STANDARD OPERATING PROCEDURE

SAFETY Everyone. Everywhere. Every day

MANUAL TASKS

DOC ID	PRO416	VERSION	4
DOC OWNER	Tom Foster	ACTIVE DATE	17/01/2017

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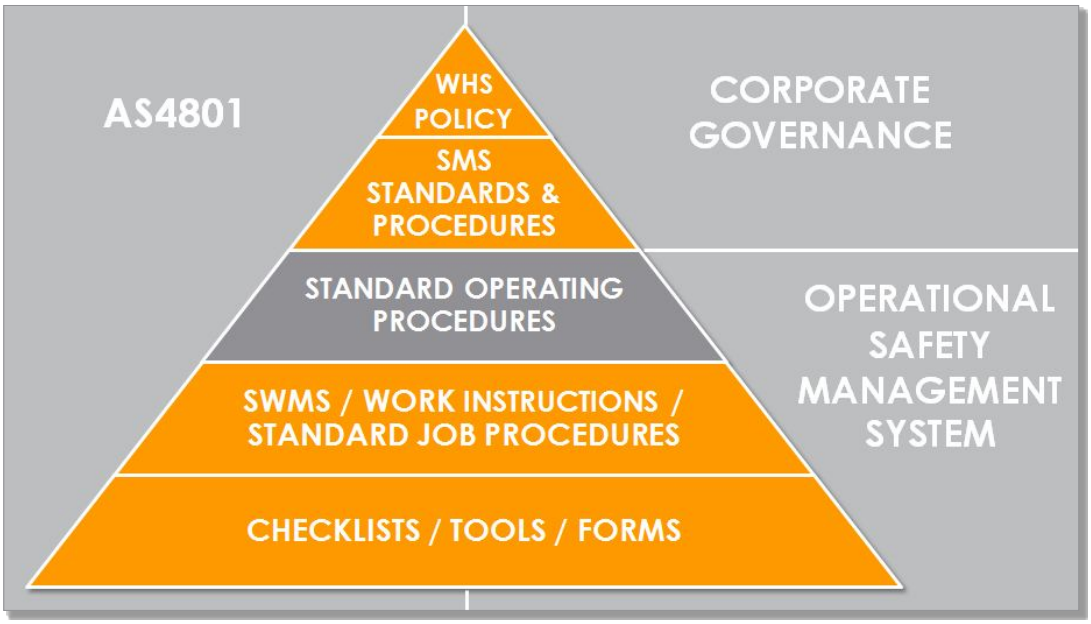
1. SMS DOCUMENT HIERARCHY



2. PURPOSE

This Standard Operating Procedure (SOP) documents Queensland Urban Utilities (QUU) approach to the management of manual tasks including hazardous manual tasks at QUU controlled workplaces.

The overall purpose of this procedure is to ensure that risks associated with manual tasks are adequately managed in order to minimise the risk of injury or harm to workers.

3. SCOPE

This SOP provides practical guidance on how to manage health and safety risks associated with manual tasks. This procedure applies to all QUU staff, contractors and other persons on QUU-controlled worksites.

4. DEFINITIONS AND ACRONYMS

Hazardous Manual Task: A manual task that involves one or more of the following:

- high or sudden force;
- exposure to vibration;
- repetitive movement;
- repetitive or sustained force; and/or
- sustained or awkward posture.

Hierarchy of Controls: the ways of controlling the risk of Musculoskeletal Disorder (MSDs) are ranked from the highest level of protection and reliability to the lowest. This ranking is known as the hierarchy of risk control.

HSR: acronym used for Health and Safety Representative.

Manager: as per QUU naming conventions, the Manager who has direct responsibility for the activity being performed or the area the activity is occurring in.

Manual Task: A task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing.

Musculoskeletal Disorder (MSD): as defined in the WHS Regulations, means an injury to, or a disease of, the musculoskeletal system, whether occurring suddenly or over time. It does not include an injury caused by crushing, entrapment (such as fractures and dislocations) or cutting resulting from the mechanical operation of plant.

Office Ergonomics: refers to workers/work that is predominantly carried out in an office environment which is predominately desk based.

SMS: acronym used for QUU's Safety Management System.

SOP: Standard Operating Procedure

STP: Sewerage Treatment Plant.

Supervisor/PICOW – Term used for any QUU employee who acts or is appointed as a Supervisor, Coordinator or Team Leader within QUU.

WHS: acronym used for Work Health and Safety.

Worker: employees, contractors, subcontractors, outworkers, apprentices and trainees, work experience students, volunteers and PCBUs who are individuals if they perform work for the business.

