CSHEMA Innovation Award

Project Description:

Carleton’s Custodial Manager created a Custodial Training Program Guide which has been distributed, in three ring binders, to all Custodial Department personnel. The Custodial Department has 51 custodians, 2 supervisors, one administrative assistant and one manager.

Scope of the project:

Carleton College is a private liberal arts college of 2,000 students that is consistently recognized as one of the top ranked liberal arts colleges in the nation. We receive about $6M/year in extramural research, we have about 2 million square feet of property and we are on a 1,040 acre campus including an 880 acre arboretum. We have just over 100 buildings to be cleaned. Our cleanable square footage is 1,206,393.

Recognizing the need for a new employee training manual, three years ago, we searched online and found an example from the University of Iowa (another CSHEMA institution) that we liked. We reached out to them and they were willing to share their guide with us. We used this example in creating a program tailored to our departmental needs and the Carleton culture.

Carleton’s Facilities Management is a union shop. In creating this manual we worked through our labor management committee (LMC) meetings which are held monthly. There were times when we added meetings depending on the detail we were trying to get done.

Originally, our purpose was to create a new employee orientation manual with different sections of useful departmental and operational information. However, once this was created, we decided that it would be a great tool for all custodians. Binders were created with tabs for each
section and full color pages were inserted. We handed the binders (personalized for each
custodian) out during small team meetings starting in 2018. In addition, we discuss the binders
and the various sections in the binders frequently at (mandatory) monthly staff meetings and new
employees receive their binders during their orientation process.

Carleton’s Environmental Health and Safety (EHS) Department has encouraged us to
submit 4 sections (Exhibit A) of our Custodial Training Guide to CSHEMA for the Innovation
Award for Process Improvement:

1. **Ergonomics** – We train our staff, annually on body mechanics in May, just before a
very busy season of flipping resident halls and setting up for large events like
commencement, reunion and summer programs.

2. **Introduction to Safety** – In this section we speak to various safety-related topics as a
daily reminder for our staff.

3. **Custodial Equipment and Chemical** – Our EHS department was helpful to suggest
adding the OSHA pictograms to the information provided on all of our chemicals.
This section does not replace our SDS books or the need to refer to the SDS for
reference when necessary.

4. **Custodial Cleaning Tasks (General Cleaning Example)** – we have included one
example of a cleaning task (dusting) to show that each task begins with a safety
statement.

This project was completed in-house using our administrative staff and copy center. The
product cost to do this was $1,070 ($70 for the 3 ring binders and $1,000 for the printing). We
consider this project to be sustainable because it is being done during work hours, with our staff
and is a standing item on our monthly LMC agendas. In addition we are using Power Point to create the manual and Blue Beam to transfer to PDF.

Since we have implemented this guide, we are starting to see a culture change in a higher amount of accountability with staff because we now have written expectations. Prior to the implementation of this guide there were no clear written guidelines or expectations for our custodial staff. Culturally, Carleton’s historical narrative is voluminous on all things from simple processes to unwritten procedures. This manual documents daily procedures and ties them neatly into the annual EHS training that our staff attend for a daily reminder that everyone should go home the way that they came to work – in one piece.

We learned ‘keeping it simple’ was key to being able to knock out the details. We purposely left out brand names of chemicals, vendor names and equipment so if changes need to be made we can easily accommodate this. We are willing to share our document and experience with others.

Respectfully submitted by:

Patti Sabrowski
Custodial Manager
Carleton College

Elisabeth Haase
Institutional Representative endorsing the application
Director, Environmental Health and Safety
Carleton College
Exhibit A
Ergonomics

Topics presented in this file include:

- Spring Ergonomics
- Winter Ergonomics
**Body Squat**

**Major Muscles Affected:** Glutes, Hamstrings, Quads  
**Purpose:** Training and engaging proper neural pattern for lifting mechanics and general warm up.  
**Coaching Cues:**  
1. Feet shoulder width apart  
2. Push hips back  
3. Keep heels down  
4. Squat as low as you can comfortably

**Lunge with Reach**

**Major Muscles Affected:** Glutes, Hamstrings, Quads, Abductors, Hip Flexors, Obliques, Latissimus Dorsi, Pecs and Rectus Abdominals  
**Purpose:** General warm up. Preventing lower crossed syndrome  
**Coaching Cues:**  
1. Step forward like you are going to kneel down  
2. Keep chest straight up without over extending back  
3. Reach opposite arm straight over head toward opposite shoulder  
4. Drive back to standing position off of front foot

