Janitors Workload Calculator User Guide

Version 1.0

A reference for users of the workload calculator

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Contents

Keywords

SHARP, janitors, cleaners, workload, ergonomic assessment, task, tool, physical risk

Version Information

This is version 1.0 of the User Guide. It is a working draft intended to provide guidance for the beta (pilot) version of the Janitors Workload Calculator. This guide will be updated periodically.

Section 1. Introduction & Background

Background

Janitorial work has been characterized as physically labor intensive with a demanding pace, resulting in high musculoskeletal and cardiovascular loads (Hagner and Hagberg, 1989; Seixas et al, 2013; Søgaard et al, 1996). Survey research found that an increase in self-reported workload was correlated with occupational injury (Green et al, 2019). As such, janitors experience a high rate of work related musculoskeletal disorders. In Washington state, the employment of janitors is increasing; between 2013 and 2018, the employment rate increased by approximately 20% (BLS, 2020). As the janitorial workforce continues to grow, more workers will be exposed to risk factors that may lead to work-related injuries and illnesses.

In response to the high injury rate of janitors in Washington State, in 2018, the Washington State Legislature provided the Department of Labor and Industries funds to conduct research of the physical demands of janitorial work. This research included:

- Quantifying the physical demands of common janitorial cleaning tasks
- Measuring the workload based on the strain that cleaning tasks place on janitors' bodies
- The development of the Janitors Workload Calculator, based on qualitative data, that can assist employers and labor groups in determining safe workloads when developing worksite contracts, in-house cleaning schedules and assigning appropriate staffing levels

The goal of the Janitors Workload Calculator is to quantify the physical workload of janitors in order to assess the risk of musculoskeletal disorders.

Janitors Workload Calculator Development

The Janitors Workload Calculator was developed for janitorial work performed in large commercial office buildings only. The calculator assesses the musculoskeletal workload from repetitive motions, awkward postures and forceful hand exertion, as well as cardiovascular workload, as measured by steps, calories and metabolic equivalent (METS). The calculator assesses the risk to the lower back, the hand and wrist, and the shoulder by job (all cleaning activities performed in a day), not by individual cleaning tasks. The job is evaluated based on three components of work performed, referred to as task combinations. The task combination is defined by:

1) The cleaning task,
2) The location cleaned, and
3) The tools, technology and methods employed

To develop the Janitors Workload Calculator, quantitative data was collected from the field and analyzed in the laboratory. Data were collected from actual janitorial service settings where participating janitors performed their regular daily cleaning tasks. Only cleaning activities that were observed are included in the Janitors Work Calculator. Cleaning activities were video-recorded and used for analyses. Detailed time studies were completed to determine the length of time spent on each cleaning task. Detailed motion studies were performed to determine various kinematics, such as

frequencies of hand exertions, duty cycles of hand exertions, hand/wrist postures, shoulder movement frequencies, shoulder loading durations, back movement frequencies, and back loading durations.

Cardiovascular Workload

Cardiovascular workload is assessed by the number of steps taken, as well as the cardiovascular demands, as measured by the heart rates, during the performance of the job. Steps were measured using a Fitbit Zip pedometer worn around the waist.

Musculoskeletal Workload

Musculoskeletal workload was assessed using validated observational assessment methods and physiological and biomechanical modeling calculations. The hand/wrist workload is assessed using the Revised Strain Index (RSI) (Garg et al, 2017), which considers repetitive motions, repetitive exertions, awkward hand/wrist postures and the total duration of the task performed. The RSI provides a composite risk level by considering all these risk factors. The higher the index score, the higher the risk to the hand/wrist. Back and shoulder workload is assessed using the Recommended Cumulative Recovery Allowance (RCRA) (Gibson and Potvin, 2016). This calculation compares the required rest time from muscle loading based on the portion of the task spent in hand/wrist exertions to the available rest time. If the calculated required rest time is greater than the available rest time, the job is considered risky.

Intended Use of the Janitors Workload Calculator

The intent of the calculator is to provide an additional tool to already existing injury prevention efforts and programs to reduce work-related musculoskeletal disorders. The calculator may be utilized for the following:

1. Assess janitorial work performed in large commercial office buildings.
2. Evaluate the risk at the job level, considering all tasks performed in a work shift.
3. Assess the workload of physically healthy workers.
4. Assess risk from the physical demands to the back, shoulder, hand/wrist.
5. Assess the work performed by using properly maintained equipment that meets manufacturers' standards and guidelines.
6. Evaluate the risk of most healthy workers, both men and women. Results are calculated using population data.

Limitations of the Janitors Workload Calculator

The following describes the limitations of the calculator:

1. Does not assess janitorial work performed in buildings other than large commercial office buildings.
2. Only assesses the risk of musculoskeletal disorders.
3. Does not predict the development of injuries.
4. Does not provide recommendations.
5. Is not intended to assess the risk for people with physical limitations.

6. Only assesses risk associated with standard cleaning techniques accepted by the janitorial industry or company.
7. Does not assess risk associated with improperly operated or maintained equipment (i.e. equipment does not meet manufacturers' guidelines).
8. Does not determine risk at the individual worker level.
9. Does not assess risk of injury from chemical exposure, slip/trips/falls, or other organizational factors.
10. Not all cleaning tasks are included due to data availability. Only cleaning tasks that were observed during the calculator development stage are included in this calculator. Should not be used for the adjudication of a claim.

Using the Janitors Workload Calculator, version 1.0

System Requirements

The Janitors Workload Calculator has been developed using MS Excel, with Visual Basic for Applications.

The Janitors Workload Calculator exists in beta (pilot testing) form, and as such, we cannot fully support or anticipate user technology issues. The current release works best on Microsoft Windows devices and does not support Mac devices or mobile use.

Preparing to Use the Janitors Workload Calculator

Specifics of the job are required for the calculation of risk. This information includes:

- All the cleaning activities (tasks) performed during shift.
- The specific locations the cleaning activities to be performed.
- The duration of each cleaning activity.
- The equipment (tools) used to perform each cleaning activity.
- The amount of work (the productivity) assigned for each cleaning activity. This may be based on square footage, the number of fixtures, or the number of items (elevators, doors) that will be cleaned.

This calculator is based on data from cleaning tasks made available for observation. As a result, the assessment may be an approximation. Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options). In the future, more task/tool combinations may be added to the calculator.

The Janitors Workload Calculator Worksheet (See Appendix One) may be used to assist in collecting all the necessary information.

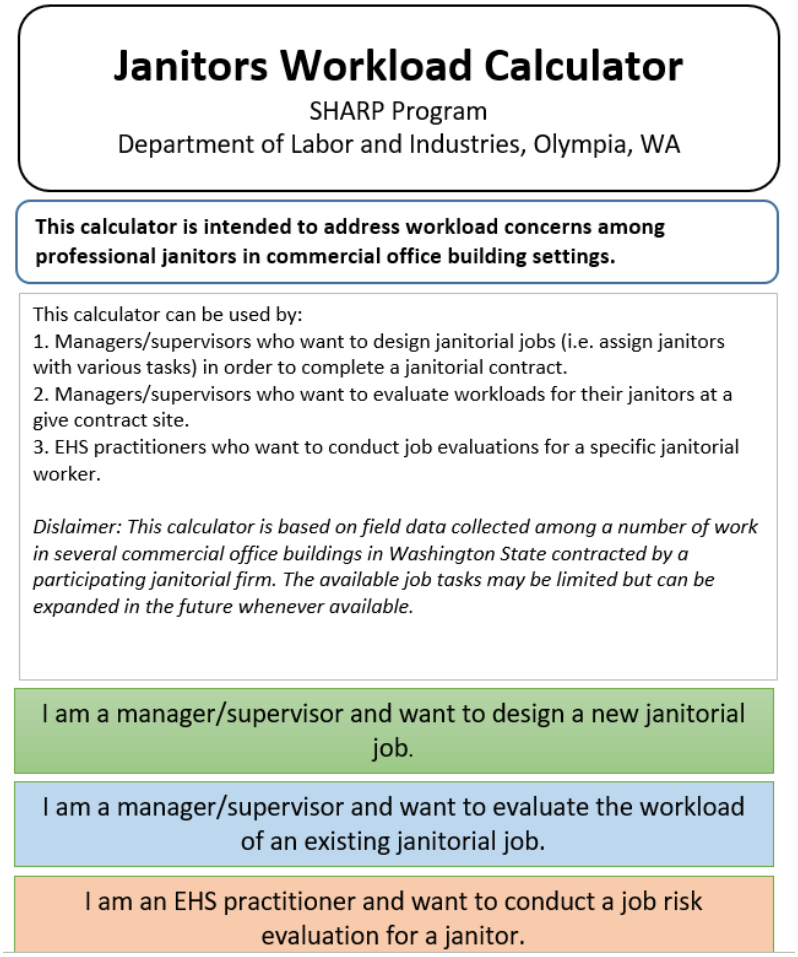
Additional Guidance

For additional questions and guidance in using the workload calculator and/or this document, please contact us:

Cleaners' Occupational Injury Reduction Emphasis (CORE)
Email: CleanerStudy@Lni.wa.gov, or
Call 1-888-667-4277, press 2 for the Cleaners' study

Section 2. Data Input

Figure 1. Janitors Workload Calculator Front-Page Screenshot



The Janitors Workload Calculator is designed to provide job risk evaluations for three different users (user groups). While the basic data entered and information provided is the same among the user groups, user groups 2 and 3 are provided additional more detailed information (See Table 1).

User Group 1: A manager or supervisor determining the workload of a new janitorial job

Intended to assist managers and/or supervisors, and workers or their representatives to determine the physical demands for their janitors based on a new janitorial contract.

For any given contract, managers and/or supervisors design individual jobs for a specific site and shift, considering the tasks included in the contract and the safest and most efficient ways to complete them. This includes breaking the tasks into sub-tasks and assigning times to complete the sub-task, The Janitors Workload Calculator can serve as a complimentary tool to other methods to help in this design process, ensuring that the amount of work allocated to individual janitors is appropriate.

User Group 2: A manager or supervisor evaluating the workload of an existing janitorial job

Intended for managers and/or supervisors, workers or their representatives to evaluate the workloads of the janitors at a given contract site.

This user group evaluates the workload of jobs of existing contracts. Additionally, janitors' physical concerns are considered. The Janitors Workload Calculator serves as a tool to help determine the workload in the existing jobs and whether the associated work demands pose a physical risk.

User Group 3: Conduct a job evaluation for a specific janitorial job (for the Environmental Health and Safety practitioner)

Intended for environmental health and safety (EHS) practitioners, to conduct technical job evaluations of a specific job.

This is application is intended for users with more knowledge of occupational risks and ergonomics. A familiarity with ergonomics-related terminology and assessment methods is needed. This application conducts a physical workload investigation as a result of a complaint or injury/symptoms associated with the job. The quantitative workload information provided by this application gives EHS professionals a more detailed analysis of specific risks and may assist them in develop job improvement recommendations.

Table 1. Features of the Different User Group Evaluation Reports

	Evaluation Report Type		
Report Feature	User Group 1: Manager or Supervisor Evaluation a New Job	User Group 2: Manager or Supervisor Evaluating an Existing Job	User Group 3: ESH Practitioner Evaluating the Job Risk
General Job Description	✓	✓	✓
Work pace	✓	✓	✓
Overall Physiological Demands	✓	✓	✓
Hand/Wrist Risk	✓	✓	✓
Shoulder Risk	✓	✓	✓
Back Risk	✓	✓	✓
Worker Issues/Complaints		✓	✓
Discomfort Survey			✓

Data Input Page (Data Entry) – Description

Once the type of application (user group) has been chosen, specifics of the job are entered into the calculator. Inputs are based on the all cleaning activities to be performed during one shift.

The cleaning tasks of a janitorial job are assessed based on the combination (**task combination**) of four aspects of the job:

1) The general cleaning **TASK,** which may be comprised of several **sub-tasks or activities**. For example, in restroom cleaning, sub-tasks include toilet cleaning, cleaning sinks, and mopping floors.
2) The **LOCATION is** either the physical location or physical feature of the setting of the task performed.
3) The **TOOL** and/or TECHNOLOGY used to complete the task. For example, for dusting, the tool may be a cloth or a duster.
4) The **VARIATION** of the work site, cleaning method, and tools/technology that impact may the workload.