5. ROLES AND RESPONSIBILITIES

Outlined below are responsibilities specific to manual tasks requirements at all QUU workplaces and controlled sites.

5.1 QUU EXECUTIVE

QUU Executive and Senior Management (CEO, ELT, General Managers – Officer and Non-Officer Appointed) are responsible for overseeing and ensuring the implementation of the requirements of this SOP and related procedures within their respective functional areas. This includes ensuring all sites are suitably risk assessed and have appropriate mechanical aids, practices and resources to ensure that risks associated with manual tasks are adequately managed to minimise the risk of injury or harm to workers.

5.2 MANAGERS

Managers in all operational areas and QUU worksites are responsible for ensuring the review and management of risks associated with manual tasks. This includes:

- Undertaking a manual task risk assessment in consultation with relevant local managers, supervisors and HSRs to determine and ensure the mechanical aids required for the workplace or site is in place and appropriate to the layout, tasks, hazards and risks in that area;
- Monitoring and ensuring all contractors who undertake work for or on behalf of QUU have implemented safe manual tasks practices in accordance with this SOP;
- Ensuring all workers are aware of this Manual Tasks Procedure and have access to fit for purpose mechanical aids and resources;
- Monitoring and ensuring that manual tasks training details are recorded and kept up to date in the QUU My Learning Space (MLS);
- Monitoring and following up any and all control measures that are implemented for manual task hazards to ensure effectiveness of controls and to ensure other risks are not created.

5.3 SUPERVISORS/PICOW

Supervisors and Team Leaders in all operational areas and QUU worksites are responsible for ensuring that risks associated with manual tasks are managed including:

- A manual tasks risk assessment has been completed for the site;
- Adequate mechanical aids are fit for purpose and are provided, accessible and known by workers;
- All workers and contractors are trained in the safe use of any equipment and mechanical aids provided for manual tasks;

- Known manual tasks hazards are included in the local site induction and are adequately managed;
- All office-based workers have completed an Office Ergonomics Risk Assessment (FOR539);
- All workers and contractors are aware and comply with the requirements of this SOP.

5.4 WORKERS

All workers shall ensure that they:

- Follow the guidelines of this Manual tasks SOP and related procedures;
- Use equipment and mechanical aids that are fit for purpose that are provided for manual tasks;
- Report any defects/hazards with equipment that is provided for manual tasks to their supervisor;
- Report any near misses/manual tasks related incidents/injuries to their supervisor and
    - Follow QUU's Health Management Procedure (PRO367); and
    - Complete a QUU WHS Incident Report (in QPulse) in accordance with QUU WHS incident reporting procedures.

5.5 CONTRACTORS

At all times when performing work on a QUU site or for/on behalf of QUU, contractors shall comply with QUU's manual tasks management requirements detailed in this and related procedures and report any incidents to the relevant QUU Manager and to their employing / contracting agency in accordance with QUU WHS incident reporting procedures.

6. RELATED DOCUMENTS

- WHS Hazard and Risk Management Procedure (PRO363)
- WHS Incident Reporting, Investigation and Escalation Procedure (PRO364)
- WHS Audit and Inspections Procedure (PRO366)
- Health Management Procedure (PRO367)
- Fatigue Management Standard Operating Procedure (STD80)
- Manual Tasks Risk Assessment (FOR540)
- Office Ergonomics Risk Assessment (FOR539)

7. PROCEDURE

7.1 OVERVIEW

Manual tasks cover a wide range of activities that involve using the body to move or hold an object, people or animals. Examples of manual tasks include jackhammering, stacking shelves, digging trenches, loading a truck, lifting a pit cover and entering data into a computer. Hazardous manual tasks can result in injuries (musculoskeletal disorders) to workers. It is the aim of this procedure to assist QUU workers and contractors to identify, assess, control and review hazardous manual tasks in order to prevent musculoskeletal injuries at work.

7.2 MUSCULOSKELETAL DISORDERS

A musculoskeletal disorder (MSD), as defined in the WHS Regulations, means an injury to, or a disease of, the musculoskeletal system, whether occurring suddenly or over time. It does not include an injury caused by crushing, entrapment (such as fractures and dislocations) or cutting resulting from the mechanical operation of plant. MSDs may include conditions such as:

- sprains and strains of muscles, ligaments and tendons;
- back injuries, including damage to the muscles, tendons, ligaments, spinal discs, nerves, joints and bones;

- joint and bone injuries or degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet;
- nerve injuries or compression (e.g. carpal tunnel syndrome);
- muscular and vascular disorders as a result of hand-arm vibration;
- soft tissue hernias; and
- chronic pain.