**Alternating Knee Touch**

**Major Muscles Affected:** Gluets, Quads, Hamstrings, Calf  
**Purpose:** Dynamic stretch of posterior chain musculature. Training and engaging proper neural pattern for lifting mechanics  
**Coaching Cues:**  
1. Take small step forward  
2. Keeping forward leg straight, push hips back and reach for knee keeping chest up
**Hip Circles**

**Major Muscles Affected:** Hip flexors, Glutes, Hamstrings, Oblique’s, Abdominals and Erector Spinae.  
**Purpose:** General hip mobility and flexibility  
**Coaching Cues:**  
1. Feet slightly narrower than shoulder width  
2. Circular motion starting from hips

**Ankle Mobs**

**Major Muscles Affected:** Gastrocnemius, Soleus, Core engagement  
**Purpose:** Increase mobility of lower leg and foot musculature  
**Coaching Cues:**  
1. Rock up to tip toes  
2. Lower back down slowly

**Executive Sit**

**Major Muscles Affected:** Glutes, IT band, Erector Spinae, Quadratus Lumborum  
**Purpose:** Increase hip mobility  
**Coaching Cues:**  
1. Stand tall keeping chest up  
2. Hold ankle  
3. Light downward pressure on knee  
4. Slowly lean forward to increase stretch

**Push Away’s**

**Major Muscles Affected:** Upper Trap, Scalenes, Lateral Neck Flexors  
**Purpose:** Increase mobility in upper back and neck musculature  
**Coaching Cues:**  
1. Arms at sides with fingers and wrists extended  
2. Lean head to one side  
3. Push opposite hand down

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**Neck Circles**

**Major Muscles Affected:** Scalenes, Sternocleidomastoid, Upper trap, Levator Scapulae  
**Purpose:** Increase general neck mobility  
**Coaching Cues:**  
1. Make slow gentle rotations with head

**Wrist Circles**

**Major Muscles Affected:** Wrist flexors, Wrist Extensors, Supinators and Pronators  
**Purpose:** Wrist mobility  
**Coaching Cues:**  
1. Clockwise motion for 10 seconds  
2. Counter clockwise motion for 10 seconds

**Shoulder Mobility**

**Major Muscles Affected:** Pectoralis Major, Deltoids, Upper and Middle Trapezius, Rhomboids, Triceps and Biceps  
**Purpose:** Increase shoulder mobility. Stretch anterior musculature and activate posterior musculature to reduce forward shoulder posture.  
**Coaching Cues:**  
1. Lightly grasp your thumb  
2. In one smooth motion reach one arm up behind head and the other behind and up your low back

**Hitch Hikers**

**Major Muscles Affected:** Pectoralis Major, Deltoids, Upper and Mid Trapezius, Rhomboids  
**Purpose:** Decrease forward shoulder posture by stretching anterior musculature and activating posterior musculature  
**Coaching Cues:**  
1. Quarter squat down and cross arms over knees  
2. Bring arms up into scarecrow position  
3. Stand up while simultaneously bringing arms up and pointing thumbs behind you
Pull Apart Swim

Major Muscles Affected: Upper and Mid Trapezius, Rhomboids, Deltoids
Purpose: Activate posterior back musculature and reduce forward shoulder posture
Coaching Cues:

1. Make 5 forward swims
2. Reverse and make 5 backwards swims

Wrist Flexion, Extension, and Thumb

Major Muscles Affected: wrist flexors, Wrist Extensors, Thenar Eminence
Purpose: Increase mobility in the wrist and hand
Coaching Cues:

1. Apply gentle pressure to digits for all positions
Body Squats

10 reps

Training of proper hip hinge movement for proper lifting mechanics
General warm up by increasing core temp, respiratory rate
Activation of glutes, quads, low back and mid back musculature
Make sure heels stay down

Lunges

10 reps each leg
20 total

General warm up by increasing core temp, respiratory rate.
Stretching of hip flexors and abdominals.
Make sure to alternate legs each rep.
**Tri Planer Arm Circles**

5 reps

General warm up of shoulder musculature. Increases core temp and respiratory rate.

Activation of Anterior, Medial and Posterior deltoids.

Make small circles as you go forward and backward.

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**Push Away**

**Wrist Circles**

20 sec.