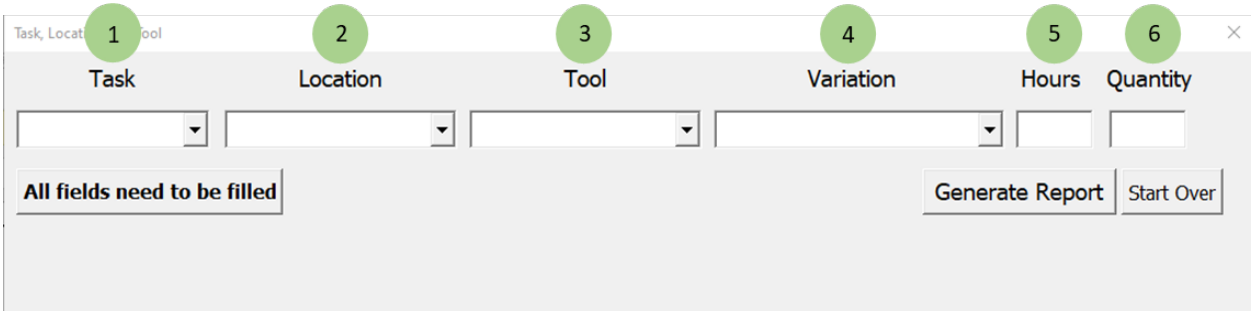
For each task combination, risk is assessed based on two aspects of workload:

1) The **DURATION** of the task, which is the time allocated to complete the task combination
2) The **QUANTITY** that is assigned to be cleaned. This is also known as the production rate: the amount assigned to be cleaned (square footage, number of fixtures) in the allocated time.

> For this calculator, only tasks lasting longer than 30 seconds per occurrence are part of the job evaluation.

Input (Data Entry) Screen

Figure 2. Input (Data Entry) Page Screenshot



To use the calculator, 6 fields must be completed in order to generate a report.

1. Step 1: Select a task from the drop-down list. These tasks are listed in Table 3.
2. Step 2: Select a locations. Locations are specific to a task.
3. Step 3: Select a tool. Tools are specific to both a task and a location.
4. Step 4: Select a variation in technique, if applicable. Variations depend on the task, location and tool selected.
5. Step 5: Enter the time spent performing the selected task-location-tool-variation.
6. Step 6: Entering how much of this task-location-tool-variation is done during the shift.

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

Navigating the Data Entry Page

Two buttons (Figure 3) on the Data Entry Page help you complete a job evaluation. These buttons are:

- Start Over: This button takes you back to the title page (landing page) to select a report type, clears all fields of inputs
- Generate Report: This button produces a risk assessment report based on the data entered

Figure 3. Navigational Buttons

To generate a risk assessment reports, all fields (task, location, tool, cleaning method, hours, quantity) must be filled in.

If the job under evaluation consists of more than one task, location, tool or variation, then a separate record must be created for each task/location/tool/variation combination.

There are 11 cleaning tasks included in the calculator. Table 2 describes the different tasks.

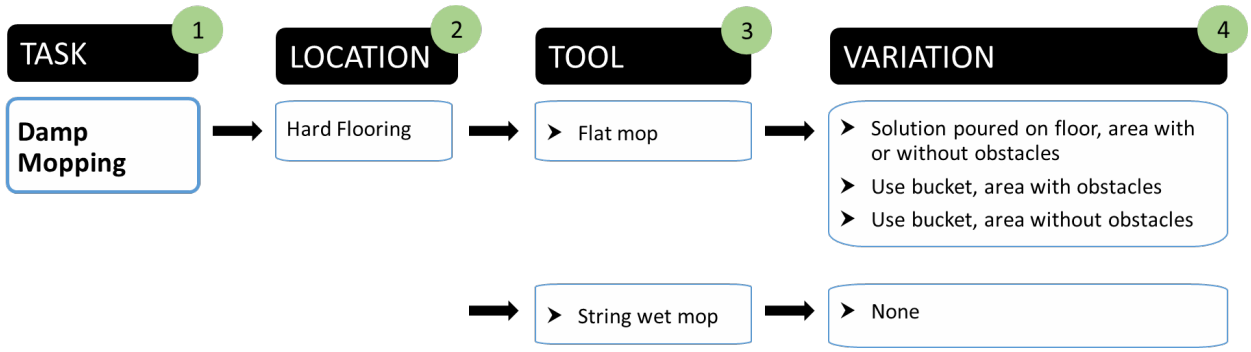
Table 2. Description of Cleaning Tasks included in the Janitors Workload Calculator

Cleaning Task	Task Description
Damp/Wet Mopping	Using a moistened mop, either wrung out or not, to clean hard flooring
Dusting and Wiping	• Clean horizontal surfaces (tables, railings), vertical surfaces (walls, windows), furniture • Clean fixtures, such as name plates, door handles • Using a cloth or duster to wipe surfaces • Includes trashing at coffee bars, if performed in conjunction with other wiping/dusting activities • Excludes restrooms • Excludes wiping trash cans if emptying trash cans occur at the same time
Dust Mopping	Sweeping a dry floor
Floor Scrubbing	Using a machine to clean hard flooring
Glass Door Cleaning	Cleaning glass and wiping handles of doors, wiping signs adjacent to doors
Elevator Cleaning	• Includes locking and unlocking elevators, waiting for the elevator, horizontal wiping, vertical wiping, cleaning door tracks • Includes vacuuming if this subtask is performed in conjunction with the wiping of the elevator
Office/Cubicle Cleaning	• Dusting desks, wiping surfaces in the desk area (chairs, desktops, shelving), • Includes emptying trash if done while performing other cubicle cleaning tasks
Restroom and Locker Room Cleaning	• Performing numerous activities including cleaning showers, restocking supplies (towels), trashing, vertical wiping (walls, mirrors), horizontal wiping (sinks, countertops), dust mopping, damp mopping, moving shower mats, cleaning toilets and urinals, trashing (in stalls, by sinks), damp mopping, dust mopping • Excludes restocking when this is the only activity being performed
Restocking	Only replacing supplies, either in the kitchen, at a coffee bar or in the restroom
Trashing	• Emptying trash bins, relining bins, checking levels of trash bins, collecting recycling • Dusting/wiping trash bins, • Dumping bags into collector carts, transporting bags of trash to dumpsters
Vacuuming	• Includes area vacuuming, spot vacuuming, coiling electrical cord, arranging mats • Includes elevators, if only vacuuming is performed

Each cleaning tasks has associated locations, tools and variations. The following section describes the specific locations, tools, and variations associated with each cleaning task.

Task: Damp/Wet Mopping

Figure 4. Task Combinations for Damp/Wet Mopping



1

1. Task Definition

Damp and wet mopping involves cleaning a floor surface by laying down a cleaning solution onto the floor and then wiping up the solution with a wet mop or using wringing mechanism to remove as much moisture as possible before mopping the floor surface.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

Hard flooring: includes tile, linoleum, wood.

3

3. Tools Used

- Flat mop: mop head consists of a long pad
- String wet mop: mop head consists of strands or strings of cotton or rayon material, and requires the cleaning solution to be wrung or squeezed out.

4

4. Variation

If more than one variation is applicable, create a separate record for each variation.

- None: no variations are present
- Use bucket, area with obstacles: The cleaning solution is in a bucket; the janitor must navigate around or underneath furniture, or design features such as planters.
- Use bucket, area without obstacles: The cleaning solution is in a bucket: the area mopped if open, free of furniture and design features.
- Solution poured on floor, area with or without obstacles: The cleaning solution is applied directly to the floor from a bottle; the area mopped may or may not have furniture and design features to navigate around.

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (e.g. 5, 5.0, 3.75)

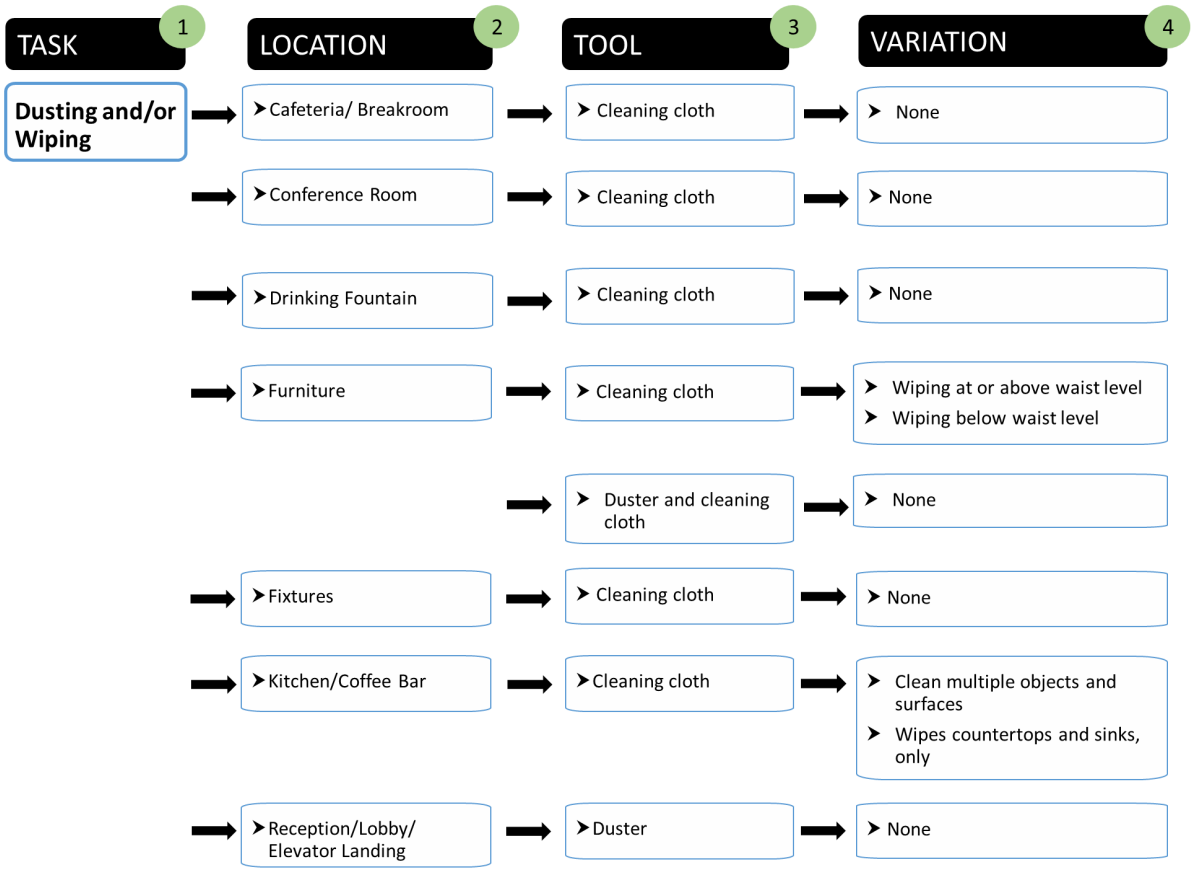
6

6. Quantity:

- Measured by the cleanable space in square footage (in feet, ft^2)
    - Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
    - Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Dusting and Wiping

Figure 5. Task Combinations for Dusting and Wiping



1

1. Task Definition

Dusting and/or Wiping involves wiping horizontal and vertical surfaces.

If dusting and wiping is performed on the vertical surfaces around elevators, as part of dusting and wiping an area, AND the inside of the elevator is not wiped, then this activity is considered a part of the task Dusting and Wiping.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Cafeteria/Breakroom: a space where food and drink is served or may be prepared, and there is seating available
- Conference room: meeting rooms, excludes meeting areas among cubicles
- Drinking Fountain: wall mounted fountains in hallways; excludes water fountains in cafeterias and break rooms (included in dusting/wiping in cafeteria/breakroom)
- Furniture: janitors use different tools to wipe tables, chairs, sofas, coffee tables
- Fixtures: wiping design features such as handrails, banisters, escalator handrails, door handles (non-glass doors), elevator buttons and name plates inside the elevator car
- Kitchen/coffee bar: an area for preparing beverages and food only, with no seating
- Reception/lobby area/elevator landing: includes reception areas, lobbies.

 If vertical surfaces around the elevator are cleaned but the inside of the elevator is not, choose the task Dusting and Wiping.

3

3. Tools Used

- Cleaning cloth: a cloth of any material used to wipe surfaces
- Duster: The use of a hand-held duster, of any material, to pick up and hold dust.
- Long-Handled Duster and cleaning cloth: The use of duster with a long or extendable handle and a cleaning cloth, of any material, to clean surfaces.

4

4. Variation

 If more than one variation is applicable, create a separate record for each variation.

