypochlor-12. It has a chemical name of NaOCI.

SDS section and heading	Specific Information Elements	Example: Sodium Hypochlorite
4. First Aid Measures	Describes specific actions to take if a worker has been exposed to a chemical.	Specific first aid instructions for inhalation, skin contact, eye contact, and ingestion
5. Fire Fighting Measures	Discusses firefighting techniques that should be used if combustion occurs. Also states what type of extinguisher to use.	Sodium hypochlorite is not a flammable explosive, so standard firefighting instructions are given.
6. Accidental Release Measures	 Describes Procedures to use if there is an accidental spill of the chemical. Suggestions on PPE and other safety measures. Methods on how to neutralize the chemical. 	A large bleach spill can affect the environment. The SDS states that it is toxic to aquatic life. If the spill runs into a sewer or is held in a ditch, the chemical can be neutralized with sodium thiosulfate if a pail is on hand. Dilution can also be the solution in some cases.
7. Handling and Storage	Instructions are given on how to move the chemicals safely and how they should be stored.	The sodium hypochlorite SDS states that the chemical should be stored in a cool, dry, ventilated area. The chemical should not be allowed to freeze. Acids should not be stored near sodium hypochlorite containers.
8. Exposure Controls	Provides limits of the concentrations an individual can be exposed to. If these limits are going to be exceeded, then additional PPE is required. When specific PPE is required, it is listed here.	Sodium hypochlorite has an exposure limit of 2 mg/m³. If the storage location is well ventilated and not too hot, there is usually no exposure problem with bleach. There is the risk of the chemical contacting the skin or eyes though. Suggested PPE is a face shield, eye goggles, rubber apron, and rubber gloves.

SDS section and	Specific Information	Example: Sodium
heading	Elements	Hypochlorite
9. Physical and Chemical Properties	Lists the chemicals' appearance, odour, odour threshold, pH, melting point/Freezing point, initial boiling point/boiling range, flash point, evaporation rate, flammability (solid; gas), lower flammable/explosive limit, upper flammable/explosive limit, vapour pressure, vapour density, relative density, solubility, partition coefficient -n-octanol/water, auto-ignition temperature, decomposition temperature and viscosity Note: A liquid with a specific gravity above 1.0 floats below the surface of the water and a chemical with a specific gravity of greater than 1.0 sinks (unless soluble in water).	Sodium hypochlorite is a liquid with a greenish-yellow colour. It has a pungent chlorine odour with a pH of 11.8 – 13. A 12% solution freezes at -15°C, while a 5% solution freezes at -6°C. Sodium hypochlorite is not flammable or explosive. Its specific gravity is 1.17, so it sinks when added to water.
10. Stability and Reactivity	Information is provided on how reactivity, chemical stability, possible hazardous reactions, conditions to avoid, incompatible materials, and hazardous decomposition products. Note: If a strong acid and a base are added together a chemical reaction occurs and large amounts of heat are generated (exothermic reaction). Some chemicals when combined cause an explosion or fire.	Sodium hypochlorite combines with iron, manganese, carbon dioxide, and organics to decrease its concentration. High heat also decreases its concentration. If bleach is combined with an acid, toxic chlorine gas can be produced. Adding bleach and ammonia together also causes chlorine gas to be produced.
11. Toxicology information	Toxicology information is most important to medical professionals, but you should understand dangerous levels.	Corrosive to eyes, causes burn

SDS section and heading	Specific Information Elements	Example: Sodium Hypochlorite
12. Ecology Information	Ecology information is provided in the event there has been a spill in the environment.	Sodium hypochlorite can be quite toxic to aquatic life and should be dechlorinated before being discharged to a receiving stream.
13. Disposal Considerations	Different chemicals are disposed of differently. This section lists any special procedures that must be done before disposal is complete. Note: Dilution is not always the solution.	If large amounts or high concentrations of sodium hypochlorite need to be disposed of then sodium thiosulphate or sodium bisulphite can be used to neutralize the sodium hypochlorite and Vitamin C is the newest method for dechlorination.
14. Transportation Information	In this section, information is added like dangerous good signage required or any other special precautions.	
15. Regulatory Information	This section indicates all regulations that apply to the chemical	
16. Other Information	Includes the date of preparation or last revision	

Note: Even products that are classified as non-toxic, have current SDS Sheets. Most SDS sheets are available on-line from the product manufacturer or distributor. It is required by law that a distributor or supplier includes an SDS with the order and delivery of the product.

Note: Current and up to date SDS are required under Federal WHMIS (Workplace Hazardous Material Information) legislation.

Needlestick and Sharps Safety

Any item that can cut skin is considered a <u>Sharp</u>. Some examples are needles, razor blades, scissors, pins, staples, cutters, and glass. When the person who used them does not dispose of them properly, they put janitors/ custodians at risk.

The reason that sharps are considered a hazard is not just because they can cut the skin, but because they can inject viral, bacterial, and protozoal infections into the body. Viral infections include HIV (which leads to AIDS), Hepatitis B, and Hepatitis C. Bacterial infections include tuberculosis and diphtheria, and protozoal infections include malaria.

To avoid any injury from needles or sharps, please adhere to the following procedures:

- Ensure that all sharps are stored securely.
- Have sharps disposal containers in restrooms.
- Use a pickup tool when picking up garbage on the building grounds.
- Wear good heavy gloves when doing yard work or taking out the recycle /garbage
- Carry garbage/recycle in such a way that the bags do not bump or touch your body.

Blood Borne Pathogens

A bloodborne pathogen is an infectious microorganism in human blood that can cause diseases. Hepatitis B, Hepatitis C and HIV are the most common. People who are exposed to needles and other sharps can be exposed to these viruses, which can cause infections, liver damage and HIV/AIDS

Any bodily fluids that can be contaminated with blood can transmit these diseases.

Handling Human Waste

There may be times when a Janitor/Custodian must handle and dispose of human waste. Please note the following precautions and procedures for handling human from the Centre of Disease Control.

- "Wash hands with soap and water immediately after handling human waste or sewage.
 - After handling human waste or sewage, wash your hands with soap and water *before* eating or drinking.
 - After handling human waste or sewage, wash your hands with soap and water before and after using the toilet.
- Avoid touching face, mouth, eyes, nose, or open sores and cuts while handling human waste or sewage.
- Before eating, remove soiled work clothes and eat in designated areas away from human waste and sewage-handling activities.
- Do not smoke or chew tobacco or gum while handling human waste or sewage.
- Keep open sores, cuts, and wounds covered with clean, dry bandages.
- Remove rubber boots and work clothes before leaving the worksite.
- Change into clean work clothing daily.
- Wash contaminated work clothing after use.

Additionally, the Centers for Disease Control and Prevention, recommend workers should always wear the following PPE when handling human waste:

- "Goggles to protect eyes from splashes of human waste or sewage.
- Protective face mask or splash-proof face shield to protect nose and mouth from splashes of human waste or sewage.
- Liquid-repellent coveralls to keep human waste or sewage off clothing.
- Waterproof gloves to prevent exposure to human waste or sewage.
- Rubber boots to prevent exposure to human waste or sewage."6

Handling Mice and Mice Droppings

Janitorial/Custodial tasks, especially in rural areas may involve the handling and disposal of mice and mice feces.

Hantavirus is a serious respiratory disease caused by an infection with Hantaviruses which in Canada is carried by infected deer mice, white-footed mice, and red/backed voles. Therefore, any infestation of these rodents around your building becomes a risk for exposure to Hantavirus.

Note: Cases of Hantavirus occur more frequently in rural areas because there are more suitable habitats for the rodents listed above to live. They live in barns, trailers, garages, cabins, storage facilities, houses, sheds, and outbuildings.

How Hantavirus Infections Occur

 Through airborne transmission. For example, when sweeping a basement that has had an infestation, and a nest is disturbed (they contain saliva, urine and or droppings), the small particles are swept into the air and breathed in. Any activity that stirs up dust where there have been rodents puts you at risk for this virus.

- If you are bitten by a rodent
- Touching mouse droppings, urine or saliva and then touching your nose or mouth.
- Eating food or water that has been contaminated with urine, droppings, or saliva from an infected rodent.

<u>Please note the bulletin from Alberta Health Services in the Appendix</u> regarding the proper handling of mice and mice feces and the potential exposure to Hantavirus.

⁶ https://www.cdc.gov/healthywater/emergency/sanitation-wastewater/workers_handlingwaste.html

* Managing the Risk

Discuss the ways you might manage these **common safety hazards** in your workplace.

HAZARD	Procedures/ Practices	Confined spaces	Equipment/ Mobile Equipment	Gravity/ Falls	Material Handling
WORKPLACE	Performing work without an established safe procedure.	Hazardous gases, vapours, dust or fumes, oxygendeficient atmosphere, entry/exit difficulties, awkward spaces, poor visibility, temperature extremes and noise	Defective tools or instruments, not enough supplies, moving vehicles like trucks, forklifts, and excavators.	Slips, trips, and falls from ground level, an elevated surface, or a vehicle or piece of equipment	Lifting, carrying, lowering, pulling, pushing
Managing the Risk					

Discuss the ways you might manage these Common Health Hazards in your workplace.

HAZARD	Psychological/ Stress	Ergonomic	Biological	Chemical	Physical
WORKPLACE	Lack of training, work overload, conflict, fatigue	Design and layout of workstation or tools	Virus, fungi, bacteria, body fluids, wastewater, insects, and plants	Dust (e.g., grinding, sandblasting, asbestos removal, etc.), paints, solvents, cleaners, fumes (e.g., welding, etc.), degreasers, acids, cutting oils, mists, and vapours	Repetitive work, noise, vibration, inadequate lighting
Managing the Risk					



SECTION 3: HAND TOOLS



Image by <u>PublicDomainPictures</u> from <u>Pixabay</u>

By the end of this section, you will:

1. Identify common hand tools that you may use daily.

INTRODUCTION

It is important to know the names of various hand tools so that you can use the correct tools for each job. If an incorrect tool is used, you could damage the part you are working with, or the tool could slip, and you could get hurt. This section contains a description of the basic tools you need, as well as key facts that you should remember when using them.