Increasing/maintaining general wrist mobility

Activation of pronator and supinator musculature
Hip Circles

10 total

3 each direction

General hip mobility also reinforcing good hip hinge mechanics

Stretching of hip flexors, I.T. bands, low back and abdominals

Make sure circles are smooth and fluid

Lunge with Reach

3 reps each side, hold 5 seconds

Improving hip and shoulder range of motion

Activation of Quads and glutes

Stretching Hip flexors, abdominals and Lats.
**START**

Alt. Knee Touch

3 each leg

Hold 5 seconds

**FINISH**

Increasing posterior leg mobility/ flexibility

Reinforcing hip hinge mechanics

Should feel stretch from calf, hamstring, glutes and low back.

Keep chest up and back straight.

**START**

Shoulder Mobility

3 each side, Hold 5 seconds

**FINISH**

Increasing Thoracic extension and shoulder mobility.

Stretching Anterior shoulder and chest musculature, triceps and lats.

Activating Upper, Mid and lower trapezius and rhomboids.
Wrist and Thumb Extension and Flexion

2 reps each position

Hold for 5 seconds

START

FINISH

Increasing wrist mobility
Decrease compressive forces in the wrist and in the hand.

Straighten out thumb

Bend thumb across palm

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Post Work Cool Down Stretches

Hold each stretch in a tolerated position and hold for 20 to 30 seconds

Hip
Flexor
Stretch

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Chest Stretch

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Carleton College
Winter Exercise Program

Warm Up in the Winter

- **Static Stretches** - When you are planning to work outside in the winter, it's imperative that you perform leg, arm and back stretches.

- **Dynamic Movements**
  - **Arm Circles** - Circle your arms in larger and then smaller circles.
  - **Twist Your Upper Body** - Place your hands on your hips and move your upper body from left to right, then from right to left.
  - **Jumping Jacks** - Jumping jacks can increase your heart rate, but make sure you perform a few stretching moves prior to these. The jumping jacks will ensure that the heart will start pumping more blood to the muscles, so that you won't be prone to injuries.
  - **Squats** - Squats will work on your lower body and will warm up the muscles from this area. Make sure you perform the squats correctly. Hold your hands in front of you, your back should be straight, and your abdominal muscles to equal down and come back up.

Preventative Stretching Regimen

- **Low Back Extension**
  - Place hands on lower back and gently bend backward. 
  - Hold for 5 seconds, repeat 3 times.

- **Quad Stretch**
  - Hold onto wall and reach behind to grab foot of bent leg.
  - Hold for 15 seconds on each side.

**Static Stretches**

**Upper Back**
- Clasp hands in front of body and reach away from self.
- Hold for 15 seconds.

**Pectoralis Stretch**
- Clasp arms behind body and pull shoulders back stretching chest and lifting arms.
- Hold for 15 seconds.

Preventative Stretching Regimen

**Hamstring Stretch**
- Extend one leg in front with foot flexed up. Bend opposite knee and sit back.
- Hold for 15 seconds on each side.
Carleton College
Snow Shoveling Techniques

The Basics: Lifting Correctly

- Bend your knees and lift with your legs
- Lift things closer to your center of gravity (Not way out in front or to the side)
- Keep back straight and bend just at the waist if you do need to bend forward.

Don't overdo it. Take lighter loads.  This is Poor Form

Things to keep in mind

- When pushing snow, don't have your arm and shoulder out to the side. Keep the shovel centered in your body at about the bellybutton.
- When lifting the snow, stand on the side of shovel and do a proper lift.
- When throwing the snow, make sure to rotate your hips and not your low back to ensure proper spinal alignment.
- Do Not Twist!
- Do Not Lean Forward, Curve Your Back, and Throw Snow

DO NOT TWIST!  DO NOT TWIST!
Intro To Safety

Topics presented in this file include:
- General Safety
- Ergonomic Awareness
- Preventing Slips, Trips and Falls
- Blood Borne Pathogens
- Chemical Safety - Hazard Communication
- OSHA Pictogram Card
- Custodial Professionalism
General Safety

**Basic Principles**
1. Wear appropriate Personal Protective Equipment (PPE) for the task.
2. Use wet floor signs and barricades to control traffic around the work area.
3. Never reach into trash or compress trash with your hands to avoid contact with sharp objects and a possible exposure.
4. Use safe lifting techniques. Get help for heavier items.
5. Do not use frayed cords.
6. **Red-tag broken equipment. Do not use red-tagged equipment.**
7. Do not step on furniture; use a ladder.
8. Help prevent accidents from occurring by remaining alert to potential hazards of the job.
9. Keep your work area organized and clean. Do not skip safety procedures to save time.
10. Safety is a shared responsibility.