- None: no variations present
- Wiping surfaces at or above waist level: cleaning items that are higher than waist height, such as bistro tabletops and tall (or bar) chairs pads and backs.
- Wiping surfaces below waist level: cleaning items that are below waist height, such as coffee tables, sofas, dining tables and chairs.
- Clean multiple items and surfaces: cleaning activities at the kitchen/coffee bar, including wiping sinks and counters, washing coffee pots and utensils.

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

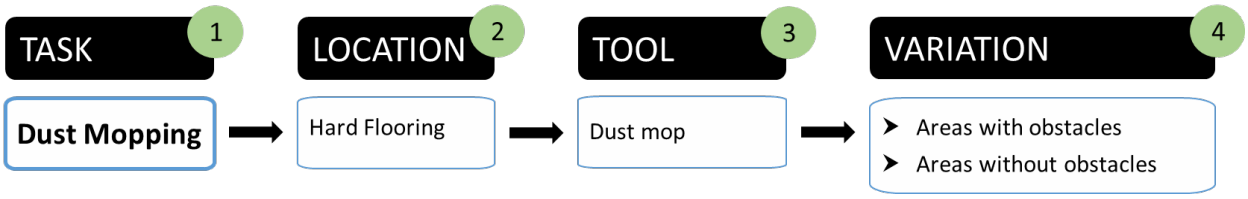
6

6. Quantity

- Measured by the cleanable space in square footage (in feet, ft^2)
    - Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
    - Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Dust Mopping

Figure 6. Task Combinations for Dust Mopping



1

1. Task Definition

Dust mopping involves cleaning floors without the use of water or cleaning solution.

This cleaning task excludes sweeping with a broom.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

Hard flooring: Non-carpeted floor surfaces

3

3. Tools Used

- Dust mop: a mop made of material designed to pick up dust and dirt without a cleaning solution.

4

4. Variation

If more than one variation is applicable, create a separate record for each variation.

- Area without obstacles: The area mopped is free of furniture and design features to navigate around.
- Area with obstacles: The area mopped contains furniture and design features that must navigated around.

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

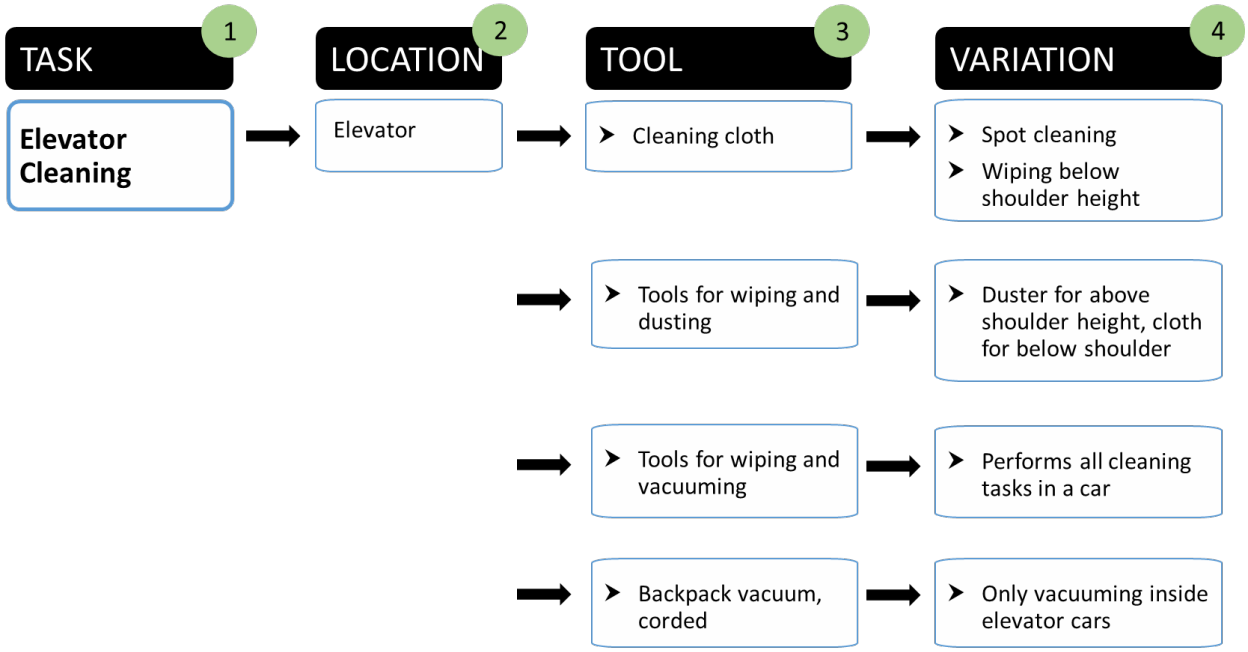
6

6. Quantity

- Measured by the cleanable space in square footage (in feet, ft^2)
    - Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
    - Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Elevator Cleaning

Figure 7. Task Combinations for Elevator Cleaning



1

1. Task Definition

Elevator Cleaning involves wiping surfaces in the elevator and on the walls around the elevator/elevator banks.

If only outside of the elevator (elevator landing) is vacuumed choose Vacuuming as the task.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Elevator: includes the inside of the elevator (the cabin) and the vertical surfaces adjacent to the doors, including buttons, lights and signs.

3

3. Tools Used

- Cleaning cloth: a cloth of any material used to wipe surfaces.
- Tools for wiping and dusting: includes any tools used to wipe and dust surfaces.
- Tools for wiping, and a vacuum: cleaning an elevator with the cleaning cloth, of any material, and vacuum to clean the carpeting in the elevator car
- Backpack vacuum, corded: a backpack vacuum, of any size, with a power cord

4

4. Variation

 If more than one variation is applicable, create a separate record for each variation.

- None: no variations are present
- Spot cleaning: Only wipes high-touch surfaces (railings, buttons), and visible marks on the cabin walls.
- Duster used for cleaning above shoulder height: The use of a cloth to wipe surfaces below shoulder height and a duster to reach above shoulder height.
- Does not clean above shoulder height: Wiping below shoulder height (railings, buttons, walls).
- Performs all cleaning tasks in an elevator car: wipes elevator cabin surfaces (railings, buttons, walls) and vacuums the floor inside the cabin.

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

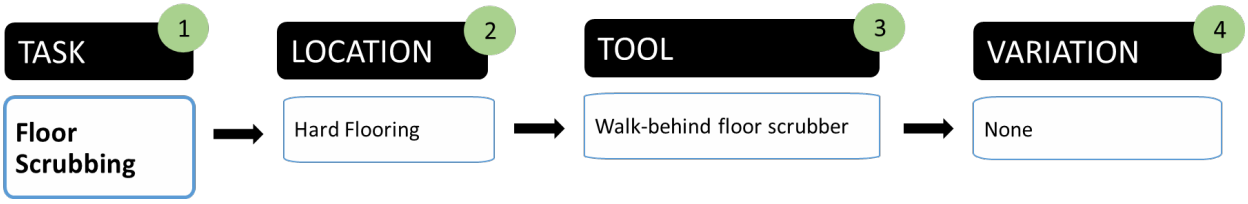
6

6. Quantity

- Measured by the number of elevators to be cleaned.

Task: Floor Scrubbing

Figure 8. Task Combinations for Floor Scrubbing



1

1. Task Definition

Floor scrubbing involves the use of a motorized, walk-behind floor scrubber to clean hard floor surfaces. Ride-on floor scrubbers and equipment for buffing, waxing or burnishing floors are excluded.

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Hard flooring: Non-carpeted floor surfaces

3

3. Tools Used

- Walk-behind floor scrubber: a powered machine with rotating scrubber(s) used to remove dirt and grime

4

4. Variation

- None: no variations are involved in this cleaning task.

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

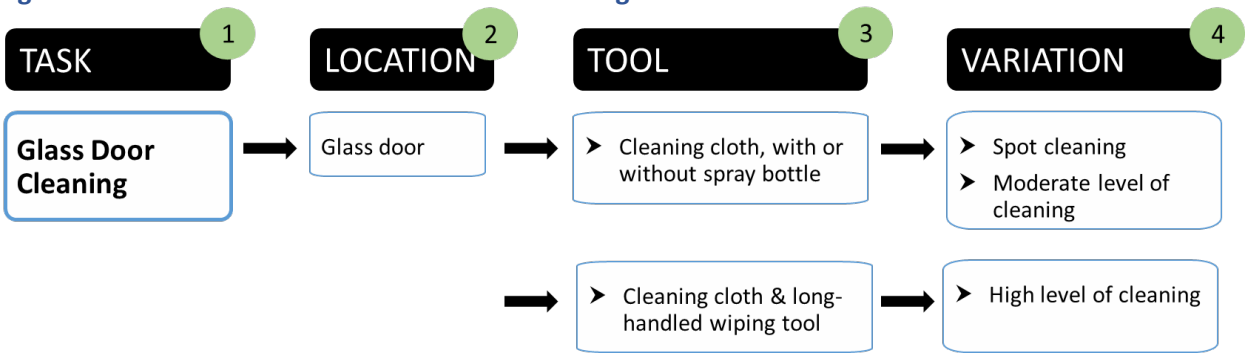
6

6. Quantity

- Measured by the cleanable space in square footage (in feet, ft^2)
- Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
- Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Glass Door Cleaning

Figure 9. Task Combinations for Glass Door Cleaning



1

1. Task Definition

Glass Door Cleaning involves wiping glass doors in lobbies and offices, including door handles.

When wiping the signage and walls around the doors, choose Dusting and Wiping as the task.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Glass door: wiping glass doors or glass revolving doors, one side or both

3

3. Tools Used

- Cleaning cloth: a cloth of any material used to wipe surfaces
- Cleaning cloth and a long handled wiping tool: Using a cleaning cloth of any material, as well as a long handled wiping tool to clean the top of the doors

4

4. Variation

If more than one variation is applicable, create a separate record for each variation.

- Spot cleaning: wiping only the high-touch areas and visible marks on the door
- Moderate level cleaning: wipes between shoulder and knee height, concentrating on high touch areas
- High level cleaning: cleans the entire door surface (from bottom to top), wipes door thresholds, wipes surfaces around the door. Uses a long handled tool to wipe door surface near or at the top

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

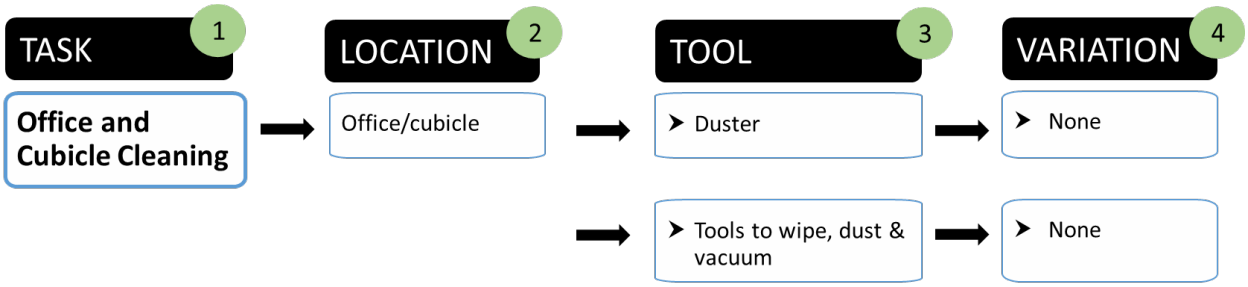
6

6. Quantity

- Measured by the number of doors to be cleaned. One door includes both sides of the door.

Task: Office and Cubicle Cleaning

Figure 10. Task Combinations for Office and Cubicle Cleaning



1

1. **Task Definition**

Office and Cubicle Cleaning involves a series of cleaning activities performed as a group. These tasks are dusting cubicle surfaces and vacuuming in and around cubicles.

If only vacuuming is performed, select Vacuuming as the task.

This task does not include cleaning or vacuuming elevator landings.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Office/cubicle: includes enclosed offices, cubicles, copy rooms, hallways and meeting spaces among cubicles. This does not include elevator landing areas.

3

3. Tools Used

- Duster: a hand-held duster, of any material, used to pick up and hold dust.
- Tools to wipe/dust and vacuum: Tools used to clean surfaces in and around cubicles (desk surfaces, partitions, chairs) and to vacuum the carpets in these areas.