Tool Facts

Tightening

When tightening a screw, bolt, or other fittings, turn it to the right (clockwise). When loosening a screw, bolt, or fitting, turn it to the left (counterclockwise). A helpful hint is to remember, "lefty loosey, righty tighty."

Units of Measure

There are two standard systems of measurement used today. The metric system is used in Canada and throughout most of the rest of the world. The United States still uses the imperial system. When using wrenches, sockets, or Allen keys, it is important to notice what unit of measure the bolt and nut are. Typically, if the equipment is manufactured in the United States or is older than 1980, it uses imperial measurements. Most products manufactured outside the United States use the metric system.

If it is unknown where a part was manufactured, you might have to try both sets of tools to see which fits better. Start with either imperial or metric, then narrow the tool to the size that fits best. If the best fitting tool still seems too loose, then switching to the other toolset in the other unit of measure usually corrects the problem.

Fasteners

Several common fasteners are used in industry, including nails, screws, nuts, and bolts. There are hundreds of types and sizes of these fasteners. Nails are used for fastening in wood applications. Screws can be used in wooden and metal applications. Nuts and bolts are used in wooden, metal and even concrete applications. A washer, nut, washer bolt combination is quite common. When both are completely tight, washers help prevent the bolt head or nut from slipping through the hole.



The information in this section has been retrieved from the TSAG's Introduction to Water and Wastewater Course.

Tool Types

There are five basic hand tools that you should be familiar with and know when to use: screwdrivers, wrenches, pliers, Hex keys (also called Allen keys), and a socket set.

Screwdrivers

Screwdrivers are among the most common tools used to remove and install screws. They come in various sizes, lengths, and tip types.

- A flat-bladed screwdriver is called a standard blade.
- A square tip is referred to as a Robertson screwdriver and was invented in Canada.
 The Robertson tip is not accepted in the United States, an alternative screwdriver tip called the Torx (star-like pattern) was invented instead.
- A Philipps screwdriver has a cross-shaped pattern on the tip.



Standard/ Image by Jordi Morella Fierro from Pixabay



Phillips/Image by Michael Schwarzenberger from Pixabay



Torx/ Image from Pixabay

Wrenches

Wrenches are used for tightening and loosening bolts. They come in metric and imperial sizes. There are several wrench types with specific names. The most common wrench is a combination wrench. It has one open end and one closed end. Care must be taken when using the open-ended wrenches on hard-to-remove nuts and bolts because they can slip and cause injury to your hand.

An adjustable wrench has a moveable jaw, which allows it to be used with different-sized nuts and bolts. The adjustable wrench has been around for over 130 years and is known by different names in different countries. It is called a crescent wrench or monkey wrench in Western Canada, an adjustable wrench in Eastern Canada, a spanner in England, and a "thumb wrench" in Newfoundland.



Pipe Wrenches /Photo from Pixabay

Pipe wrenches come in several sizes and are adjustable. They are used to tighten or remove pipes or pipe fittings with rounded surfaces. A pipe wrench should not be used to remove hardened steel bolts as they can damage or misshape the head.

Pliers

Pliers come in many shapes and sizes, each having a specific purpose. Pliers are used for gripping, positioning, holding and loosening objects. They can also be used for cutting and twisting wire. Pliers should not be used when a more appropriate wrench would be a better tool for the job. If the bolt spins while the pliers are holding it, the nut could become stripped and must be cut off instead of just being turned off with a wrench.

There are five types of pliers:

- Slip-joint: the most common type of plier and what everyone refers to as pliers.
- Water-pump known as Channel Locks and are used for tightening and loosening pipe fittings.
- Linesman: sometimes called electricians pliers and can be used for gripping or cutting and stripping wire.



Photo from Pixabay

- Locking: also known as vice grips. This type of adjustable plier can be used as a clamp to lock an object in place.
- Needle-nose: used to get into small spaces and grip objects or cut small wires.

Hex Keys

Hex keys may also be referred to as Allen keys or wrenches. They are used to tighten or remove drive bolts or screws with hexagonal sockets in their heads. Hex keys come in metric and imperial sizes. Each key has two hex-shaped heads and looks like an L-shaped tool. If the hexagonal socket has become stripped, it is sometimes possible to switch between the metric and imperial keys to find one that works to loosen the stripped bolt.



Hex KeysPhoto from Pixabay

Socket Set

A socket set includes several parts that assist in removing nuts and bolts quickly, and they are used to get into small spaces and grip objects or cut small wires safely. A standard socket set consists of ratchet, extensions, and various sized sockets. Socket sets come in metric and imperial sizes. The ratchet must be set to tighten or loosen a bolt, allowing motion of the ratchet in only one direction while preventing motion in the opposite direction. A ratchet set to tighten, clicks to the left when the socket is held and tightens the bolt to the right when the handle is pulled in that direction. The knob on the ratchet is switched to loosen, and the ratchet clicks to the right, causing the ratchet to loosen the bolt when it is pulled to the left. The socket extensions are used to get into tight spaces and allow the ratchet to be turned freely above.

SECTION 4: JANITORIAL SUPPLIES AND EQUIPMENT



Image by Steve Buissinne from Pixabay

By the end of Section 4, you will:

- 1. Create an inventory of janitorial chemicals, supplies and equipment for your facility.
- 2. Create a list of contacts for vendors/suppliers.
- 3. Research green cleaning products and outline those that would be appropriate for your facility.
- 4. Evaluate your facility recycling awareness and determine where changes need to be made

Basic Cleaning Equipment and Supplies

To provide an acceptable level of janitorial service to any facility, appropriate cleaning equipment and supplies are required including but not limited to:

- A sturdy and durable janitor's cart
- Wet mop and bucket/ringer (standard or microfiber)
- Good quality commercial vacuum (preferably with a HEPA filter)
- Floor scrubber (optional for larger facilities)
- Microfiber cleaning cloths
- Sponges
- Broom/dustpan
- Toilet brush with a long handle
- Duster with a handle that can be extended
- Good quality protective gloves
- Cleaning tasks checklist
- SDS Sheets (Safety Data Sheets) for all chemicals
- Environmentally friendly cleaning supplies
- Consumable items (toilet paper, tissue, liquid soap, deodorizers, garbage can liners)
- Safety signs (ex. Wet Floors)
- Basic tools such as: screwdrivers, wrench, hammer
- Floor buffer

The Janitorial Cart

The contents of a janitorial cart will vary according to the organization or type or facility you work in. Some suggestions are:

- Cleaning agents (preferably environmentally friendly) with their SDS. Do not include cleaning agents that you don't need to use or those that are dangerous.
- Personal Protective Equipment
- Cleaning cloths (microfiber work best), scrub brushes and sponges

Janitorial Equipment is used daily, so it is important that good quality and durable equipment is purchased. Make sure bigger pieces of equipment come with a good warranty.



- Basic tools such as: screwdrivers, wrench, hammer, plunger
- Duster
- Toilet brush
- Consumables (tissue, toilet paper, garbage can liners, soap, paper towels)
- Broom/ dustpan
- Mop and bucket

The better stocked and organized your cart is, the more efficient you can be in your work.

Microfibre Cloths

Microfibre cloths have become the industry standard for wiping cloths and floor mop cloths because they pick up and hold on to dust and dirt. They come in different sizes and textures for specific cleaning purposes as well as a variety of colours which helps prevent cross contamination when you clean different areas of your facility.

Note: If surfaces do not appear to be getting a proper cleaning after using a microfiber cloth (streaks and smudges which are especially obvious on glass or mirrors), the cloth must be properly washed before being used again.



Image from Shutterstock_ 283564578

Colour	Purpose ⁷
Red	Use red on sanitary appliances, restroom floors, toilets, and urinals. Also use red-coded mops on restroom floors.
Yellow	Use yellow for other restroom surfaces, including sinks, towel dispensers, hand dryers, soap dispensers, door handles, walls, etc.
Green	Use green microfiber for general food and bar clean-up. Use green cloths and mops in non-preparatory food areas such as lunchrooms.
Blue	Blue is used for general low-risk areas, including common areas, offices, classrooms, etc.

Note: Microfiber cloths lose their effectiveness over time, depending upon the type of surface being clean and the amount of dirt or grime on a particular surface.

⁷ https://www.cmmonline.com/articles/cross-out-contamination-by-color-coding-microfiber

Janitorial Work/Storage Area

Every Janitor/Custodian requires a room of sufficient size to allow the storage of carts, buckets, signs, and supplies. It should have:

- A floor drain and taps
- Sufficient storage shelves to properly store all necessary cleaning chemicals, paper supplies and other tools required for the job.
- Sufficient hooks and hangers over the floor drain to properly hang wet mops to allow them to dry. Wet mops should not be left in buckets to dry. Note: Rinse/clean mops after every use.
- Adequate space to tip buckets upside down to drain and dry.
- Hooks and hangers to hang other cleaning mops, dusters etc. off the floor.



SECTION 5: CLEANING YOUR FACILITY



At the end of Section 5, you will:

- 1. Compile a list of janitorial protocols for your facility.
- 2. Describe the difference between cleaning, disinfecting, and sanitizing.
- 3. Define "Green" facilities and practices.
- 4. Choose 5 green practices you could implement immediately and outline how you will do so.

Cleaning Your Facility

Keeping your facility clean is not just for aesthetic purposes. It also helps prevent the spread of infectious diseases. <u>The Centers for Disease Control and Prevention</u> outlines 6 tips that will help slow the spread of flu:

- 1. Know the difference between cleaning, disinfecting, and sanitizing.
 - Cleaning removes dust, dirt, and germs using soap or detergent and water.
 Cleaning only lowers the numbers of germs and the risk of spreading an infection, it does not kill germs.
 - When you disinfect a surface or object you kill germs because you use a chemical that is intended for this purpose. Disinfecting is not cleaning. You typically disinfect after cleaning.
 - **Sanitizing** a surface, uses a product to *reduce* the *number* of germs to a level determined to be safe by public health standards.
- 2. Clean and disinfect surfaces and objects that are touched often.