MSDs occur in two ways:

- gradual wear and tear to joints, ligaments, muscles and inter-vertebral discs caused by repeated or continuous use of the same body parts, including static body positions; or
- sudden damage caused by strenuous activity, or unexpected movements such as when loads being handled move or change position suddenly.

7.3 HAZARDOUS MANUAL TASKS

Not all manual tasks are hazardous. It is therefore necessary to identify those tasks that are potentially hazardous and ensure they are adequately managed. Hazardous manual tasks involve the use of one or more of the following:

- repetitive or sustained force;
- high or sudden force;
- repetitive movement;
- sustained or awkward posture;
- exposure to vibration; and
- Sedentary tasks.

Examples of hazardous manual tasks in QUU workplaces include sitting for long periods at a computer or in a vehicle, lifting equipment in and out of light and heavy vehicles, lifting valves/pipes/joiners, digging trenches and lifting Gatic covers.

The first step in managing risks from carrying out manual tasks is to identify those tasks that have the potential to cause MSDs. Hazards that arise from manual tasks generally involve interaction between a worker and:

- the work tasks and how they are performed;
- the tools, equipment and objects handled; and
- the physical work environment.

In order to assist in identifying hazardous manual tasks, QUU will use a range of measures including consultation with workers, review of workplace incidents/injuries, worker's compensation data, direct observation of manual tasks and discomfort surveys. Once hazardous manual tasks have been identified, QUU managers, supervisors and workers will assess the risk of MSD. The risk management process will be a collaborative one, involving workers who are directly involved in the hazardous manual task, their supervisors, managers, safety representatives and the QUU Health and Safety Team where required.

7.4 HAZARDOUS MANUAL TASK RISK ASSESSMENT

The risk management process for manual tasks is described by the flowchart in **Appendix A** which is taken from the *Hazardous Manual Tasks Code of Practice- Qld 2011*.

The process involves:

- Identification of the hazardous manual task;
- Assessment of the risk factors for hazardous manual tasks including posture, force, repetition, time and exposure to vibration;

- Identifying the source of the risk such as work area layout, systems of work, nature of the work or load and the work environment;
- Identifying suitable controls for the risk with reference to the hierarchy of controls;
- Provision of adequate training and awareness of issues such as fatigue management; and
- Reviewing the effectiveness of controls that have been implemented.

As always, the risk management process involves communication and consultation throughout to ensure an effective outcome.

In order to assist in the assessment process for hazardous manual tasks, QUU has developed a **Manual Tasks Risk Assessment Form (FOR540)**. This should be used by all QUU managers, supervisors, HSRs and workers when hazardous manual tasks are identified or suspected. If the hazardous manual task is related to computer work or an office workstation, the **Office Ergonomics Risk Assessment Form (FOR539)** should be used.

7.4.1 Identifying Hazardous Manual Tasks

QUU workers and contractors who perform manual tasks can provide valuable information about discomfort, muscular aches and pains that can signal potential hazards. For example, workers may identify tasks that:

- are difficult to do (or appear harder than they should be);
- are very tiring (muscle fatigue reduces work capacity);
- are awkward or dangerous (for example, difficulty controlling loads); and
- cause discomfort.

A discomfort survey that may be used to assist in identifying hazardous manual tasks is found in **Appendix B.**

Records of workplace injuries and incidents, inspection reports and any workers compensation claims made for MSDs will be reviewed by managers in consultation with the QUU Health and Safety Team to help identify which manual tasks may cause harm. However, not all hazardous manual tasks will be associated with reported incidents; therefore it is important for staff, supervisors and managers to gather additional information. Information and advice about hazardous manual tasks and risks relevant to QUU's work activities may be available from regulators, industry associations, unions, technical specialists and safety consultants. Look for trends in incident and injury claims. Trends may show that workers in a particular location are exposed to more hazardous manual tasks than in other areas and this could indicate a problem with the design and layout of that work area or the way work is carried out there. These trends may help in deciding which manual tasks should be addressed as a priority.

QUU managers, supervisors and workers will observe where practicable manual tasks that exhibit the characteristics of hazardous manual tasks (see Definitions and Acronyms) having regard to:

- any changes that have resulted in new manual tasks or a changed environment;
- tasks involving tools, machinery or equipment that do not work properly or are difficult to use; and
- if workers have made improvisations to tasks to avoid discomfort (such as modifying hand tools, changing the working height of desks, etc.).

7.4.2 Characteristics of Hazardous Manual Tasks

Refer to **Appendix C** for guidance and examples for each of the characteristics of hazardous manual tasks.