4

4. Variation

- None

5

5. Hours:

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas.
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

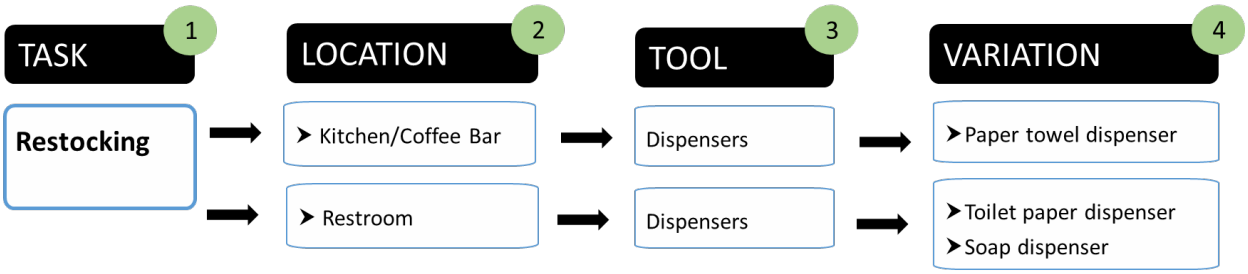
6

6. Quantity:

- Measured by the size of the area to be cleaned in square footage (in feet, ft^2)
- Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
- Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Restocking

Figure 11. Task Combinations for Restocking



1

1. Task Definition

Restocking involves moving from location to location, only refilling or replenishing supplies.

When restocking is performed in conjunction with other cleaning tasks for a specific location (restroom/locker room, kitchen/coffee bar), choose the other cleaning task. For example, if supplies are replenished in the restroom while doing other cleaning tasks in the restroom, then this activity is included in restroom/locker room cleaning.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Restroom/Locker Room: restrooms include single user or multiple user restrooms, and those in locker rooms
- Kitchen/coffee bar: an area for preparing beverages and food only, with no seating

3

3. Tools Used

- Dispenser: a device for holding and dispensing supplies in small amounts, such as a paper towel dispenser

4

4. Variation

- Paper towel dispenser: Refilling wall-mounted paper towel dispensers in restrooms

If more than one variation is applicable, create a separate record for each variation.

- Toilet paper holder: replacing toilet paper rolls in restrooms
- Soap dispenser: replacing soap bottles below counter-mounted soap dispensers in restrooms

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

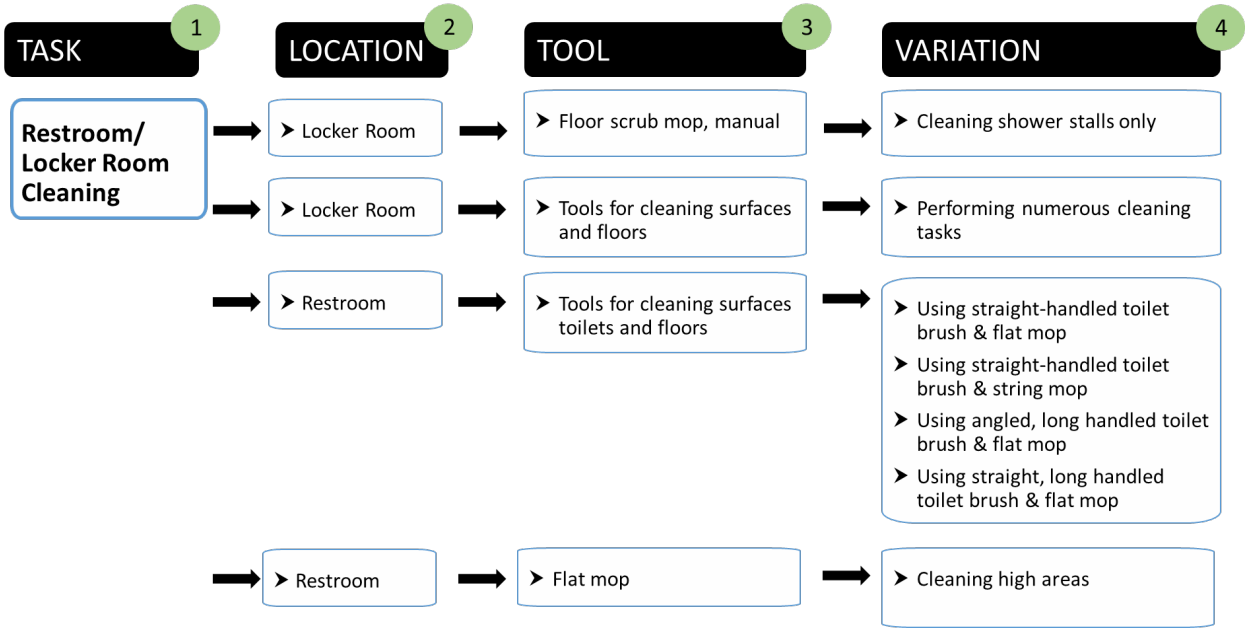
6

6. Quantity

- Measured by the number of dispensers to be restocked or replenished

Task: Restroom and Locker Room Cleaning

Figure 12. Task Combinations for Restroom and Locker Room Cleaning



1

1. Task Definition

Restroom and Locker Room Cleaning involves a sequence of cleaning activities in either a restroom or locker room, performed in any order.

- Restroom cleaning tasks: toilet bowl cleaning, urinal cleaning, mopping floors, cleaning sinks/vanities, wiping mirrors, restocking supplies (e.g. paper towel and toilet paper rolls), emptying garbage, including stall bins, paper towel bins
- Locker Room cleaning tasks: cleaning showers, mopping locker room floors, restocking supplies (towels, soap, paper towels, cleaning sinks and mirrors, removing dirty towels

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Restroom: includes single user or multiple user restrooms

- Locker Room: includes lockers, showers. Restrooms are excluded from this location – cleaning the restroom area in a locker room is to be included with the restroom location.

Restrooms in locker rooms are excluded from this location, choose Restroom as the location.

3

3. Tools Used

- Floor scrub mop, manual:
- Tools for cleaning surfaces and floors:
- Tools for cleaning surfaces, toilets and floors:
- Flat mop: A tool that uses a pad instead of a mop head to clean

4

4. Variation

If more than one variation is applicable, create a separate record for each variation.

- Cleaning shower stalls, only: in the locker room, the only task performed is cleaning the shower stalls
- Performing numerous cleaning tasks: in the locker room, numerous cleaning tasks are performed in succession before moving onto the next area. Cleaning tasks may include wiping sinks, counters and mirrors, emptying trash, cleaning shower stalls and fixtures.
- Straight-handled toilet brush, flat mop used: Numerous cleaning tasks are completed in the restroom area, including cleaning toilets using a straight-handled toilet brush and a flat mop on the floors.
- Straight-handled toilet brush, string mop used: Numerous cleaning tasks are completed in the restroom area, including cleaning toilets using a straight-handled toilet brush and a string mop to clean the floors.
- Angled and long-handled toilet brush, flat mop used: Numerous cleaning tasks are completed in the restroom area, including using a toilet brush with a straight handle longer than 15 inches and a flat mop to clean the floors.
- Straight and long-handled toilet brush, flat mop used: Numerous cleaning tasks are completed in the restroom area, including using a toilet brush with a straight handle longer than 15 inches and a flat mop to clean the floors.
- Cleaning high areas: dusting areas above shoulder height, such as wall surfaces close to the ceiling or ceiling vents

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

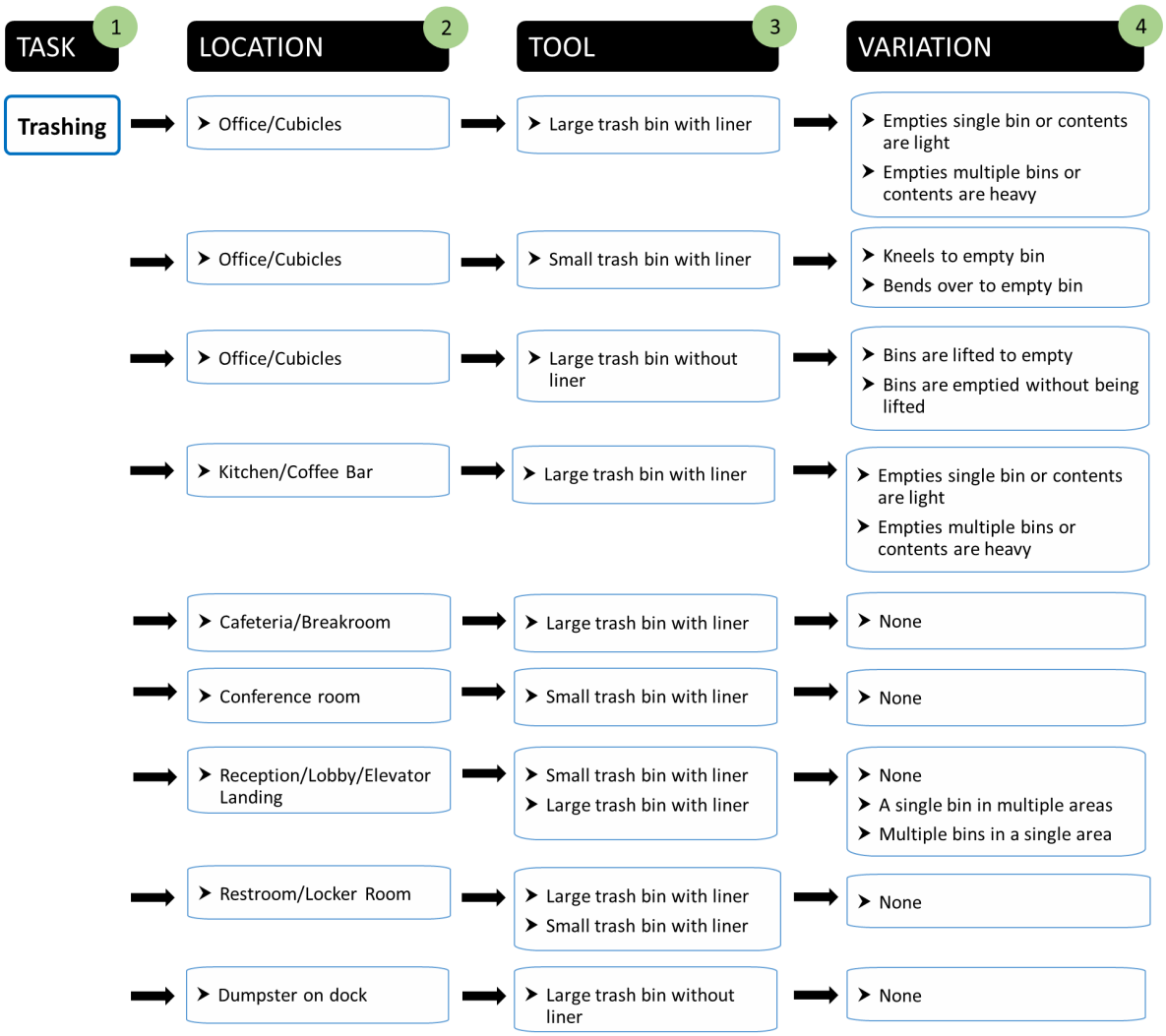
6

6. Quantity

- Restroom: Measured by the number of fixtures. Fixtures include toilets, urinals, sinks/faucets
- Locker Room: Measured by the number of fixtures (sinks, shower stalls). **A shower stall counts as 2 fixtures**.

Task: Trashing

Figure 13. Task Combinations for Trashing



1

1. Task Definition

Trashing includes emptying trash bins, relining bins, checking levels of trash bins, transporting trash from bins to dumpsters, collecting recycling.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Cafeteria/break room: a space where food and drink is served or may be prepared, and there is seating available
- Conference room: meeting rooms, excludes meeting areas among cubicles
- Kitchen/coffee bar: an area for preparing beverages and food, no seating is available
- Office/cubicle: includes enclosed offices, cubicles, copy rooms, hallways; excludes elevator landing areas
- Reception/lobby area/elevator landing: includes reception areas, lobbies, and elevator landings (the area in front and adjacent to the elevator doors)
- Restroom/Locker Room: restrooms include single user or multiple user restrooms, locker rooms
- Dumpster on dock: dumpster area where trash from bins is collected

3

3. Tools Used

- Large trash bin with liner: a bin with a capacity of more than 5 gallons (with or without wheels and/or handles) and a plastic liner inside the bin
- Large trash bin without liner: a bin with a capacity of more than 5 gallons (with or without wheels and/or handles) and without a plastic liner inside the bin
- Small trash bin with liner: a bin with a capacity of 5 gallons or less and a plastic liner inside the bin

4

4. Variation

 If more than one variation is applicable, create a separate record for each variation.

Below is a list of the variations in cleaning methods for trashing that are included in the calculator. Variations are specific to the task-location-tool combination. Refer to Figure 13. Task Combinations for Trashing to see which variations are linked to which task-location-tool combination.