It is critical to clean and disinfect objects and surfaces that people use frequently such as keyboards, desktops, tables, educational materials, toys, counters, doorknobs, and tap handles. You may also have to disinfect these items daily (bathrooms for example). Remember: If any surfaces have bodily fluids on them, use any necessary PPE when cleaning and disinfecting.

3. Maintain Routine Cleaning and Disinfecting

Although studies show that flu viruses can live and potentially infect a person for up to 48 hours, it is not necessary to clean/disinfect every surface because standard cleaning and disinfecting are enough to remove or kill viruses. CDC does not recommend the use of room air deodorizers or fumigating due to the potential impact they can have on the health of the building's occupants.

4. Clean and Disinfect Correctly

Carefully read all directions on cleaning products and disinfectants. To remove germs, wash surfaces with a general household cleaner and rinse with water. Afterwards, use an EPA-registered disinfectant to kill germs. For electronic items, use disinfecting wipes, but ensure that the wipes will not harm the electronic items.

5. Use products safely

Read all hazard warnings on each product to ensure that you have the proper PPE before you use them. **Do not** mix cleaners and disinfectants unless the labels indicate it is safe to do so, because combining these products can result in chemical reactions that cause injury or death.

6. Handle waste properly

- Wear gloves to handle waste
- Throw disposable cleaning materials away as soon as you are finished with them.
- Avoid touching used tissues
- Wash your hands with soap and water after emptying the trash

For greater detail on slowing the spread of flu please visit https://www.cdc.gov/flu/school/cleaning.htm

Green Cleaning

Using Green Cleaning practices means using cleaning procedures and products that contain fewer harmful ingredients, are non-toxic and biodegradable. Many green products are concentrated and so use less packaging.

Avoid the use of spray bottles as they release cleaning agents into the air that can irritate building occupants.

What is the impact of Green Cleaning?

"The use of green clean products instead of traditional cleaning products means fewer chemicals are being used and the chemicals are more environmentally responsible. In addition, new technology means that more dust and dirt are being permanently removed through the cleaning process."

Some non-green cleaning agents can harm the environment and people because they leave behind chemical residues. They can also leave behind scents that impact the air quality. When this happens, people (especially those with respiratory issues such as allergies and asthma) can be severely impacted.

Green products

Green cleaning does not just mean using cleaning products that are environmentally friendly. It also includes paper products, trash bags, hand soaps, and equipment that are environmentally friendly. Look for products that:

- are nontoxic or less toxic that what you are currently using (and products that have Green Seal certification)
- have minimal packaging
- can be used for more than one purpose.
- are biodegradable
- do not contain dyes and fragrances
- have no or low voc's

⁸ Green Clean Program Resource Guide Ontario Ministry of Education March 2010, Price Waterhouse Coopers

"Green" Chemicals for Janitorial/Custodial should be certified by the programs below as they have evaluated the products that display their stamp have their environmental claims confirmed:







Note: Ecologo is the Canadian standard and Green Seal is the American standard and each has specific criteria for different products.

Try to avoid products with the following ingredients:

- Nonylphenol Ethoxylates,
- NTA,
- EDTA,
- glycol ethers,
- sodium hydroxide,
- potassium hydroxide,
- sodium metasilicate,
- phosphates.
- petroleum distillates,
- ammonia
- ethylene glycol
- mono butyl ether (butyl cellusolve),
- 2-butoxyethanol,
- ammonia, and sodium hydroxide.
- metal-cross linked polymers.
- Hydrochloric acid,
- Phosphoric acid.
- sodium hypochlorite (chlorine bleach),
- quaternary ammonium compounds,
- alcohols,
- phenolic compounds.

- xylene, Stoddard sol
- nonylphenol ethoxylates,
- Para dichlorobenzene
- mineral spirits, 2-butoxyethanol
- hydrochloric or phosphoric acid
- Freon,
- dichloro-difluoromethane,
- trichloro-fluor methane.
- methylene chloride,
- petroleum distillates,
- propane,
- butane.
- isobutene,
- sodium hydroxide. glycol ethers in general,
- ethylene glycol mono butyl ether (butyl cellusolve), sodium hydroxide
- ammonia
- alcohols,
- propylene glycol,
- ethylene glycol and other glycol ether

^{*}Source: Georgia Technology Green Cleaning Manual

*Green Cleaning and Waste Diversion

Maintaining a "Green" facility should also include waste diversion and recycling.

Building occupants can generate a lot of waste. For example, a study done in 2016 on Ontario schools estimated that schools generate 16 kilograms of waste per student per week, and with approximately 5 million elementary and high school students in Canada, that is 80,000 tonnes of garbage a week coming from campuses across the country!

Any high use community building is a great place to introduce a waste reduction program. Health Centres, Band Administration Offices, Employment and Training, Public Works, gas bars, and businesses all generate a lot of waste that can be diverted from the landfill. The best way to do this is understand how you can implement the 4R's at your facility.

The 4 R's

Refuse - Refuse wasteful and polluting products.

Needless over-packaging rather than ecofriendly packaging causes much waste. We can choose to refuse to buy items that contain single-use plastics or items that are individually packaged.

Reduce - Reducing the amount of waste produced in the first place is the most efficient way of conserving resources and



Photo purchased from istock

protecting our environment. We are all responsible for the waste we produce. Ask yourself, what do you throw away each day? When you avoid making waste in the first place, you do not have to worry about reusing it or recycling it later.

- Speak to others in your building about the importance of waste reduction and responsible purchasing. Get your fellow workers involved in reducing the amount of waste that they produce.
- If you have a cafeteria or kitchen, ask the staff to limit the number of disposables available. Replace disposable serving ware or utensils with reusable versions. Purchase reusable water bottles instead of disposable cups.

Reuse - Reusing items gives the resources they were originally made from another life, while reducing pollution and conserving the energy that is used in the manufacturing process, or in recycling the items.

- Have a reusable paper bin and use single sided discards for draft printing or scrap paper.
- Reuse jars and containers for storage.

Recycle - Recycling and purchasing products made with recycled materials is a great way to conserve resources. If we cannot reduce waste by avoiding it, and it can't be reused, can we recycle it?

- Recycle by composting organics such as food scraps, leaves, and yard trimmings.
- Set up a recycling system or increase the diversion rate in the facility.
- Ensure building occupants are trained on how to properly separate trash and recyclables and dispose of each.

Note: Always make sure recyclable areas are kept clean so as not to attract pests.					

Information on Waste Diversion retrieved from TSAG's Waste Diversion Course

SECTION 6: DAILY CLEANING PROCEDURES



Image purchased from Shutterstock: 1407876536

At the end of this section, you will:

- 1. Compile a list of janitorial tasks at your facility.
- 2. Create a daily work schedule for your facility.

Daily Cleaning Procedures

Areas to be cleaned daily include restrooms/washrooms, boardrooms, offices, workstations, and any general-purpose areas.

Restroom/Washroom Cleaning

Restrooms/washrooms of any facility are generally considered to contain the most bacteria and other hazardous material. This means that strict attention must be paid to your safety and protection when cleaning any restroom/washroom. PPE such as disposable nitrile or

vinyl gloves must be worn and should be properly removed and disposed of after cleaning any restroom/washroom (failure to properly dispose of gloves used to clean restrooms/washrooms will lead to cross contamination of and to other areas in the facility).

Microfibre cloths are recommend for restroom/washroom cleaning, but make sure you practice colour coding principles.

A standard cleaning "Hierarchy" should be implemented when cleaning restrooms/washrooms. A cleaning

hierarchy consists of cleaning the "cleanest" or "safest" areas first then leaving other areas such as toilets, urinals, and floors around toilets and urinal last. This ensures that contaminants and bacteria are not spread to other areas of the restroom/washroom. Cleaning hierarchies can be:

- Clean from "Clean to Dirty"
- Clean from "High to Low"
- Clean from "Outside to Inside"

In cleaning restrooms/washrooms it is important to remember the difference between cleaning, sanitizing, and disinfecting. Most items in a restroom/washroom should be sanitized, not just cleaned.

Remember to track

Daily Tasks

- 1. Clean, sanitize and disinfect
 - Sink Taps
 - Door Handles
 - o Paper Dispensers
 - Waste/Baskets Garbage Cans

completed by yourself or a hired professional. Keep these in a file for each area of your building.

all janitorial tasks

- 2. Clean, sanitize and disinfect areas around a toilet be disinfected including:
 - Toilet Seats
 - Toilet Rim
 - o Inside Door Locks
 - Handicap/Accessibility Handrails
 - o Flush Handle
 - Inside and outside door to Toilet Stall
 - Feminine Hygiene Waste Holders
 - Urinal Flush Handles



- 3. Mop restroom/washroom floors. Clean from the cleanest areas first then move to the "dirty" areas (normally the floor around the toilets and urinals).
 - Completely drain and dispose of all dirty water in mop buckets and refill with clean water after cleaning a restroom/washroom. Failure to do so could increase the risk of cross contamination by spreading germs, bacteria, or other hazardous waste to other parts of the facility.
 - Mops used in restrooms/washrooms should be thoroughly cleaned before using them on other floors in a facility. It is a best practice to have separate buckets and mops exclusively for restrooms/washrooms.
- 4. Empty trash cans and change liners
- 5. Restock soap dispenser, paper towels, toilet tissue
- 6. Clean mirrors
- 7. Spot wash walls and remove any graffiti



Image from Shutterstock_ 283564578

Colour coded microfiber cloths should be used for sinks, mirrors, chrome, toilet seats and outside of urinals. Cloths used to sanitize touch points should not be used on other surfaces.

Offices/Boardrooms/Workstations/Classrooms

The daily cleaning of offices, boardrooms and workstations should focus on "Touch Points" that should be sanitized and disinfected. Touch points are areas that human hands contact.