Ergonomic Awareness

**Basic Principles**
1. Make adjustments in work methods to eliminate physical discomfort and possible injury.
2. AVOID prolonged exposure to:
   - Excessive Force – Use of broom or mop handles with a tight grasp.
   - Awkward Posture – Bent wrists, elbows away from body, twisting, long reaches for materials.
   - Continuous, repetitive activity.
   - Temperature extremes.
   - Vibration from hand tools.
   - Poor body mechanics.
   - Lifting heavy or awkward objects.
3. RECOMMENDED STEPS:
   - Keep wrists, hands and arms in their natural positions.
   - Stretch at the start of your day or as needed.
Preventing Slips, Trips and Falls

**Basic Principles**
1. Anticipate conditions that can cause falls and eliminate them.
2. Practice safe walking skills; wear the right shoes.
3. Think about the safest way to do the job before starting.
4. Prevent traffic near spills with signs or barricades.
5. Pay attention to where you are going; don’t rush.
6. Move objects out of the way before you start; be careful while carrying loads.
7. Keep one hand on the handrail whenever using the stairs.
8. Do not jump off elevated areas; use a ladder to reach heights.
9. Keep work areas well-lighted; watch your step.
10. Inspect for hazards frequently.
11. Report slips or falls immediately.

Blood Borne Pathogens

**Basic Principles**
1. Blood borne pathogens (BBP) are microorganisms in human blood and body fluids that can cause disease.
2. Contact your supervisor immediately if you feel you have been exposed to infectious materials.
3. Never reach into trash or compress trash with your hands to avoid contact with sharp objects and a possible exposure.
4. Look before grabbing trash bags; always grab the top of the trash bags.
5. Make sure all containers of blood or potentially infectious material are labeled and disposed of properly.

**When exposure to blood borne pathogens may occur:**
1. Wear Personal Protective Equipment (PPE).
2. Do not handle biohazard containers.
3. Wash hands frequently; always after removal of PPE.
4. Employees with potential exposure to blood borne pathogens or other bodily fluids are offered the Hepatitis B vaccine at no cost to the employee.
Chemical Safety - Hazard Communication

**Basic Principles**

1. Use Personal Protective Equipment (gloves, goggles, etc.).
2. Wash hands frequently.
3. Make sure each chemical is in the proper container and correctly labeled.
4. Use chemical according to manufacturer's instructions on container label or Safety Data Sheet (SDS).
5. Do not mix chemicals.
6. Know where Safety Data Sheet records are kept and what information is on a SDS.
7. Learn the correct names of the chemicals used on the job.
8. Know the proper method of storing and disposing of chemicals.
9. Know what to do when a chemical is spilled.
10. Never dispose of chemicals in trash unless authorized by your supervisor.
11. As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the Label is determined by the chemical hazard classification.

OSHA Quick Card – Hazard Communication Standard Pictogram

**Health Hazard**

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

**Flame**

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

**Exclamation Mark**

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

**Gas Cylinder**

- Gases Under Pressure
**OSHA Quick Card – Hazard Communication Standard Pictogram con’t.**

- **Corrosion**
  - Skin Corrosion/Burns
  - Eye Damage
  - Corrosive to Metals

- **Exploding Bomb**
  - Explosives
  - Self-Reactives
  - Organic Peroxides

- **Flame Over Circle**
  - Oxidizers

- **Environment (Non-Mandatory)**
  - Aquatic Toxicity

- **Skull and Crossbones**
  - Acute Toxicity (fatal or toxic)

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**Custodial Professionalism**

**Basic Principles**

1. Be on time and check in upon arrival at the job site.
2. Wear a uniform and I.D. badge if required.
3. Maintain strict control of keys to buildings.
4. Maintain a positive attitude.
5. If entering a locked room for cleaning, be sure to lock it when leaving.
6. Do not allow any unauthorized people in the building.
7. Never touch or read documents on desks; do not open desk drawers.
8. Continue to learn new and better ways to work.
9. Show respect by being friendly and professional with everyone.
10. Deal with personal issues outside of work.
Custodial Equipment

**Tools**

- **Green Microfiber Cloth**
  - Use: General Cleaning

- **Blue Microfiber Cloth**
  - Use: Glass Cleaning

- **Red Microfiber Cloth**
  - Use: Toilet/Urinal Cleaning Only
  - Do not cross contaminate

- **Magic Erasers**
  - Use: Stain removal on hard surfaces

- **White/Yellow Light Duty Scrub Sponges**
  - Use: Scouring areas that need it

- **Easy Trap Dust Cloths (Sticky Dust Cloths)**
  - Use: Put on flat mop to pick up dust and dirt.