- None: cleaning situation does not involve variations listed
- Empties single bin, or contents are light: only one bin is emptied or multiple bins are emptied but the contents are light (such as paper), or the bins are not full
- Empties multiple bins, or contents are heavy: empties multiple bins in a location or the contents of a single bin is heavy (such as food waste)
- Empties single bin in only one location: Empties only one bin in one area only
- Empties single bin in multiple locations: Empties a single bin in each area but does several locations
- Empties multiple bins in a single location: Empties multiple bins in one area only
- Bin is lifted to empty contents: the entire bin is lifted and tipped to empty the contents
- Bin is emptied without lifting: the janitor reaches in and grabs the contents
- Kneels to empty bin: the janitor kneels while emptying the bin
- Stands to empty bin: the janitor stands while emptying the bin

5

5. Hours

- Time assigned to complete the cleaning task, includes preparation time and time taken to travel to areas
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

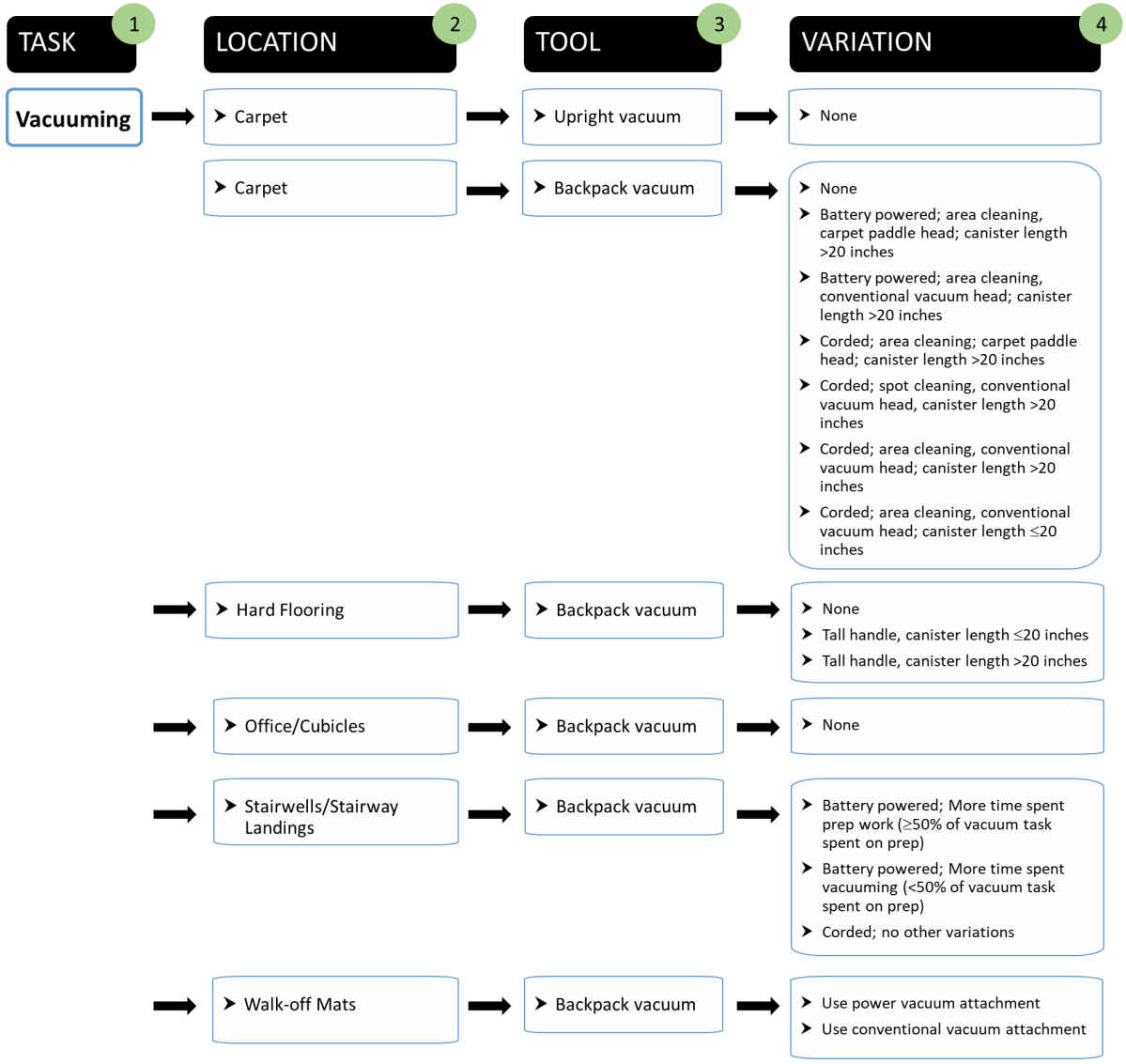
6

6. Quantity

- Measured by the cleanable space in square footage (in feet, ft^2)
- Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
- Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Task: Vacuuming

Figure 14. Task Combinations for Vacuuming



1

1. Task Definition

Vacuuming involves area vacuuming, spot vacuuming, vacuuming walk-off mats, coiling and moving the electrical cord, arranging mats.

This task includes vacuuming inside elevators and the areas in front of the elevators (elevator landing), if the only task performed is vacuuming. If other cleaning activities occur in addition to vacuuming, choose Elevator Cleaning as the task.

If more than one task-location-tool-variation combination exists, a separate record must be created for each combination

Where tools or tasks are not included in the calculator, you may select a similar option (the closest match from the available options), however, the resulting evaluation will be an approximation.

2

2. Location Cleaned

- Carpet: vacuuming carpeted areas, does not include vacuuming cubicles if other tasks are performed in conjunction with vacuuming
- Carpet/hard floor: if both surfaces are vacuumed at the same time
- Elevators: only involves vacuuming, no wiping or dusting
- Hard floor: non-carpeted floor surfaces
- Office/cubicle: regardless of surface type
- Stairways/Landings: must be separated from vacuuming flat, continuous surfaces
- Walk-off mats

3

3. Tools Used

If you use more than one tool in a given location, separate records must be created for each task-location-tool combination.

If your tool is not listed, choose the option closest to your situation. This calculator is based on data from cleaning tasks made available for observation. For cleaning tasks or tools not included in this calculator but a best option is selected, the workload will be an approximation.

- Upright vacuum: includes vacuum of any size, powered by an electrical cord
- Backpack vacuum: includes vacuum of any size, may either be corded or battery powered

4

4. Variation

If more than one variation is applicable, create a separate record for each variation.

Below is a list of the vacuum types included in the calculator. Variations are specific to the task-location-tool combination. Refer to Figure 14. Task Combinations for Vacuuming to see which variations are linked to which task-location-tool combination.

- None: cleaning situation does not involve variations listed.
- Using a conventional carpet head (Figure 15): for backpack vacuums, tool used for carpets and hard surfaces
  Using a carpet paddle attachment (Figure 15): for backpack vacuums, tool used for hard-to-reach areas, especially underneath objects
- Using a power vacuum attachment (Figure 15): for backpack vacuums, used on various carpet heights, providing additional suction power
- Spot cleaning: only areas that are visibly dirty are vacuumed
- Area cleaning: an entire area is vacuumed, area does not have to appear to be dirty
- Vacuum tank less than 20 inches long, long wand: tank capacity is 6 quarts, wand extends to shoulder height or above
- Vacuum tank 20 inches or more long, long wand: tank capacity is 10 quarts, want extends to shoulder height or above
- More time spent vacuuming than doing preparations: the actual vacuuming task takes more time than the activities that are completed prior to vacuuming (e.g. walking to site, changing filter bags, cleaning filter, charging batteries)
- More time spent doing preparations than vacuuming: the activities completed to prepare for vacuuming (e.g walking to site, changing filter bags, cleaning filter, charging batteries) takes more time than the actual vacuuming task

Figure 15. Different Vacuum Heads

A conventional carpet head

A carpet paddle attachment

A power vacuum attachment

5

5. Hours

- Time assigned to complete the cleaning task – includes time for preparation, walking between areas, and wrap-up.
- Measured in hours (See Appendix 2 for conversions from minutes to hours)

6

6. Quantity

- Measured by the cleanable space in square footage (in feet, ft^2)

- Net cleanable area is the space typically cleaned by staff, including floors, restrooms, carpets, lobbies
- Net cleanable area excludes spaces such as elevator shafts, mechanical rooms and storage areas, and other areas not considerable cleanable.

Section 3. Evaluation Report

This section describes the different elements of the evaluation report. The evaluation report is generated when all the necessary data (task, location, tool, variation, hours and quantity) have been inputted.

Navigating the Evaluation Report:

At the bottom of each tab page of the evaluation report are several buttons (Figure 16) to navigate within the calculator (Figure 16).

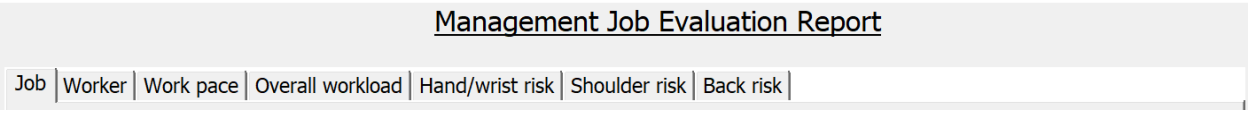
- Edit task input: Returns the user to the data input page where changes can be made.
- Export results: Results are exported into an editable Excel spreadsheet, which can then be saved. Once this button is clicked, the user is exited from the calculator program.
- Start over: This button takes you back to the title page (landing page) to select a report type, clears all fields of inputs

Figure 16. Navigational Buttons of the Evaluation Report

Evaluation Report Tabs

The evaluation report contains seven tabs (Figure 17), each presenting different information about the job. The information on each of these tabs may differ based on the user group selected.

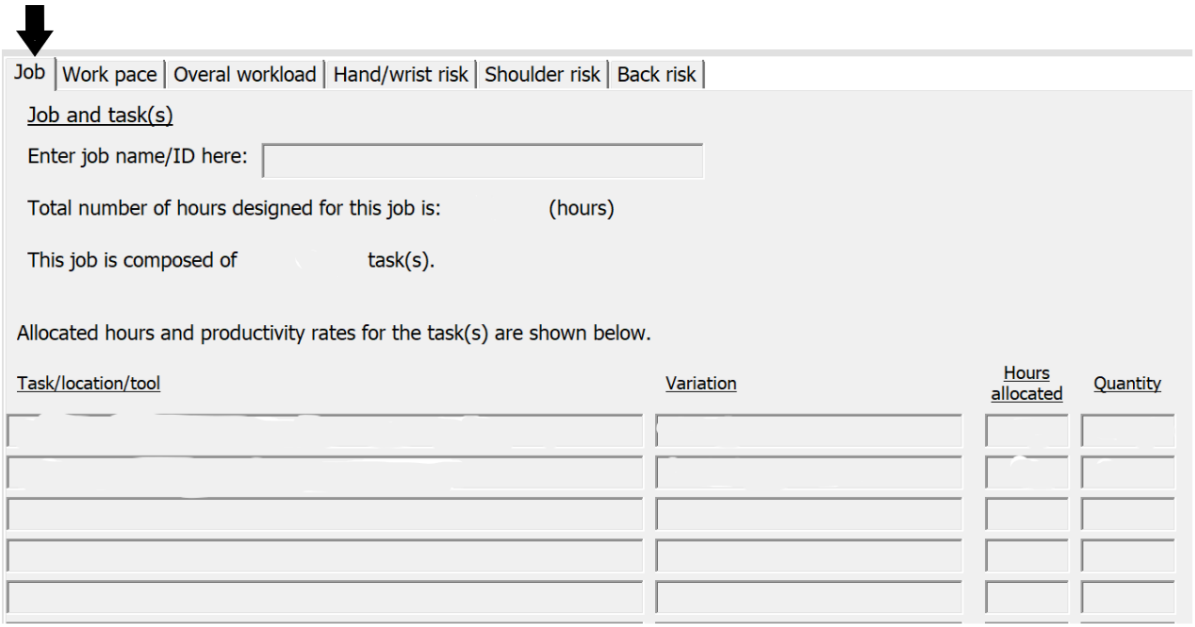
Figure 17. Tabs of the Evaluation Report



Tab: Job

The **Job** tab summarizes the data that were entered into the Data Input page.

Figure 18. Results on the Job Tab



Enter job name/ID here:

- An editable field to enter a job description, job title, etc.

Total number of hours Designed for this job:

- The sum of the hours assigned to all the task/location/tool/variation combinations.
- Automatically populated from the data entered on the Data Input page.