- 1. Sanitize and disinfect Touch points in an office, boardroom, or workstation include, but are not limited to:
 - Door Handles & Push Plates
 - Light Switches
 - Telephones keypads, ear, and mouth pieces
 - Computer keypads and screens
 - Areas of desks that are free of papers or other personal or office materials.
 - Arm rests of chairs
- 2. Empty wastebaskets
- 3. Clean dry-erase boards
- 4. Vacuum carpets

- 5. Dust Mop/wet mop tiled floors
- 6. Clean glass in doors
- 7. Remove smudges or dirt from windows, glass, or walls.
- 8. Empty trash or garbage bins. (Pick up garbage or waste intended for the garbage as well). If used, replace garbage can liners if the liners are coated with coffee stains or other unsightly material.
- Complete light dusting on areas not considered to be touch point areas. Use colour coated microfiber cloths or a dusting wand such as a "Swiffer" duster.
- 10. Vacuum the flooring under desks and in high traffic areas.
- 11. Clean and remove marks and small stains on carpet with a spot cleaner.

To remove gum from a desk: fill a plastic bag with ice and hold it over the gum for a couple of minutes then rub vegetable oil over the gum.

Custodians or Janitors should never touch or move any papers, or other personal or office materials that are left on any desk or counter, nor touch any computer or laptop that is left on. Failure to follow the above could result in accusations or disciplinary actions against a custodian or janitor if any items go missing or erased from a computer.

Kitchens and Serving Areas

Note: The cleaning of kitchens in schools or other facilities may be under the Federal or Provincial practices and regulations which have a unique set of guidelines for cleaning, especially if food preparation is involved.

- 1. Clean and sanitize areas where food is prepared or temporarily stored/placed.
- 2. Clean floors under and around food preparation counters and areas with a sanitizing solution.
- Seal, remove and dispose of garbage daily, especially garbage with any food waste.
 Garbage bins and lids should also be inspected for signs of any food products that
 are sticking to the inside or outside. The garbage bins and lids should be washed
 and sanitized regularly.
- 4. Clean tables
- 5. Sweep/Mop cafeteria floors
- 6. Wash and sanitize dirty dishes daily, utilizing the principles and practices of the Alberta Health Services "Two Sink Washing Method". (Can be seen on the next page)
- 7. Clean sinks



https://www.albertahealthservices.ca/assets/wf/eph/wf-eh-color-2-sink-dishwashing.pdf

Hallways, Stairways, and Flooring

- 1. Clear any debris that could be a trip hazard.
- 2. Hallways, especially those near outside entrances are often subjected to heavy traffic and may need more attention than regular vacuuming (even more so in the winter months). A "Wet Vacuum" will be required in the winter and spring to extract all the water and salt that is tracked in from the outside.
- 3. Vacuumed carpeted areas.
- 4. Sweep high traffic areas.
- 5. If possible, vacuum floor using hard floor attachment, as traditional mops just spread dust around. If using a mop use a water-based dust mop treatment or microfiber mop covers.

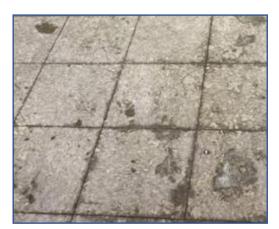
Always use continuous motion (not lifting the mop from the floor).

- 6. Clean tiled flooring with a commercial floor scrubber or scrubber sweeper. Tiled floors that are waxed regularly and properly and cleaned properly on a regular basis will provide a durable, lasting, and shiny floor. The condition of any floor always starts with regular cleaning. Always use warning cones or signs when doing washing floors.
- 7. Clear and clean all stair treads.
- 8. Sanitize hand railings.
- 9. Keep entrance areas free of debris and water, sleet, or snow that comes in on rainy or winter days.
- 10. Ensure that proper matting is available.

Always use warning signs when washing or cleaning floors.



Flooring Taken Care of Properly



Evidence of Flooring Not Taken Care of or Proper Waxing Not Performed

General Areas

Other daily janitor/custodial tasks include:

- 1. Vacuum/Sweep high traffic areas-this includes entryways (outside sidewalks and floor mats)
- 2. Empty all interior wastebaskets
- 3. Turn lights off in any areas that are unoccupied
- 4. Replace any light bulbs that are burned out
- 5. Clean/sanitize/disinfect water/drinking fountains
- 6. Remove gum
- 7. Check for graffiti and remove
- 8. Empty all exterior trash cans and if provided, cigarette containers
- 9. Inspect all exterior walls etc. for any vandalism and remove or report within 24 hours.
- 10. Inspect interior and exterior fixtures that are out of order and repair or report within 24 hours.
- 11. Remove all litter from sidewalks and grounds
- 12. Pick up all litter around dumpsters
- 13. Ensure that all exterior doors are properly secured and all panic hardware and locking mechanisms are fully functional.

To remove gum from carpet: fill a plastic bag with ice and hold it over the gum for a couple of minutes. If you can't pull off the gum afterwards warm ¼ cup of white vinegar, dab a clean cloth or towel in the vinegar and then onto the gum. Scrape away the gum using a dull knife. If there is a bit of residue dip a toothbrush in vinegar and brush the rest out.

To remove gum from a wall: fill a plastic bag with ice and hold it over the gum for a couple of minutes. Scrape of the gum with a knife.

Gymnasium

- 1. Empty waste baskets and recyclable collectors.
- 2. Dust mop floors.
- 3. Spot clean any floor scuffs.
- 4. Vacuum carpeted areas.
- 5. Clean glass on doors.
- 6. Spot clean walls.
- 7. Remove any graffiti.

Building Grounds

- 1. Check to see that all playground equipment is in safe working order.
- **2.** Pick up any trash or recycle.
- 3. Empty trash and replace it with fresh bags.
- 4. Remove graffiti.
- 5. Clean entrance mats.
- 6. Spot clean any glass on doors.
- 7. Vacuum or sweep entrance areas.
- 8. Remove any gum.



SECTION 7: WEEKLY CLEANING PROCEDURES



Image purchased from Shutterstock: 527394403

At the end of this Section, you will:

- 1. Compile a list of janitorial procedures of weekly tasks at your facility.
- 2. Create a weekly cleaning schedule for your facility.

Weekly/Monthly Cleaning Tasks

Restrooms

Weekly Cleaning Tasks

- 1. Clean restroom walls: this is more thorough than just daily spot washing.
- 2. Check deodorizers and replace pucks, screens if dissolved or weak.
- 3. Dust and wash wall and ceiling vents. These vents (usually located in the ceiling) assist in providing and removing air to the washroom area. Often the openings of the vents are clogged with dirt and debris that build up over time. A good weekly cleaning will allow the vents to continue to provide the necessary air extraction they are designed for.

Colour coded microfiber cloths should be used for sinks, mirrors, chrome, toilet seats and outside of urinals.

4. Clean Floor Drains

• Check floor drains at least on a weekly basis to ensure that the drain is free from any paper or debris that may clog the drain and not allow any water to flow freely down the drain. This also ensures that the drain has a supply of water that is contained in the floor "P-Trap". (The P-Trap in the floor drain prevents sewer gas odours from filtering through the restroom area). Often Janitors receive complaints of a 'sewer gas' smell in a restroom which, often, originates from the floor drain where the water in the P-Trap has evaporated. Checking the drain for water and if dry, pouring water down until it is visible will usually prevent any sewer gas smell complaints.

5. Clean Partitions and Doors

Note: The frequency of cleaning partitions and doors depends upon the frequency of use and if there are health concerns in the building.

 Toilet partitions and doors should be sanitized and if required disinfected, especially the handle and lock area.

6. Clean Sinks, Toilets and Urinals

Remove any stains on sinks and especially toilets.



Kitchens/Cafeterias

Weekly Cleaning Tasks

1. Counters

 Although counters in any kitchen or serving area should be cleaned and sanitized daily, extra cleaning should be completed every week in areas on and under the counter that may not be performed daily. If using microfiber cloths, ensure you are using a colour coding system. Remember to track all janitorial tasks completed by yourself or a hired professional. Keep these records in a file for each area of your building.

2. Appliances

Appliances include refrigerators, microwaves, coffee or beverage dispensers, freezers or in larger kitchen areas stoves or burners and range hoods.

- The outside of appliances should be cleaned with proper cleaner and microfiber cloths. Handles or touch pads should be sanitized.
- Empty fridges of perishables and clean inside the fridge as needed.
- If the range hood has a grease trap, the grease trap should be examined regularly and cleaned when necessary. For more information on how clean a commercial range hood and filters, please visit https://www.partstown.com/about-us/how-to-clean-a-commercial-range-hood
- 3. Clean A/C vents
- 4. Spot clean walls
- 5. Wash dishes and clean sinks

Monthly Kitchen Tasks

1. A "top to bottom clean" should be done every month (meaning empty entire fridge, wipe down all containers returning to fridge with a bleach/water mixture, wipe down all shelves, doors, drawers, and walls).

Offices/Conference Rooms/Classrooms/Staffrooms

- 1. Spot clean walls, doors: fingerprints and smudges
- 2. Clean glass in doors and any other interior glass
- 3. Clean whiteboards/blackboards
- 4. Dust all desks, countertops, and office furniture

- Dusting desks, office countertops and other office furniture can be accomplished with either a coloured microfiber cloth or a dusting "Swiffer" type of device.
- Remember that absolutely nothing on any desk should be moved or touched.

5. Dust windowsills, furniture, tops of lockers

 Use a moist colour coded microfiber cloth when cleaning a windowsill. If there is a large area of dirt and grime or insects, a vacuum may have to be used.

6. Change Waste Basket Liners

- Plastic wastebasket liners do not have to be changed every day, except in cases of spilled liquids or other garbage that may stain the liner or cause unnecessary odours. However, weekly changing of the liners will ensure that the basket and area will smell fresh.
- Always look underneath the liners to ensure that no sticky waste or liquid products remain in the wastebasket. An air freshener could be used in the basket before the installation of a new liner.

7. Wash Floors

- Any tiled or other flooring that is missed during the daily cleaning tasks should be scheduled once per week. These areas may include furnace/boiler rooms, janitorial storage rooms and other similar areas.
- 8. Empty all recyclable containers
- 9. Spot clean carpets as needed
 - A carpet cleaning/extraction machine should be used for carpets that show signs of staining or built-in dirt

Monthly Office/Conference Rooms/Classroom/Staffroom Tasks

- 1. High dust (Up to 8 feet): blinds, lights, vents, and pipes
- 2. Wash windows

General Areas

Weekly Cleaning Tasks

- 1. Vacuum all carpets. Any carpeted flooring that is missed during the daily cleaning tasks should be scheduled for at least once a week (such as less trafficked area and rooms).
- 2. Clean entrance windows inside and out.