- **Electrostatic Replacement Sleeves**
  - Use: Put over feather duster for dusting
Custodial Chemicals

PHOS 20 Heavy Duty Clinging Bowl, Tile & Porcelain Cleaner
Use: Clean Toilets and Urinals

Enzyme Odor Neutralizer
Use: Control Floor Drain Odors

Liquid Scour Cleaner
Use: For scouring areas that need it

Glass Cook Top Cleaner
Use: Clean Glass Cook Tops

Stainless Steel Cleaner
Use: Clean Stainless Steel
Custodial Chemicals

Alpha Multi-Surface Disinfectant Cleaner RTD
Use: Disinfect hard surfaces, use in restrooms. Allow 10 minutes of dwell time and let air dry.

Alpha Multi-Surface Disinfectant Cleaner – J-Fill for shower machines only
Use: Disinfect hard surfaces, use in restrooms. Allow 10 minutes of dwell time and let air dry.

Crew Shower Tub & Tile RTD
Use: Clean Showers

Crew Shower Tub and Tile Cleaner – J-Fill for shower machines only
Use: Clean Showers

Crew Bathroom Cleaner & Scale Remover RTD
Use: Restroom cleaning to remove soap scum and hard water deposits.

Stride Citrus Neutral Cleaner RTD
Use: Floor Cleaner

Corrosive

Corrosive

Harmful/Irritant

Harmful/Irritant
Custodial Chemicals
Off Campus & Academic Houses Only

Suma Multi Purpose Cleaner D2.3 Smart Dose
Use: Kitchen stovetops, oven vents, hard surfaces with grease

Stride Citrus Neutral Cleaner RTD
Use: Floor Cleaner

Alpha Multi-Surface Disinfectant Cleaner RTD
Use: Disinfect hard surfaces, use in restrooms. Allow 10 minutes of dwell time and let air dry.

Crew Shower Tub & Tile RTD
Use: Clean Showers

Corrosive
Harmful/Irritant
Corrosive
Carleton College
Custodial Services
Training Program
Custodial Cleaning Tasks
General Cleaning
Example
Each task starts with safety!
GENERAL CLEANING

- Waste Removal  Page 4
- Dusting  Page 5
- Glass Cleaning  Page 6
- Restocking Restroom Supplies  Page 7
- Restroom Mirrors and Walls  Page 8
- Clean Sinks  Page 9
- Clean and Disinfect Toilets/Urinals  Page 10
- Floors  Page 11
  - Restroom Floors
  - Dust Mopping
  - Damp Mopping
- Page 12
- Page 13
Dusting

SAFETY

- Always protect your eyes.
- Use rubber gloves and floor signs as needed.
- ALL bottles MUST be properly labeled.

TOOLS

- Duster
- Rag or wiper for larger surfaces
- Disinfectant

- ALL bottles MUST be properly labeled and filled through dispensing station.
- Feather duster for small sensitive items.
- Synthetic (high) duster for blinds and larger surfaces.
- Rag or wiper for larger surfaces.
- Don't contaminate feather or synthetic dusters with sticky soils, food, or liquid. Clean per manufacturer direction.
- Shake high duster over trash or into a bag to clean.

EXECUTION

- Wet rag or wiper with disinfectant solution. Don't spray on surfaces.
- Start on high surfaces and work down.
- Move around room from left to right.
- Use clean duster for small surfaces.

- Don't use dust rag on glass.
- Pick up dust – don’t move it around.

- Spray solution on rag or wiper, not surface.
- Spraying onto surface can seal dust into cracks and can drip into electrical connections.
- Start high and work down; move around room from left to right.
- Don't use dust rag on glass. Don't use mirror wiper to dust.
- Pick up dust – don’t move it around.
- Shake into a bag or trash.

PRIDE

- No dust on surfaces.
- Equipment cleaned, stored, and secured.

- No dust on surfaces. Equipment cleaned, stored, and secured.