This job is composed of:

- The number of task/location/tool/variation combinations entered on the Data Input page.
- Automatically populated from the Data Input page.

Hours allocated:

- The hours provided for each task/location/tool/variation.
- Automatically populated from the data entered on the Data Input page.

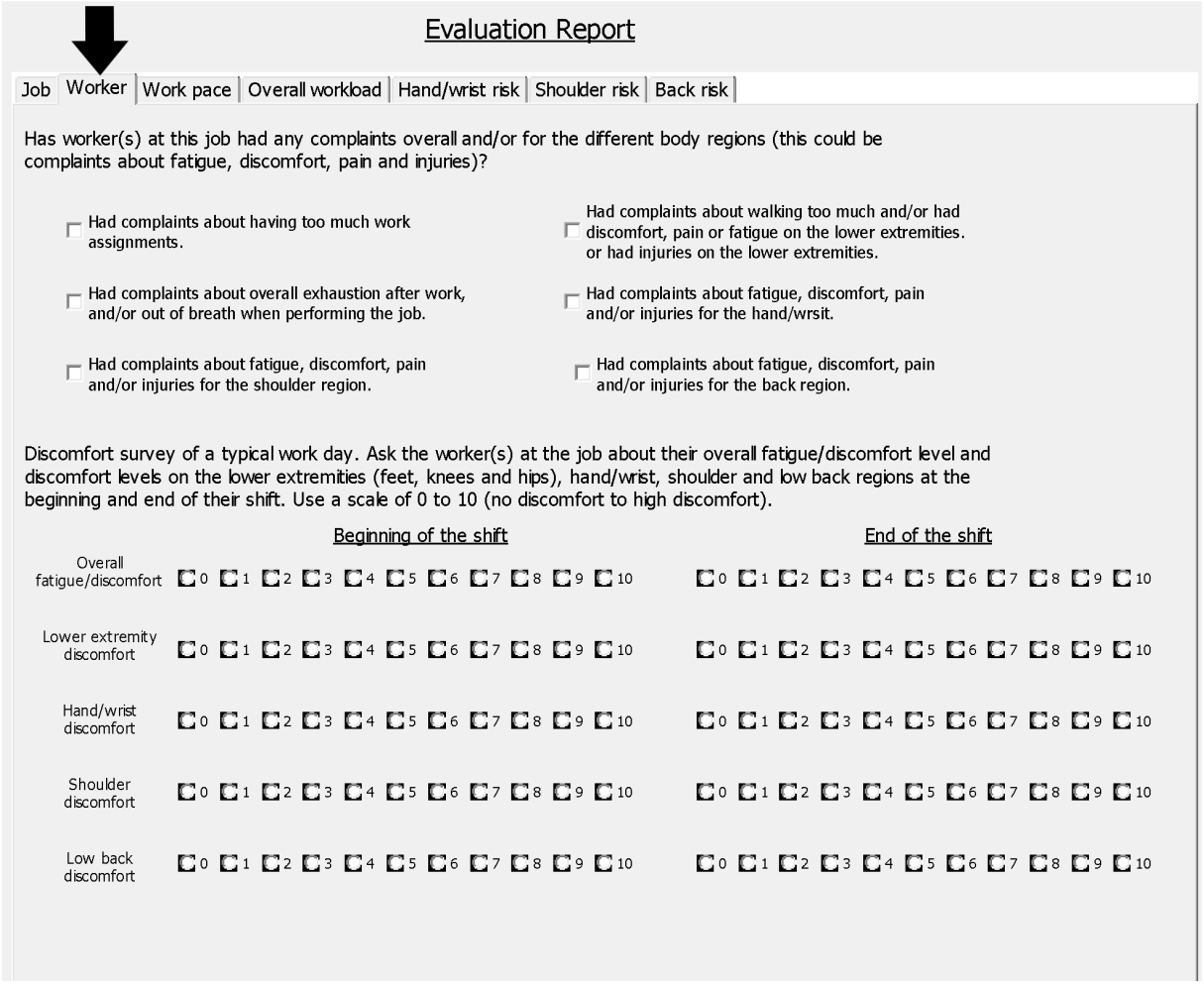
Quantity:

- The number of fixtures or square footage assigned for the cleaning task/location/tool combination.

Tab: Worker (Manager/Supervisor Report and EHS Job Reports Only)

The **Worker** tab collects data on the symptoms or injuries experienced by the worker(s). This tab is only available for reports for the Manager/Supervisor and EHS user groups.

Figure 19. The Results on the Worker Tab



Worker Physical Complaints:

Multiple fields can be selected.

- *Complaints about having too much work*:
  Used in the risk assessment of the work pace
- *Complaints about overall exhaustion after work, and/or out of breath*:
  Used in the assessment of the job's energy expenditure requirements of the job
- *Complaints about the shoulder region*:
  Used in the assessment of the risk to the shoulder region

- *Complaints about the hand/wrist region*:
  Used in the assessment of the risk to the hand/wrist region
- *Complaints about the back region*:
  Used in the assessment of the risk to the back region
- *Complaints about walking too much:*
  Used in the assessment of the walking requirements of the job

Discomfort Survey:

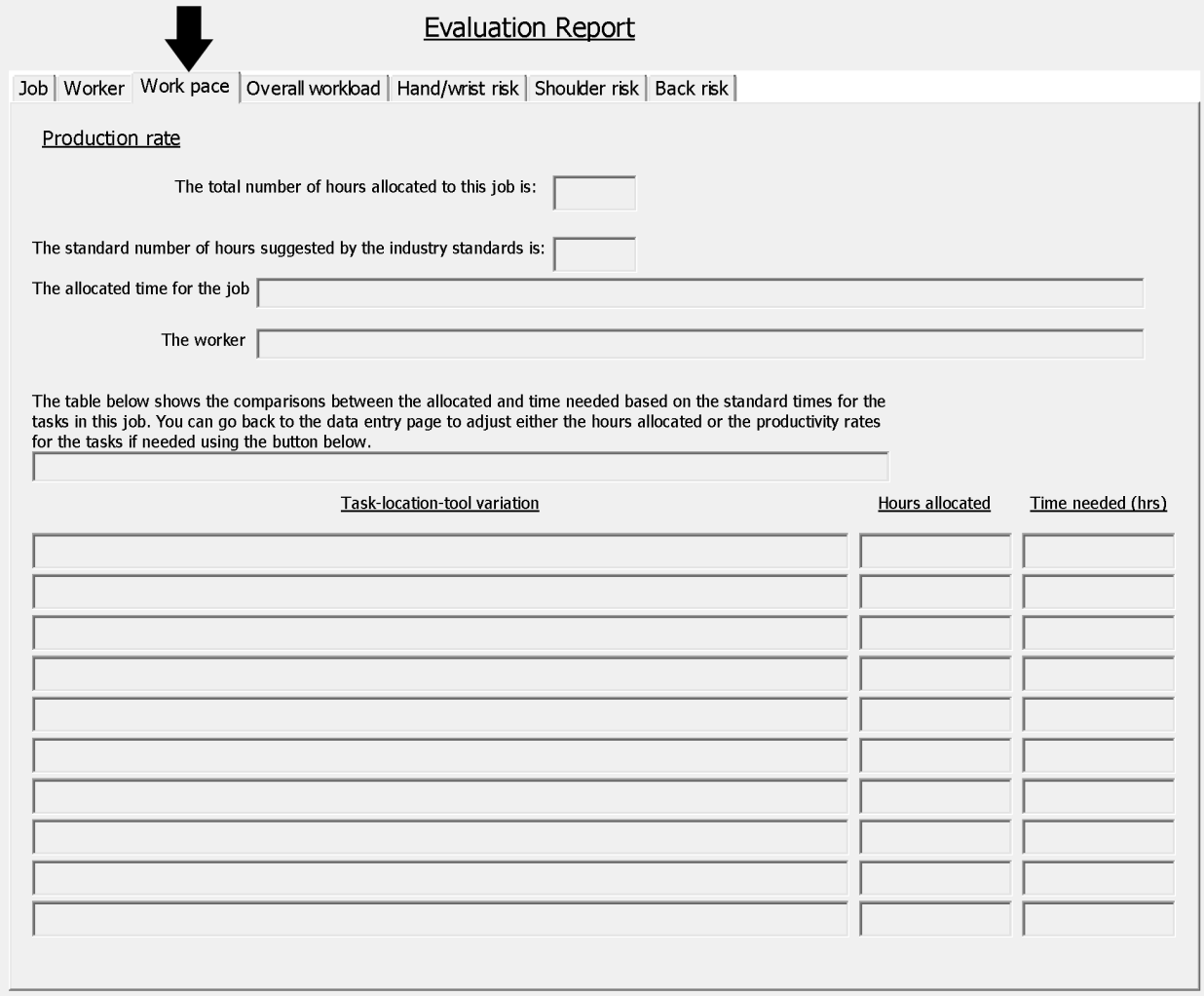
The survey is intended to perform a job-related discomfort evaluation. At this level of job evaluation, it is important to consider worker discomfort and symptoms. It is completed at the beginning and end of the work shift.

- Discomfort is described on a scale of 1 to 10, 1 being almost no discomfort, 10 being a high level of discomfort
- For each body part, a worker's discomfort at the beginning and the end of their shift is noted. If the end of the shift level is higher, this may be an area of concern.
- These data are used in the assessment of the overall workload (**Overall Workload** tab)

Tab: Work Pace

This **Work Pace** tab determines if the time allowed or assigned to complete the tasks is within the industry standards. Industry standards, as described by the ISSA Cleaning Guide (ISSA, 2021), which lists the time needed for most healthy workers to complete an assigned task. The industry standard times are not based on risk exposure.

Figure 20. Results on the Work Pace Tab



Job-Level Assessment

Total number of hours allocated to this job:

- States the total number of hours for all the task-location-tool-variation combinations.
- Automatically populated from the data entered on the Data Input page.

Standard number of hours by industry standards:

- The number of hours needed, by industry standards, to complete all the task-location-tool-variation combinations.

- States the industry standard cleaning for all cleaning tasks combined.
- Industry standards are obtained from the “The ISSA Cleaning Times” guidance document (ISSA, 2021).
    - This document, produced by the International Sanitary Supply Association (ISSA), provides a set of average times for cleaning tasks.

The allocated time for the job:

- States whether the total number of hours allocated to this job (all task-location-tool-variation combinations) is sufficient by industry standards.

The worker (Manager/Supervisor and EHS Job Reports only):

- States if there have been reported issues from workers regarding not have enough time to complete their assigned tasks.
- Automatically populated from the selected item on the **Worker** tab.

Individual Task-Level Assessment

Task-Location-Tool-Variation Table Summary

- A determination if any task-location-tool-variation combination entered on the Data Input page does or does not have sufficient time allocated to complete the cleaning activity by industry standards.

Task-location-tool-variation:

- A listing of the task-location-tool-variation combinations entered on the Data Input page.

Hours allocated:

- The number of hours assigned to individual task-location-tool-variation combinations.