- 3. Spot clean carpets as needed (any larger carpeted areas with staining or ground in dirt should be cleaned with an extraction machine)
- 4. High dust
- 5. Dust or vacuum blinds/drapes
- 6. Wash floors
 - Any tiled or other flooring that is missed during the daily cleaning tasks should be scheduled once per week. These areas may include Furnace/Boiler Rooms, Janitorial Storage Rooms, and other similar areas.
- 7. Dust windowsills, furniture, tops of lockers
- 8. Empty all recycle containers
 - Empty all the blue and green bins (used for recyclable plastics, glass, and paper) and ship the contents to an appropriate recycle centre. Note: some larger facilities have large green bins or dumpsters on the property that will be emptied by a recycle company on a regular basis.
- 9. Clean up around dumpsters
 - This prevents the area from becoming an attraction for animals and insects.
- 10. Clean windows using the proper colour coded microfiber cloth. To get smudges or grime off a window, moisten a portion of the microfiber cloth, rub it on the smudge and wipe dry. If the affected area of the window is heavily marked, a mild window cleaning solution may have to be applied.



- 11. Change burnt out light bulbs and clean reflectors
 - Some bulbs, including fluorescent tubes may be changed easily with the use of a small ladder. However, bulbs or tubes that are located on high ceilings such as gymnasiums may require scaffolding, or platform lifts. Ensure that all ladder and height safety policies are followed including fall protection equipment.
 - It's best to use LED bulbs and tubes when replacing lights. They have a life expectancy of approximately 50,000 hours which minimizes the frequency of changing burned out bulbs and tubes.

Note: Fluorescent tubes are rated in different "colours" or brightness temperatures. The higher the number, the brighter the light. A fluorescent tube with a colour temperature of

4100K is average for many applications. However, fluorescent tubes are available from 2000K to 6500K. Please refer to the table below:

Color Temperature (KELVIN)	2000К - 3000К	3100K - 4500K	4600K - 6500K	
Light Appearance	Warm White	Cool White Daylight		
Ambience	Cozy, calm, inviting, intimate	Bright, vibrant	Crisp, invigorating	
Best for	Living room, kitchens, bedrooms, bathrooms, restaurant/commercial ambient lighting, decorative outdoor lighting	Basements, garages, work environments, task lighting, bathrooms	Display areas, security lighting, garages, task lighting	

https://www.liteglo.co.za/colour-temperature/

12. Sweep exterior walkways and stairs

- Often entrance ways are the "end zone" of a lot of wind so dirt, debris, papers, and leaves pile up around entrance ways and doors. If not picked up on a regular basis, all the debris accumulated near entrance doors will make their way into a facility when the doors are opened.
- If available, a backpack blower will assist in cleaning the walkways and entrance ways.

SECTION 8: ANNUAL JANITORIAL PROCEDURES

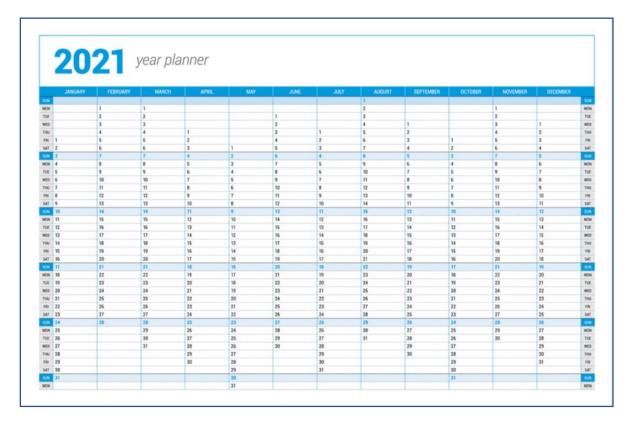


Image purchased from Shutterstock: 1707769528

At the end of this Section, you will:

- 1. Compile a list of annual janitorial tasks for your facility.
- 2. Create an annual cleaning schedule for your facility.

Deep Cleaning

Annual cleaning tasks are an opportunity for a janitor/custodian to conduct what is considered a "Deep Clean" as well as other janitorial tasks that are not considered "routine" or part of daily or weekly cleaning procedures. Deep cleaning includes but is not limited to moving furniture to wash, strip/wax floors, vacuum and/or steam clean carpets, dusting all surfaces (including high places), thoroughly cleaning all appliances, cleaning blinds and draperies, vacuuming air ducts, washing walls and cleaning windows. For more information on Deep Cleaning please see the links below.

Remember to track all janitorial tasks completed by yourself or a hired professional. Keep these records in a file for each area of your building.

http://austincleaning.net/2016/09/what-does-an-office-deep-cleaning-consists-of/

https://www.servicemastertc.com/how-often-do-offices-really-need-a-deep-cleaning/

Floor Stripping and Refinishing

Floor stripping and refinishing on tiled floors is a common task performed either annually, or depending upon the use and location, semi-annually. Stripping needs to be done when the floor has become discoloured or stained, has lots of scratches, or has lost its lustre. Always exercise caution when stripping a floor and follow the directions on the machine you are using. Not using the right tools, using dirty equipment, and not diluting the stripper are just a few of the mistakes people make.

For a complete list of materials needed for stripping a floor and the process to use, please see: https://www.cleanfreak.com/how-to/stripping-a-floor.html

Choosing the Proper Floor Pad

In stripping and waxing a floor as well as general buffing, it is important that the proper type of floor pad be used. Typically, lighter pads are the least coarse and darker pads are coarser. The manufacturer or supplier of the floor pad will provide guidance and instruction on the proper floor pad for the need and use.

For information on how to choose the right floor pad please see:

https://www.cleanlink.com/sm/article/Selecting-The-Right-Floor-Pad--10101

Rotary Floor Buffers and Automatic Scrubbers

To clean, buff, strip or wax floors, a rotary floor buffer or automatic floor scrubber is required. The type of floor, size of floor in square feet and type of cleaning required will determine the type and size of machine needed.

Rotary Floor Buffers (sometimes called rotary floor machines) typically have a
rotating head that sits on the floor and can spin at a variety of speeds. It has a

round scrub pad that spins in a circle and can be used buff, clean or scrub and strip floors (depending on the type of floor pad that is used).

Autoscrubbers can dispense cleaning solution and vacuum it up so that you only
must make one pass to clean (they have separate tanks for dirty and clean water).
Autoscrubbers can be used on multiple types of surfaces including but not limited to
ceramic, stone, rubber, and tile. They use less water and solution and so floors dry
quicker, and it is a more hygienic process. They come in three styles: upright, walk
behind, and ride.

Deep Carpet Cleaning/Extraction

Deep Carpet Cleaning (also called extraction and hot water extraction) is another annual task. It is different from a regular weekly vacuum and/or spot cleaning because it involves removing furniture and using specialized equipment that sprays the carpet with hot water and vacuums up the dislodged dirt at the same time. The company Jan Pro sites the advantages and disadvantages to this system of cleaning:

"Advantage:

The advantage of hot water extraction is that as very little or no chemical is used, it doesn't leave any residue. This makes it safe for everyone, especially for those who are allergic to detergents and other chemicals.

Disadvantage:

The disadvantage of this method is that a lot of hot water is required, which means you may need to use highly specialized equipment to clean the carpet. Also, if 100% of the moisture is not removed, your carpet may become a fertile breeding ground for mould, mildews and microbes."9

Note: Due to the equipment involved in Annual or Semi-Annual deep carpet cleaning extraction, many institutions choose to outsource this work to professional carpet cleaning companies.

For more information on the process of extracting the carpet please see:

https://www.cleanfreak.com/how-to/carpet-cleaning-extraction.html

Washing Exterior Windows

Exterior Window should be cleaned at least annually. Depending upon the height of a facility and/or the number of windows involved, exterior window washing is a task that is often outsourced. When outsourcing make sure to verify the credentials of the company being hired. These credentials include insurance, experience, training, proper equipment (including fall protection if using high ladders).

⁹https://www.jan-pro.ca/blog/what-is-the-difference-between-extraction-carpet-cleaning-and-bonnet-carpet-cleaning/

On a single storey facility, most exterior windows can be easily cleaned. Even so, the proper equipment, training and safety concerns should be met. Supplies that are required for exterior window cleaning include:

- Clean bucket
- Spray Bottle (if preferred)
- Sponge
- Good quality rubber squeegee for drying
- Microfibre cloth
- Ladder

Cleaning Solutions

When choosing a window cleaning solution, make sure it is "streak free". A cleaning solution that is gaining attention is "home-made". This solution uses cleaning water, vinegar and "Dawn" dishwashing detergent as follows:

- 2 cups water
- ¼ cup white vinegar
- ½ teaspoon dish detergent¹⁰

There are also many brands of commercial window cleaning solutions available including:

- Avmor Ecopure EP61 Glass and Surface Cleaner
- Zep Greenlink Concentrated Glass Cleaner
- Regard Glass Cleaner
- Wesclean Glass Cleaner
- Windex

When using commercial cleaning solutions all safety precautions must be followed. These include, but not limited to:

- Read the SDS (MSDS) prior to use
- Read manufacturer's instructions for dilution ratio and proper use
- Use safety glasses, proper gloves, and other PPE stated in SDS sheets and follow all manufacturer's instructions when pouring or diluting.

-

¹⁰ https://shewearsmanyhats.com/the-best-window-cleaner/

Cleaning the Windows

- 1. Using a spray bottle or wet sponge, apply the cleaning solution to the window.
- 2. Stubborn stains, such as bird droppings or mineral deposits may require more window cleaning solution, or vinegar solution to soften and

remove the stain. A good quality razor blade type of scraper may have to be used for stubborn stains but be careful not to scratch the glass with the razor

blade.

 Wipe the window dry using the rubber blade on a squeegee. It is important that the blade of the squeegee be in good condition (and sharp), and that the blade of the squeegee be always in contact with the window. If the window(s) to be cleaned have any type or form of tinting on them special precautions must be taken as they tend to scratch very easily. Do not use squeegees with metal edges.