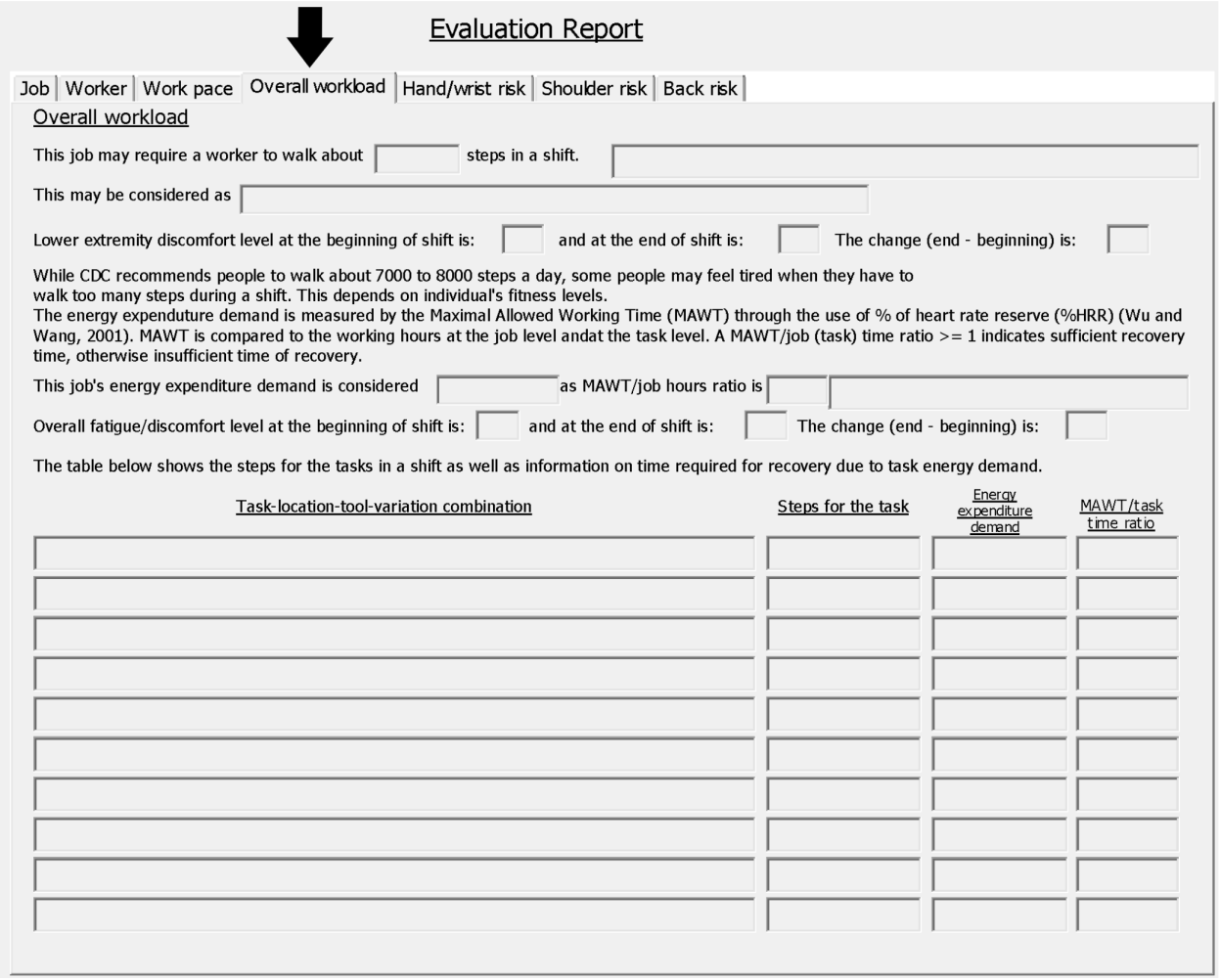
Time needed (hours)

- The number of hours, suggested by industry standards, necessary to complete each task-location-tool-variation combination based on the quantity entered on the Data Input page

Tab: Overall Workload

The **Overall Workload** tab examines the cardiovascular impact from the workload of the cleaning tasks performed.

Figure 21. Results on the Overall Workload Tab



Job-Level Assessment

Step requirements for the overall job (the total of steps from all task-location-tool-variation combinations):

- The number of steps attributed to this task. This includes steps walking between cleaning areas, steps taken during task preparation. This number is based on the number of steps calculated from observations of the cleaning tasks.
- This section will also inform if the worker reported any issues; this information is automatically populated from the **Worker** tab

Risk determination of the level of steps taken during the job:

- Three levels of risks: low, moderate, high
- Level of risk is based on the Center for Disease Control's (CDC) recommendations. Risk levels were defined as:
    - Low Risk Level: less than 7,000 steps
    - Moderate Risk Level: 7000 - 15,000 steps
    - High: more than 15,000 steps

Lower extremity discomfort assessment

- A comparison between discomfort level at the beginning of the shift and at the end of the shift is made, with the change in discomfort being noted.
- Values for before and after shift are automatically populated from the **Worker** tab

Energy expenditure demand:

- Based on energy consumed during the performance of the job, the energy demand is assessed as low, moderate or high
    - Low: greater than 1.0
    - Moderate: 0.8 - 1.0
    - High: less than 0.8
- Maximum Acceptable working time (MAWT)
    - Maximum acceptable work time is negatively correlated with percent of maximum oxygen uptake (the maximum rate of oxygen your body is able to use during exertion), relative heart rate () and relative oxygen uptake
- Discomfort survey results

Overall fatigue/discomfort assessment

- A comparison between discomfort level at the beginning of the shift and at the end of the shift is made, with the change in discomfort being noted.
- Values for before and after shift are automatically populated from the **Worker** tab

Individual Task-Level Assessment

Steps per task, task level:

- The average number steps calculated for task, based on field observations.

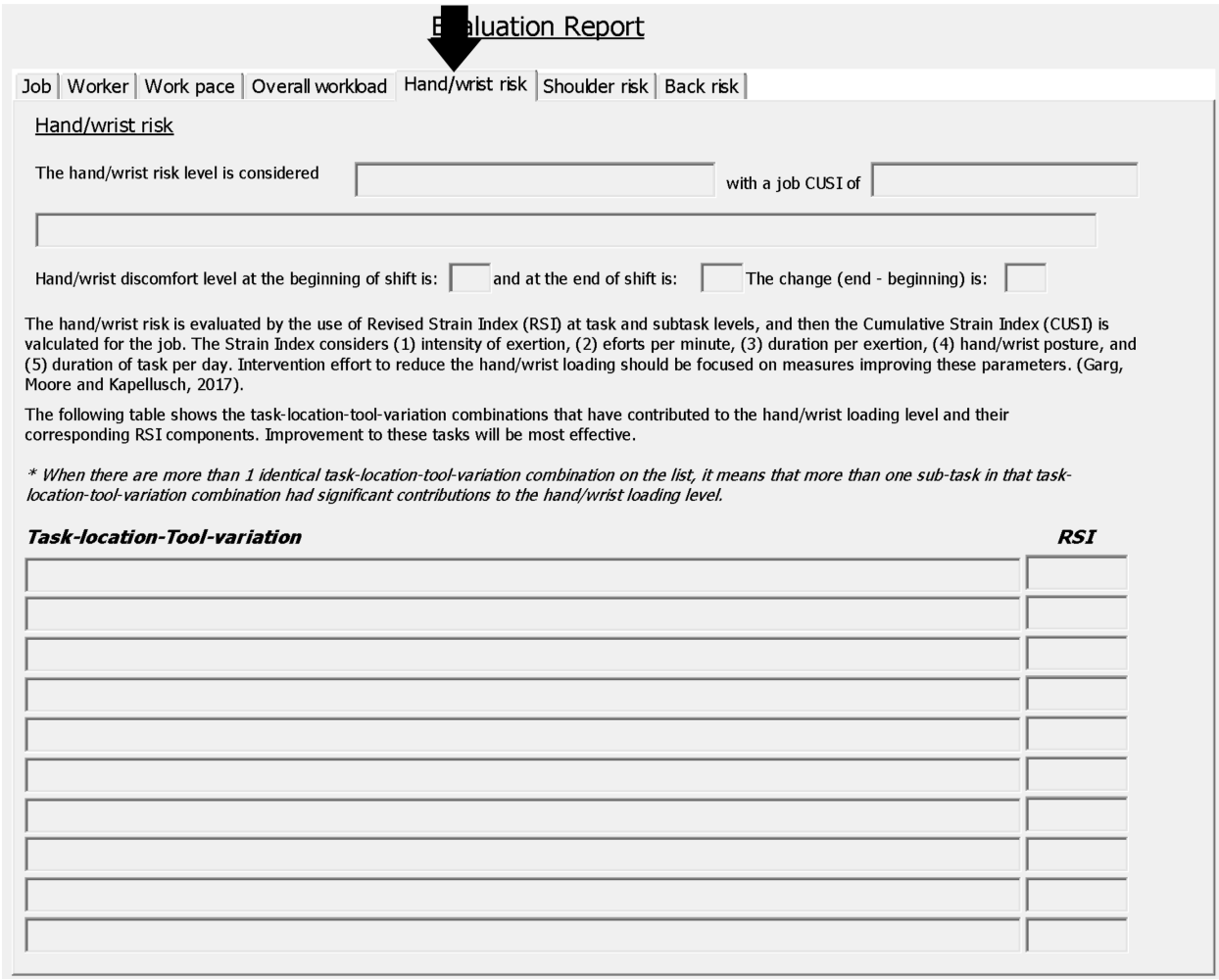
Time sufficient for recovery:

- Yes/No: if the actual effort is less than the maximum acceptable effort
- This assessment is based on the Maximum Acceptable Work Time, which determines if the time allowed between exertions provides sufficient recovery to reduce the risk of injury.

Tab: Hand/Wrist Risk Assessment

The **Hand/Wrist Risk** tab shows the results of the risk assessment for the hand and wrist based on the data entered on the Data Input page.

Figure 22. Hand/Wrist Risk Assessment Screenshot



Risk determination for the hand/wrist:

- This is the risk level for the hand/wrist at the job level.
- The risk level is described as low, moderate or high and is determined using the Cumulative Strain Index (CUSI).
- The corresponding CUSI scoring for each risk level is as follows:

  Low Risk: CUSI= less than 7.5
  Moderate Risk: CUSI: 7.5 -14.9
  High Risk: CUSI: 15 or greater

Risk level comment (Manager/Supervisor Report: Evaluating an Existing Job Report only):

- Automatically populated from the fields selected on the Worker tab.

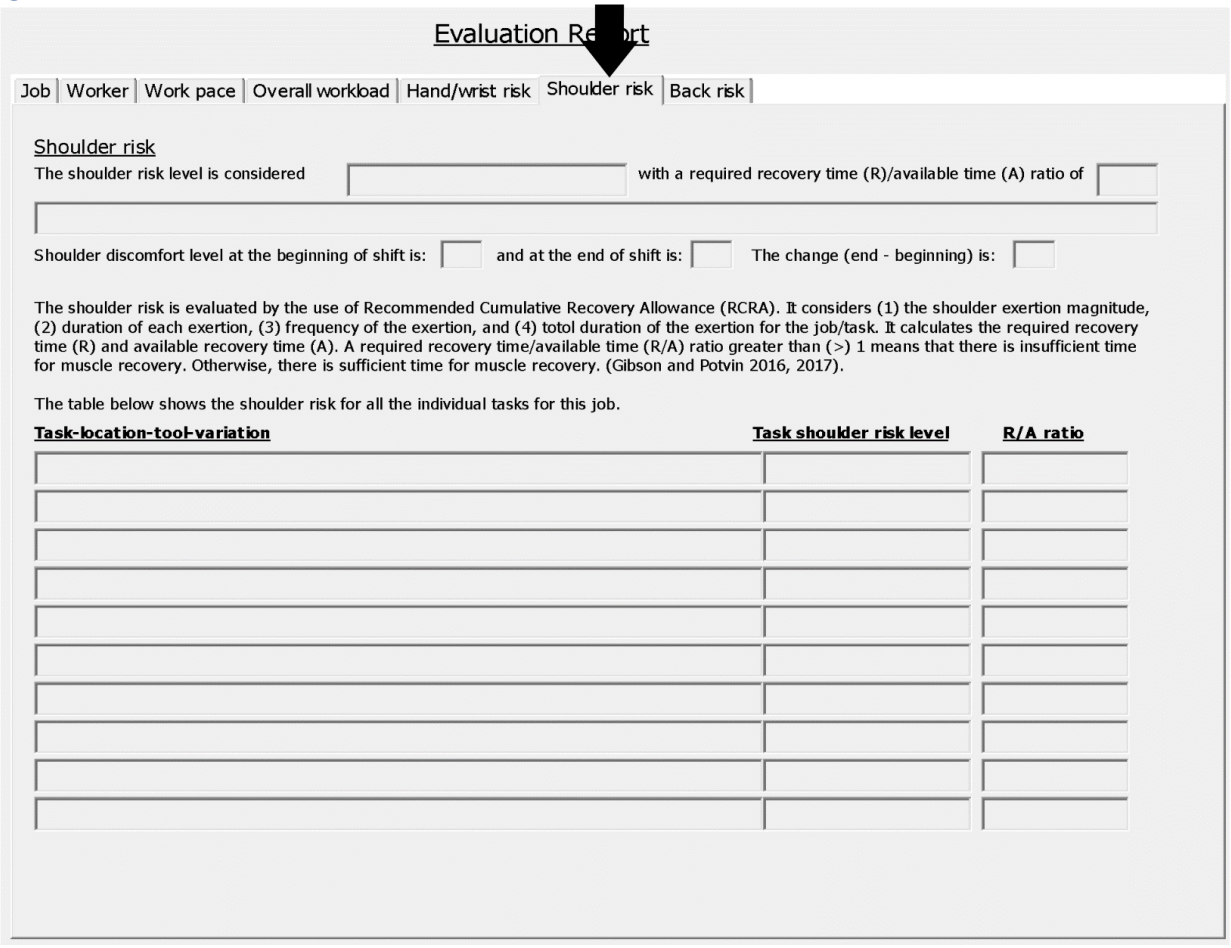
Task-location-tool-variation:

- Identifies the task combination where the risk is present.
- The same task combination may appear more than once indicating that more than one sub-task presents a risk.
- The list is ordered by the highest risk level to the lowest. Efforts should be focused on the combinations at the highest level in order for interventions to be the most effective.