- 4. Wipe the window from top to bottom using long strokes that overlap.
- 5. Depending on the amount of liquid, the blade of the squeegee may have to be dried occasionally between strokes.
- 6. If the squeegee does not dry all the water/solution from the window or if streaks from the squeegee are noticed, wipe the window dry with a clean microfiber cloth. The microfiber cloth could also be used to clean the edges of the windowpane.

For Those Difficult to Reach Windows

- If a window cannot be safely reached with a proper ladder, use an extension handle with the sponge and squeegee. The cleaning solution could be sprayed on the sponge which then can be wiped on the window and the squeegee can be used to dry the window.
- Use a water-fed pole system. The system includes a pump, an extendable pole
 with a cleaning head (and a hose that runs the length of the pole). The pole is
 connected to a source of clean water and has a brush on the end to scrub the
 glass.

Fire Extinguishers, Exit Signs and Alarm Panels:

- Have all fire extinguishers inspected by a professional and record date inspection on the attached Inspection Tag.
- Visually inspect all pull stations monthly.
- Visually inspect all Exit signs monthly. They must be properly illuminated.
 Change the bulb or sign if necessary or report deficiency to the fire inspection company.
- Test emergency lighting by pressing the test button on portable battery pack wall mounted units or by turning off the breaker on direct wire systems. Have any defective battery packs or lights replaced.
- Record test date on tag.
- Visually inspect fire alarm panel: check for any amber, flashing or red lights and report deficiencies to the fire inspection company.
- Visually inspect all hose and hose cabinets (if supplied). Ensure all components are intact. Record inspection on tag.

Mid and High-Level Cleaning

High level dusting (areas above 16') is the cleaning of areas that are normally difficult to clean because of their height such as ceiling trusses, support beams, fire sprinkler lines, ledges, vents, piping, and light fixtures. The objective of high cleaning is not to just remove dirt and dust from high level areas but rather to trap and absorb dust and dirt that are trapped in high level areas.

Special equipment such as lifts, and HEPA vacuums, are important when performing high dusting services. Fall Protection awareness is also important. Depending on the height, an alternative to using lifts for high cleaning is the use of telescopic poles. Telescopic poles are attached to high volume vacuums and can vacuum areas normally dusted and cleaned with the use of lifts or scaffolding.

SECTION 9: MOULD IDENTIFICATION AND REMEDIATION



Image purchased from Shutterstock: 368852549

By the end of this section, you will:

- 1. Recognize possible sources of mould in your facility.
- 2. Develop a plan for mould prevention and remediation in your facility.

How does Mould grow?

Mould grows when it has <u>moisture</u> and <u>food</u>. Food for mould includes but is not limited to paper, fabric, wood, drywall, carpet, and ceiling tiles. High levels of moisture can be created when:

- Water leaks in from the outside through leaky roofs, cracks in the foundation, walls, floors, windows, or doors
- When there has been flooding
- When plumbing fixtures leak
- When people cook or bathe without venting
- When there are too many plants in a house
- When people wash clothes and hang them inside
- When firewood is stored inside

Signs of Mould Problems

Signs that you have a mould problem show up in several ways:

- Musty or earthy smell
- Wet spots, dampness, or evidence of a water leak
- Discoloration on carpets
- People start to develop allergies or other health issues
- Visible signs of mould
- Signs of water damage
- Water leaks

Mould will grow if we provide it with moisture and nutrients. If we keep things dry, mould does not grow.

Preventative Maintenance for Mould

- Fix all plumbing leaks.
- Keep the building clean and free from excess stored material/clutter.
- Ensure there is adequate ventilation in areas with high water usage.
- Check your building for signs of mould.
- Check for water leaks into the building.
- Monitor humidity and dehumidify if necessary.
- Clean and replace furnace filters.
- Check fans to ensure they exhausts properly.
- Take out the garbage daily to prevent spoiling.
- Vacuum using a vacuum with a HEPA filter.
- Clean hard floors with a damp mop.
- Inspect the roof and cladding for any places where water might enter.
- Ensure eaves troughs/downspouts are connected and free of debris.

Types of Mould

Type of Mould	Colour	Found
Stachybotrys- <u>Toxigenic.</u> Also, known as Black Mould. Extremely dangerous and causes headaches, aches and pains, depression, sinusitis, chest pains, joint pain, coughing, fever, fatigue, nosebleeds, skin rashes, itching, upper respiratory discomfort, and neurological disorders. Extremely dangerous for children.	Black/greenish colour	Damp leaves, wood, paper, wicker, and drywall. Grows best in wet areas with high humidity levels.
Mucormycetes: can trigger asthma, difficulty breathing, and flu-like symptoms. Can also cause fungal infections that can damage sinuses, lungs, and the brain.	Fuzzy white or greyish	HVAC systems, decaying fruits and vegetables, soil and plants, condensation lines, air conditioner drip pans
Alternaria: Allergenic. Can trigger symptoms like allergies, as well as asthma and other breathing issues.	Velvet like green or brown hair like filaments	Found along the bases of tub and showers and under sinks
Aspergillus: Allergenic. Most types are harmless, but some strains can become more toxic and cause serious respiratory illnesses as well as fever, headaches, and fatigue.	Variety of colours	Grows on damp surfaces
Aureobasidium Pullulans: Allergenic. Can irritate the skin and cause infection of the eyes, skin, and nails.	Starts as light pink in colour then turns a deep brownish black	Painted surfaces, bare wood, porous tile grout, under wallpaper
Acremonium: Toxigenic. Can cause immune system issues (like arthritis and pneumonia), breathing problems, and bone marrow diseases. It can also impair brain functions. People can feel nauseous, and may experience vomiting, and diarrhea.	Starts out as moist but then gets powdery. Can be pink, orange, white, or gray. Looks powdery and dry	condensation lines, air conditioner drip/ drainage pans
Chaetomium: some strains are pathogenic, and others are allergenic. Inhaling this can cause watery eyes, sneezing, rashes, an itchy throat, asthma, headaches, seizures, and other more serious health issues.	Can change from white to grey, brown, and black	Soil, plant debris, compost
Cladosporium: Allergen. Causes sore throats, irritated sinuses, runny eyes, and sneezing, skin rashes, asthma, and lung infections. Can also cause eye, ear, and sinus infections. Can bother pets.	Can be green to brown and looks soft	Textiles, inside cabinets, carpets, upholstered furniture, under sinks
Ulocladium: some strains are pathogenic, and others are allergenic. Some types can cause respiratory symptoms that look like hay fever, and some types can cause serious respiratory symptoms. Can cause eye and skin infections.	Usually, black	Is typically a result of water damage or flooding. Needs lots of water to survive
Fusarium: Most strains are allergenic and can cause runny nose, itchy eyes, and skin rashes. Some strains very toxic and can cause nervous systems disorders and internal bleeding.	White, pinkish, or reddish spots	Garden plants, agricultural crops, upholstery, wallpaper, and drapery, soft textiles, carpeting
Penicillium: Allergenic and Pathogenic. Can cause allergy like symptoms, asthma, and respiratory conditions as well as stomach pain and diarrhea.	Velvety bluish green	Found in homes that have been water damaged or flooded: wallboards, carpeting, wallpaper
Trichoderma: most types are non-pathogenic. Can cause allergic reactions: coughing, sneezing, and bronchial or lung infections. Toxic types can weaken the body's immune system.	White with green patches	Wallpaper, carpet, wood, soil, and fabric. Can also be found in HVAC systems and A/C systems.

How to Detect Mould

To detect mould, you can use any of the following methods:

Bleach Test

Using a cotton swab dab a drop of household bleach onto a suspected mould spot. If the spot loses its colour or disappears within two hours, then it may be mouldy. If there is no change, it probably is not mould.



Paper Swipe Test



With a small strip of rough paper (a coffee filter works well), gently rub the surface of the suspected patch of mould. If powder rubs off onto the paper, it may mould. This test works especially well with dark-coloured mould. Beware that soot from candles or other combustion sources is also dark and will also rub off on paper.

Flashlight Test

In a darkened room, hold a flashlight against the surface suspected of being mouldy, and shine the beam across the surface from the side. Areas where mould is growing may show up as a shadow and appear as fine fuzz. This test works well with light-coloured mould that may not be easily seen in daylight.



Efflorescence

A common sign of moisture problems affecting foundation walls is the formation of fuzzy white spots on the surface of poured concrete and masonry. This fuzzy growth is called efflorescence. It is made up of delicate crystals of salts that form when moisture with high salt content moves through the concrete or masonry.



Information for this section has been retrieved from TSAG's Mould Awareness Course.

Mould Remediation

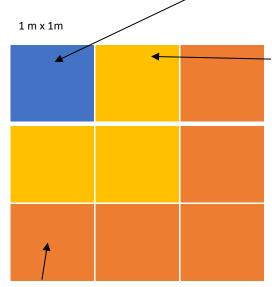
Before you can determine how to combat the mould issue, you need to determine how severe the mould problem is. To do this, you need to estimate the extent of the mould by getting an approximate measurement of the surface area that the mould covers.

Moisture builds up when it is not vented outside.

Estimating the Extent of Mould

1. Small

The mould area is *small* (coloured blue below) if there are one, two or three patches of mould and each patch is smaller than one square metre (1 m x 1 m). Mould on windowsills is considered a small area.



2. Medium

The mould area is considered *medium* (coloured yellow beside) if there are more than three patches of mould (each smaller than one square metre) but the total mould area is less than three square metres (for example, 1 m x 3 m or about the size of a 4 ft. x 8 ft. sheet of plywood). Patches close together are considered as one patch.

3. Large

The mould area is *large* (coloured orange above), if a single patch of mould is larger than three square metres (for example, 1 m x 3 m or a standard piece of 4 ft. x 8 ft. plywood) or if there are many medium or large patches of mould all through the house.

Getting Rid of the Mould

- 1. Small areas (area of less than one square meter and less than 3 such areas)
 - Wear rubber gloves, a mask and safety glasses.
 - Ensure pregnant women and people with health issues are not in the room during cleaning
 - Scrub washable surfaces with a solution of unscented detergent and water using a clean rag then wipe dry.

- If the mould is on drywall, wipe with a damp rag with a bit of baking soda or unscented detergent on it. Wipe the water off quickly. Note: if the mould is under the drywall, the drywall will need to be removed and replaced with new drywall.
- If the mould is on concrete, scrub with unscented detergent and a clean rag, then sponge with a clean damp rag and let it dry. Remove any carpets or cardboard boxes as they may be contaminated.
- All contaminated debris, including polyethylene sheeting, clothes and used protective equipment should be double-bagged in 6-mil polyethylene bags and sealed tightly by twisting the top of the bag and securing with duct tape or other suitably strong material or placed in drums, bins or other containers that are not easily damaged by the waste (e.g., sharp edges). The waste must be declared hazardous and taken to a regional landfill.
- <u>2. Medium size area</u> (more than 3 patches each patch smaller than a square meter, or if there is one patch larger than 1 square meter but smaller than 3 square meters.)

Note: Medium mould clean-ups often require the participation of trained maintenance staff.

- Ensure pregnant women and people with health issues are not in the room during cleaning.
- Wear rubber gloves, a mask, and safety glasses
- Isolate the area with plastic sheets taped to walls and ceiling.
- Remove all wet or damaged materials from the work area.
- Check non-washable furnishings, carpets, pillows, paper, cardboard, stuffed toys for mould. If necessary, throw it away.
- Place a fan in a window of the room being cleaned that blows the inside air to the outside.
- Place and seal any wet or damaged materials from the work area in a plastic bag and take them outside.
- Wash any clothes/fabrics with unscented detergent and one cup of bleach and store in closed plastic bags until the mould issue is resolved.

Remember to track all janitorial tasks completed by yourself or a hired professional. Keep these records in a file for each area of your building.

- Scrub washable surfaces with a solution of unscented detergent and water and a clean rag then wipe dry.
- Vacuum all surfaces slowly and carefully using a vacuum with a HEPA filter.

- Wood that is rotting should be thrown away and replaced. If not rotted, clean with unscented detergent and water. Rinse with a clean damp rag and dry.
- If the mould is on drywall, wipe with a damp rag with a bit of baking soda or unscented detergent on it. Note: if the mould is under the drywall, the drywall will need to be removed and replaced with new drywall.
- If the mould is on concrete, vacuum up using a HEPA cleaner, scrub with unscented detergent and a clean rag, then let dry. Remove any carpets or cardboard boxes as they may be contaminated.
- All contaminated debris, including polyethylene sheeting, clothes and used protective equipment should be double-bagged in 6-mil polyethylene bags and sealed tightly by twisting the top of the bag and securing with duct tape or other suitably strong material or placed in drums, bins or other containers that are not easily damaged by the waste (e.g., sharp edges). The waste must be declared hazardous and taken to a regional landfill.

3. Large Areas

The mould problem is considered extensive if a single patch is larger than 3 square meters. This size of mould problem must be handled by a professional.

*Mould Information retrieved from TSAG's Mould Awareness and Remediation Course.

Note: It is critical to clean mould up as soon as you see it because mould can grow quickly. However, cleaning does not solve the mould problem. You must address why the moisture and dampness that caused the mould.



SECTION 10: TIME MANAGEMENT



Image purchased from Shutterstock: 110240975

By the end of this section, you will:

- 1. Develop 3–5-time management strategies to more effectively complete daily tasks.
- 2. Create checklists to guide your daily, weekly tasks

Time Management

Time management is integral to the role of a Janitor/Custodian. To complete the responsibilities of this position a variety of tools should be used including schedules, checklists (daily, weekly, monthly, and annually), and prioritizing your workload.

Cleaning Schedules

Cleaning schedules vary depending on the type of and use of a facility. Janitorial/Custodial cleaning services should be performed in a facility during times of minimal building use to

ensure minimal interruption to employees or staff. Most of their tasks are typically performed in the hours when there are less people in the building.

Before you create your schedule note where your most productive times are so that you can complete those tasks that require more energy during those times.

Janitorial Checklists

- Janitorial checklists should be created for daily, weekly/monthly, semi-annually, annually, and other special cleaning needs and schedules. They ensure that standardization and consistency are followed and accomplished for all tasks which ensures a complete and comprehensive cleaning schedule.
- Janitorial checklists should have a section for rating the minimum standard of cleanliness of an area into categories of Satisfactory, Unsatisfactory or N/A (Not Applicable). If an area is rated as "Unsatisfactory", there should be an area on the checklist to enter recommendation(s) for improvement.
- Emergencies and special events will alter any work prescribed on checklists.

Time Management Strategies:

- Do not multitask
- Keep social media to personal time
- Set times to complete each of your tasks



Janitorial Checklist

Duste:				Facility:		
Name:				Community:		
Confirm specific dom with the description. Leave section blank if the	Choose one			T contributes describe contracts Where is the unsafetiatory component located		
iben does tof evid.	Satisfactory	Charleliotory	AHA.	O STREET SCOTE (STREET)	If ansatisfactory, describe problems of the standard of the st	
DAILY	Land William Control			(Recommended as a minimum standard)		
RESTROOMS						
Clean and savitize at fixtures and surrounding areas						
Empty waste baskets-change kners if needed						
Stock all dispensers / replace fresheners as needed						
Sweep and wet mop floors						
Clean mirrors						
KITCHEN						
Wipe tables , countertops, and seating areas						
Dispose garbage						
Wash dishes						
Others:						
BOARDROOMS, OFFICES, WORK STATIONS						
Dust desktops						
wpe phones						
Dispose garbage						
GENERAL AREAS						
Vacuum / sweep all high traffic eneas						
Empty at interior wastebaskets						
Empty all exterior trashcans and cigarette containers						
Vandalism: remove or report within 24hrs.						
Fixtures: Report any non- working within 24hrs.						
Drinking fountains-clean and sanifize						
Remove litter: sidewalks and grounds.						
Pick up loose trash around dumpater						
Secure doors						
Others:						



APPENDIX

Glossary

Glossary	
Area Cleaning	Area cleaning is when one person does all the cleaning in an area. The custodian/janitor must know how to complete all tasks efficiently and thoroughly.
Association of Physical Plant Administrators (APPA)	APPA is THE association for facilities professionals (custodial, maintenance, grounds) to network, learn, and propel their profession forward. We do this through our educational programs, publications, regions, and chapters, as well as our webinars, town halls, and credentialing program. (APPA)
Automatic floor scrubbers	Also called Autoscrubbers or floor scrubbers, they are used to clean cement, tile, rubber, ceramic, stone, marble, and granite floors using less water and solution and are more hygienic. They can be upright, walk-behind or ride.
Center for Disease Control (CDC)	The Center for Disease Control and Prevention is the public health institute of the United States. Their mission is "to protect America from health, safety, and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable, or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.
	CDC increases the health security of our nation. As the nation's health protection agency, CDC saves lives and protects people from health threats. To accomplish our mission, CDC conducts critical science and provides health information that protects our nation against expensive and dangerous health threats and responds when these arise."11
Canadian Environmental Protection Act	An Act respecting pollution prevention and the protection of the environment and human health to contribute to sustainable development ¹²
Public Health Agency of Canada (PHAC)	Its activities focus on preventing disease and injuries, responding to public health threats, promoting good physical and mental health, and providing information to support informed decision making. ¹³
-	

https://www.cdc.gov/about/organization/mission.htm
 https://laws-lois.justice.gc.ca/eng/acts/c-15.31/page-1.html
 https://www.canada.ca/en/public-health.html

International Sanitary Supply Association (ISSA)	ISSA is a non-profit trade association for the cleaning industry. They provide educational products and publications, as well as regulatory services and standards for the cleaning industry.
Safety Data Sheet (SDS)	Safety Data Sheet (also known as Material Safety Data Sheet -MSDS) is a document that contains information on the potential hazards (health, fire, reactivity and environmental) of a given chemical and instructions on how to work safely with it.
Team Cleaning	Team cleaning is where a team moves through a facility and each person performs a specific task such as vacuuming, dusting etc.
Workplace Hazardous Material Information (WHMIS)	The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard. The key elements of the system are hazard classification, cautionary labelling of containers, the provision of (material) safety data sheets ((M) SDSs) and worker education and training programs. It is aligned with the GHS (Global Harmonized System). ¹⁴

 $[\]frac{14}{\text{https://www.canada.ca/en/health-canada/services/environmental-workplace-health/occupational-health-safety/workplace-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-health/occupational-$



Hantavirus

7 Steps to Safe Clean-up of Mouse Droppings, Nests, or Dead Mice

Hantavirus is a severe, potentially fatal, illness. Humans can be exposed to Hantavirus when the urine or feces of an infected rodent become airborne.

This means that anyone who disturbs areas of mice or mice droppings, such as when cleaning, can be at risk. Reduce your risk of illness by following these seven simple – but essential – steps, when dealing with rodent clean-up.

- Open doors and windows and allow the area to ventilate for at least 30 minutes prior to starting your clean-up. Keep out of the area while you let it ventilate.
- Wearing rubber gloves, thoroughly soak droppings, nests and dead mice with a bleach/ water solution (one part bleach to nine parts water) or a household disinfectant.
- Let the bleach water solution sit on the droppings/nests/mice, for five minutes. Do NOT disturb any droppings, nests or dead mice, prior to soaking with this bleach solution (for the full five minutes).
- Mop up bleach-soaked droppings, nests and/or dead mice, or pick up with paper towels, placing immediately into a plastic bag.
- Seal the plastic bag completely.
- 6 Put sealed plastic bag directly into a garbage container with a tight fitting lid.
- Wash your gloves before removing, and then wash your hands thoroughly (with warm soap and water).

NOTE: never vacuum or sweep droppings, nests or dead mice. This can create dust that can be inhaled. The dust may contain Hantavirus.

Albertans dealing with significant mouse infestations, and/or mouse infestations in enclosed, poorly ventilated, spaces, should contact Health Link Alberta (1.866.408.5465), to discuss necessary special precautions.