Tab: Shoulder Risk Assessment

The **Shoulder Risk** tab shows the results of the risk assessment for the shoulder based on the data entered on the Data Input page.

Figure 23. Results on the Shoulder Risk Assessment Tab



Risk determination for the shoulder:

This is the risk level for the shoulder at the job level. Described as low, moderate or high. This risk determination is based on the Recommended Cumulative Rest Allowance (RCRA).

Risk level comment (management/supervisor evaluation of existing job):

This comment is automatically populated from the fields selected on the **Worker** tab.

Task-location-tool-variation:

A list of the tasks entered. The risk at the task level is displayed.

Task shoulder risk level:

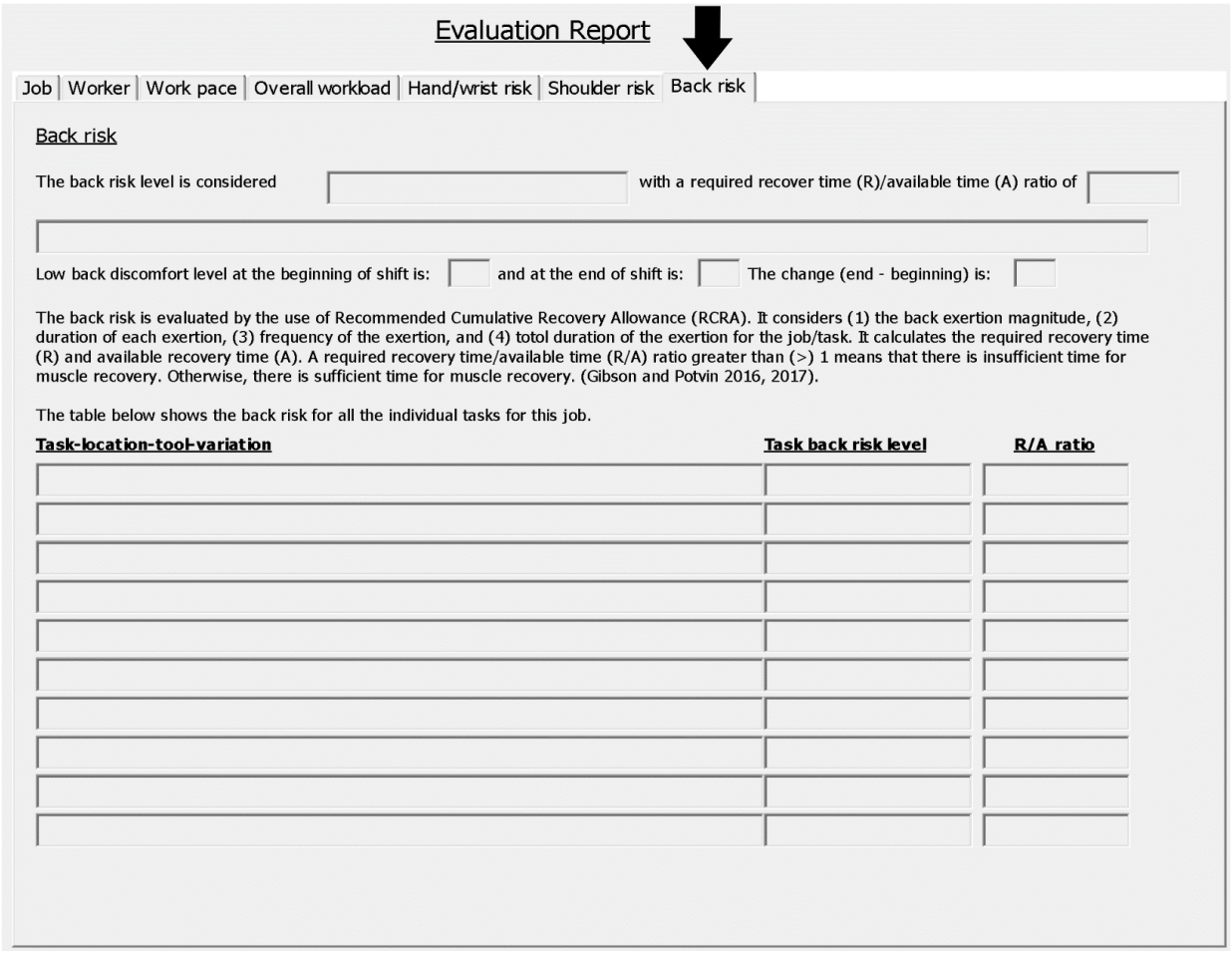
Described as low, moderate or high. Based on the ratio calculated from the RCRA calculation:

Low = 1.0 or less
Moderate = 1.1-1.2
High = 1.3 or higher

Tab: Back Risk Assessment

The **Back Risk** tab shows the results of the risk assessment for the back based on the data entered on the Data Input page.

Figure 24. Results on the Back Risk Assessment Tab



Risk determination for the back:

This is the risk level for the back at the job level. Described as low, moderate or high. This risk determination is based on the Recommended Cumulative Rest Allowance (RCRA).

Risk level comment (management/supervisor evaluation of existing job):

This comment is automatically populated from the fields selected on the **Worker** tab.

Task-location-tool-variation:

A list of the tasks entered. The risk at the task level is displayed.

Task back risk level:

Described as low, moderate or high. Based on the results from the RCRA calculation:

Low = 1.0 or less
Moderate = 1.1-1.2
High = 1.3 or higher

Section 4. Guidance on Interpreting the Evaluation Report

This section provides some general guidance on interpreting the results of the evaluation report through the use of several example scenarios. These scenarios should not be considered a complete list of the possibilities.

The Evaluation Report contains multiple sections summarizing the risk based on different aspects of the workload. To properly assess the risk of the job and reduce the risk of injury, all sections must be considered together. The determination of risk is achieved through review of all sections and not just a single aspect.

Interpreting the Recommended Cumulative Recovery Allowance (RCRA) Results

The risk evaluation of the back and shoulder is performed using the Recommended Cumulative Recovery Allowance (RCRA). The RCRA ratio indicates if the time provided for recover (time between exertions) is adequate or acceptable. The calculation of the RCRA ratio is shown in Figure 25.

Figure 25. Calculation of the Recommended Cumulative Recovery Allowance Ratio

$$\frac{\text{Time allowed during a cleaning task to recover from exertion (pauses, breaks)}}{\text{Time necessary to adequately recover from exertion}}$$

The results of the RCRA are presented for the overall job and at the task level (individual task-location-tool-variation combinations).

- The user must verify that the ratio for all tasks is acceptable. If the overall allowance is acceptable but not acceptable at the task level, then then the job is considered unacceptable.
- An invalid determination of the RCRA will occur if the exertion occurs during the entire period, with no breaks. This may occur when the activity is of short duration, such as lifting a weight.

Scenarios

Scenario 1: Allocated Time & Body Part Risk

There may be instances where the time assigned to complete a task is more than the industry standard but there is still a risk to a body part.

- Allocated time more than time needed
- Risk identified to a body part

Interpretation: Although the time allocated may be greater, this time does not account for the varying levels of risk to each specific body part. The industry standard times are not based on risk exposure.

Scenario 2: RCRA & Body Part Risk

The time for recovery is insufficient for the back but the level of risk is low.

- Time allocated is more than the standard time
- The level of risk to the back is low
- The time given for the back to recovery is insufficient

Interpretation: The assessments for risk and recovery measure different aspects of the workload. The level of risk to the back is related to the physical demands exerted for all the muscles and joints in the back area. The recovery is related to the cardiovascular demands.

Scenario 3: Overall Workload, RCRA

The task may consist of multiple sub-tasks, each with an individual evaluation of the sufficient time for recovery.

- The job's energy expenditure demand is considered low.
- One sub-task is determined to not allow sufficient time for recovery given the physical demands.

Interpretation: The overall job may be determined to provide sufficient time for recovery but all subtasks must provide sufficient time for recovery for the entire task to be acceptable. Problems will arise in the calculation of RCRA when the janitor performs the task continuously with no pauses, i.e. short durations, such as 1 minute or less.

Scenario 4: Work Pace - Allocated Time & Standard Cleaning Time

Although the level of risk to hand/wrist, shoulder or back is low and the time for recover is sufficient, the allocated time to complete a task is less than the industry standard.

- Allocated time less than time needed
- Risk to hand/wrist, shoulder and back is low
- Time for recovery sufficient

Interpretation: The ISSA publishes standard baselines for determining janitorial workloads, detailing the industry standard completion time for cleaning tasks. When the assigned time to complete a cleaning task is less than the standard cleaning time, the workload is considered high.

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Appendix One. Janitors Workload Calculator Worksheet

To prepare for using the calculator, detailed job information is required. This worksheet will help guide you in collecting the information needed to complete the calculator. Job cards, job contracts, facility departments, blueprints and other such data sources can be used to find specific job characteristics.

The productivity assigned to each task (i.e. how much is cleaned) is needed as input for the calculator. The units of productivity for each task/location combination are listed below. Refer to guidance document for detailed description and definitions of each column.

Table 1. Task-Location Combinations and their Productivity Measures

Task	Location	Productivity Measure
Damp Mopping	Hard flooring	Square footage
Dust Mopping	Hard flooring	Square footage
Dusting and Wiping	Cafeteria/Break Room	Square footage
	Conference Rooms	Number of objects
	Drinking Fountains	Number of fountains
	Fixtures	Number of objects wiped
	Furniture	Number of objects
	Kitchen/Coffee Bar (detailed cleaning)	Number of kitchens
	Kitchen/Coffee Bar (wiping countertops, sinks & faucets only)	Square footage of countertop including the sink
	Reception/Lobby/Elevator Landing	Number of objects
Elevator Cleaning	Elevator	Number of elevators
Floor Scrubbing	Hard flooring	Square footage
Glass Door Cleaning	Glass Doors	Number of doors
Office/Cubicle Cleaning	Office/Cubicles	Square footage
Restocking	Kitchen/Coffee Bar (paper towels)	Number of dispensers
	Restroom (soap dispenser)	Number of dispensers
	Restroom (toilet paper holders)	Number of fixtures

Task	Location	Productivity Measure
Restroom and Locker Room Cleaning	Locker Room (scrubbing shower walls only)	Number of fixtures
	Locker Room (includes wiping, not scrubbing shower walls)	Number of fixtures
	Restroom (clean high areas)	Number of objects
	Restroom (sinks, mirrors, toilets, urinals)	Number of fixtures
Trashing	Office/Cubicles	Number of bins
	Reception/Lobby/Elevator Landing	Number of bins
	Restrooms/Locker Rooms	Number of bins
Vacuuming	Carpet	Square footage
	Hard flooring	Square footage
	Stairwells/Stairway Landings	Square footage
	Walk-off Mats	Square footage

JANITORS WORKLOAD CALCULATOR WORKSHEET

Table 2. Worksheet to collect required information

	Tasks Performed During the Shift (refer to guidance for details	Location of Task Performed	Tools/Equipment Used for Task	Quantity of space to be cleaned	Expected Cleaning Time/Duration
Example	*Vacuuming*	*Cubicles/Offices on floors 4-6*	*Backpack vacuum*	*Measured in square footage*	*2 hours*
Example	*Restroom cleaning*	*Restrooms on floors 4-6*	*Mop, cleaning cloth, toilet brush*	*Measured by number of fixture (e.g. sinks, toilets, urinals, mirrors)*	*3 hours*
Example	*Wipe/dust signage*	*Lobby*	*Dust cloth*	*Number of objects*	*1 hour*
Task 1	*Cleaning Task*	*Location*	*Tool/equipment*	*Square footage/# fixtures/# objects*	*Expected Duration*
Task 2	*Cleaning Task*	*Location*	*Tool/equipment*	*Square footage/# fixtures/# objects*	*Expected Duration*
Task 3	*Cleaning Task*	*Location*	*Tool/equipment*	*Square footage/# fixtures/# objects*	*Expected Duration*
Task 4	*Cleaning Task*	*Location*	*Tool/equipment*	*Square footage/# fixtures/# objects*	*Expected Duration*
				Total Time Assigned for All Tasks	

Appendix Two. Conversion of Minutes into Hours

Minutes	**Hours**
10	0.2
20	0.3
30	0.5
45	0.75
60	1.0