Individuals infected with Hantavirus generally show symptoms one or two weeks after exposure, however symptoms have been known to appear up to five weeks after exposure. Symptoms resemble severe influenza, including fever, body aches, chills, and severe breathing problems.

If you have recently been in an area contaminated by mice, and have developed severe influenzalike symptoms (including difficulty breathing), it is important that you see a doctor immediately.

To learn more about Hantavirus, visit MyHealth.Alberta.ca

Asbestos Containing Materials

- 1. Asbestos cement drainpipe
- 2. Roof felting
- 3. Asphalt shingles
- 4. Soffit boards
- 5. Stucco and textured paints
- 6. Asbestos cement siding
- 7. Brick mortar
- 8. Window putty
- 9. Deck under sheathing
- 10. Asbestos cement shingles
- 11. Spray-applied insulation (acoustic & fireproofing)
- 12. Vermiculite (blown-in) insulation (in attics & wall cavities)
- 13. Paper backing on fiberglass insulation
- 14. Drywall mud
- 15. Plaster
- 16. Asbestos cement board
- 17. Textured coatings
- 18. Ceiling tiles
- 19. Fireplace box & mantel
- 20. Artificial fireplace logs & ashes

- 21. Vinyl sheet flooring & mastic
- 22. Vinyl floor tile & mastic
- 23. Poured flooring/levelling compound
- 24. Asphalt flooring
- 25. Vinyl sheet flooring with asbestos backing
- 26. Furnace duct tape
- 27. Furnace/boiler insulation
- 28. Pipe (mechanical) insulation
- 29. Hot water tank insulation
- 30. Mastic
- 31. Asbestos rope & gaskets
- 32. Asbestos cardboard insulation
- 33. Fire doors
- 34. Electrical wiring insulation
- 35. Fire blankets
- 36. Chalkboards
- 37. Heat reflectors
- 38. Penetration fire stopping
- 39. Light fixture backing (pot lights)
- 40. Flooring Heating (HVAC) & ducting
- 41. Brake Pads

Please note that this list does not include every product that may contain asbestos. It is intended as a general guide.



BIBLIOGRAPHY

- Alberta Government. (2009, July 1). Best practices: mould at the work site Open Government. https://open.alberta.ca/publications/4468981
- Austin Cleaning. (2020, June 16). What does an office deep cleaning consist of? Austin Professional Cleaning Services. http://austincleaning.net/2016/09/what-does-an-office-deep-cleaning-consists-of/
- Bragg, N. (2011, September 27). Exterior window cleaning: Water-fed pole systems improve productivity, safety. CleanLink. https://www.cleanlink.com/sm/article/Exterior-Window-Cleaning-Water-fed-Pole-Systems-Improve-Productivity-Safety--13525
- Carr, D. (2019a, April 9). What is the difference between floor buffers and burnishers? EBP Supply Solutions. https://www.ebpsupply.com/blog/differences-between-floor-buffers-and-burnishers
- Carr, D. (2019b, May 7). What is an automatic floor scrubber (types, sizes, & features)? EBP Supply Solutions. https://www.ebpsupply.com/blog/what-is-an-automatic-floor-scrubber
- Carroll County Public Schools. (2012, August 22). Maintenance department procedure manual. CCPS.
 - https://www.carrollk12.org/admin/facilities/Pages/MaintenanceProcedureManual.aspx
- CCOHS. (2021, January 8). Indoor air quality moulds and fungi: OSH answers. Canadian Centre for Occupational Health and Safety.
 - https://www.ccohs.ca/oshanswers/biol_hazards/iaq_mold.html
- CDC. (2021, May 6). How To Clean and Disinfect Schools to Help Slow the Spread of Flu | CDC.

 Centers for Disease Control and Prevention. https://www.cdc.gov/flu/school/cleaning.htm
- Certified Asbestos Removal. (2020, August 7). Common mould myths dispelled.
 - https://certifiedasbestos.ca/common-mold-myths-dispelled/
- Chilliwack School District. (n.d.). Custodial manual Chilliwack school district #33. Retrieved July 27, 2021, from https://sd33.bc.ca/custodial-manual

- Clean Freak. (n.d.-a). Carpet cleaning extraction. Retrieved July 27, 2021, from https://www.cleanfreak.com/how-to/carpet-cleaning-extraction.html
- Clean Freak. (n.d.-b). How to strip commercially waxed floors. Retrieved July 27, 2021, from https://www.cleanfreak.com/how-to/stripping-a-floor.html
- CleanLink. (2015, May 23). Top ten mistakes when stripping floors.

 https://www.cleanlink.com/news/article/Top-Ten-Mistakes-When-Stripping-Floors--15612
- Crowe, C. (2017, April 24). Must-Have tools, products for janitorial carts. CleanLink.

 https://www.cleanlink.com/cp/article/Must-Have-Tools-Products-For-Janitorial-Carts-20733
- Dicker, L. (2017, June 22). 9 Signs You Should Invest in Floor Stripping. Action Unlimited Resources. https://www.actioncleanup.com/blog-4/9-signs-you-should-invest-in-floor-stripping
- Employment and Social Development Canada. (2003). *Protect your back!* Canada.Ca. https://www.canada.ca/en/employment-social-development/services/health-safety/reports/back.html
- Facilities Manager. (2021). Tending to the campus sense of place. APPA. https://www.appa.org/issue/july-august-2021/
- Gentile, M. (2021, January 18). How to clean a commercial range hood. Partstown. https://www.partstown.com/about-us/how-to-clean-a-commercial-range-hood
- Georgia Institute of Technology. (2013). Green cleaning manual. GIT.
- Haney, B. (2016, April 1). Cross out contamination by color coding microfiber. Cleaning & Maintenance Management. https://www.cmmonline.com/articles/cross-out-contamination-by-color-coding-microfiber
- Ideadev, I. (2021, April 30). How often do offices need a 'deep cleaning?.' Servicemaster Twin Cities. https://www.servicemastertc.com/how-often-do-offices-really-need-a-deep-cleaning/

- InspectAPedia. (n.d.). Interior perimeter drain or "french drain" to stop or prevent basement leaks & water entry. Retrieved July 27, 2021, from https://inspectapedia.com/Wet Basements/Basement Perimeter Drain.php
- ISSA. (2019, February 4). The clean standards. https://www.issa.com/certification-standards/issa-clean-standards
- Leadens. (2020, July 8). Commercial cleaning microfiber. https://www.leadens.com/commercial-cleaning-microfiber/
- McCoy, W. (2018, November 21). List of common tools used by a custodian. Career Trend. https://careertrend.com/list-7427579-list-common-tools-used-custodian.html
- NACHI. (n.d.). Indoor air quality > mold inspection gallery. Retrieved July 27, 2021, from https://www.nachi.org/gallery/mold
- Next Insurance Staff. (2020, December 18). Janitor tools and equipment: What and how to choose.

 Next Insurance. https://www.nextinsurance.com/blog/janitor-tools-equipment-choose/
- Summerstone, L. (2008, November 1). Selecting the right floor pad. CleanLink. https://www.cleanlink.com/sm/article/Selecting-The-Right-Floor-Pad--10101
- Taylor, G. (2020, March 30). The 12 Most Common Types of Mold in the Home. Bob Vila. https://www.bobvila.com/articles/types-of-mold-in-homes/
- United Independent School District. (2017). Custodial services department procedures manual.

 UISD.
- U.S. Department of Education, National Center for Education Statistics, & National Forum on Education Statistics. (2003). Planning guide for maintaining school facilities. School Facilities Maintenance Task Force.
- Weaver, B. (2016, April 12). What is the difference between extraction carpet cleaning and bonnet carpet cleaning? Office Cleaning Services | JAN-PRO Canada. https://www.jan-pro.ca/blog/what-is-the-difference-between-extraction-carpet-cleaning-and-bonnet-carpet-cleaning/
- Weltin, D. (2003, August 1). PPE: The housekeeping staff's line of defense. CleanLink. https://www.cleanlink.com/hs/article/PPE-The-Housekeeping-Staffs-Line-of-Defense--885

WorkSafeBC. (n.d.). Mould - WorkSafeBC. Retrieved July 27, 2021, from https://www.worksafebc.com/en/health-safety/hazards-exposures/mould#:%7E:text=For%20most%20people%2C%20exposure%20to,sinusitis%2C%20or%20other%20lung%20infections.

WorkSafeBC. (2005, March). Indoor air quality: A guide for building owners, managers, and occupants. https://www.worksafebc.com/en/resources/health-safety/books-guides/indoor-air-quality-a-guide-for-building-owners-managers-and-occupants?lang=en

WorkSafeBC. (2010, July 20). Mould exposure [Video]. YouTube.

https://www.youtube.com/watch?v=Kj5InS35N24

Other Sources

- 1. CMHC "Assessing and Remediating Houses for Mould Trainer Manual" 2006
- 2. CMHC "Housing Quality Matters for First Nations: Mould Remediation Participant Manual" 2006
- 3. CMHC "Housing Quality Matters for First Nations: Mould Remediation Trainer Manual" 2006
- 4. CMHC "Mould in Housing for First Nation Housing Managers" 2011 https://www.cmhc-schl.gc.ca/en/first-nation/housing-managers/maintenance/mould/upload/mould-in-housing-for-first-nations-housing-managers.pdf
- 5. CMHC "Mould in Housing for First Nation Residents" https://www.cmhc-schl.gc.ca/en/first-nation/care-for-your-home/mould/upload/mould-in-housing-first-nation.pdf
- 6. CMHC "Mould in Housing Toolkit" https://www.cmhc-schl.gc.ca/en/first-nation/housing-managers/maintenance/mould/index.cfm
- 7. CMHC "Mould in Housing Videos"
- 8. CMHC "Mould in Housing: An Information Kit for First Nations Communities" 2002
- 9. CMHC "Mould in Housing: Information for First Nations Communities" 2014
- 10. Mould Educations Etc. http://www.mouldeducationetc.com/
- 11. Retail Safety http://www.retailsafety.ca/training/personal-protective-equipment (link not found)
- 12. SpaceVac High Level Cleaning Systems https://spacevac.us/
- 13. https://www.cleanlink.com/hs/article/PPE-That-Protects-Cleaning-Workers