7.4.3 Assessing the Risks

A risk assessment involves examining the characteristics of the hazardous manual task in more detail to assess whether the forces, movements and postures are undertaken in such a way that they give rise to the risk of MSDs. The **Manual Tasks Risk Assessment Form (FOR540)** should be used to conduct assessment of hazardous manual tasks. Conducting a risk assessment will help QUU managers, supervisors and staff to determine:

- which postures, movements and forces of the task pose a risk;
- where during the task they pose a risk;
- why they are occurring; and
- what needs to be fixed.

The **Manual Tasks Risk Assessment Form (FOR540)** contains a list of the characteristics of hazardous manual tasks along with a graduated risk profile of each characteristic to assist in quantifying the risk of injury.

Force

Increasing the forces in any task will increase the risk of MSD. Forces may be a whole of body force such as lifting a heavy box or tool kit, or they may be high forces on a discrete body part such as squeezing tightly on a pair of pliars to cut a piece of wire. Forces in the **Manual Tasks Risk Assessment Form (FOR540)** are nominally classified as low (0-5kg), Medium (6-10kg) and high (> 11kg). These values are provided as guidelines only and acceptable force will vary greatly from task to task and person to person. High forces can cause MSDs even if they are not repetitive or sustained. This means that any task involving high force may be a risk, even if it is only done occasionally or for short periods. The longer and more often force is applied and the higher the force, the greater the risk.

The risk in tasks involving high force is related to:

- the intensity of the force needed - forceful muscular exertions place high stress on the muscles, tendons, joints, ligaments and vertebral discs.
- the speed involved - fast movements (particularly if repeated) can injure muscles, tendons and ligaments. The rapid or sudden speed changes caused by sudden or unexpected movements are high risk.
- whether the force is jerky or sudden - forces suddenly applied or stopped can overload the muscles, tendons, joints, ligaments and vertebral discs. This can occur when throwing or catching loads, or when the load or item worked on moves unexpectedly (for example, when pulling up a fence post that suddenly comes free, or a stand pipe that requires high force to loosen and suddenly opens).

Posture

Awkward postures will increase the risk of injury, especially if combined with high force, repetition, or sustained movement. Any deviation from a neutral posture is deemed to increase the risk of MSD. For the purpose of hazardous manual task risk assessment, a neutral posture is one where:

- a worker is upright, with weight evenly distributed through both legs;
- the head is pointing forward and neither looking up or down or twisted;
- Arms are resting by the side, with elbows straight or at 90 degrees to the ground and supported; and
- Wrists and fingers are in a neutral ('handshake') position.

For an office worker sitting at a desk, a neutral (or preferred) posture is one where the back is straight with lumbar support, the hips and knees are at 90 degrees and the forearms are resting on the desk with the shoulders relaxed and person looking straight ahead (see pictures in Office Ergonomics Risk Assessment (FOR539) and **Manual Tasks Risk Assessment Form (FOR540)**

Awkward postures involve one or more of the following deviations from neutral:

- Bending the back or head forwards or sideways more than 20 degrees;
- Bending the back or head backwards more than 5 degrees or looking up;
- Twisting the back or neck more than 20 degrees;
- Working with one or both hands above shoulder height;
- Reaching forward or sideways more than 30cm from the body;

- Reaching behind the body;
- Standing with most of the body's weight on one leg;
- Twisting, turning, grabbing, picking or wringing actions with the fingers, hands or arms that includes excessive bending of the wrist;
- Working with the fingers close together or wide apart;
- Squatting, kneeling, crawling, lying, semi-lying or jumping or very fast movements.

Repetitive/Sustained

As a general rule, a repetitive task is one that is repeated more than twice per minute and a sustained task is held for more than 30 seconds. In order for these repetitive and sustained tasks to be a risk for MSD, there must also be either an element of high force, or an awkward posture (or both). Where a repetitive task is sustained, the risk is further increased.

Duration

If a task is assessed as involving postures, movements or forces that are also repetitive (more than two per minute) and/or sustained (held for more than 30 seconds), determine the duration of the task.

The duration of the task is how long the task is carried out over a whole shift or continually at any time during a shift. Tasks undertaken over a prolonged period of time or are repeated over the work day increase the risk of injury.

As a general guideline, long duration means the task is done for more than a total of 2 hours over a whole shift or continuously for more than 30 minutes at a time. Keep in mind that workers may use the same parts of the body to repeat similar movements when carrying out various tasks that are similar in nature over time.

Vibration

Prolonged exposure to whole-body or hand-arm vibration increases the risk of MSDs and other health problems. The degree of risk increases as the duration of exposure increases and when the amplitude of vibration is high.

Some examples of sources of vibration are:

- driving, particularly on rough roads;
- frequent or prolonged use of hand powered tools;
- use of machines or tools where the manufacturer's handbook warns of vibration;
- being jolted or continuously shaken (e.g. front-end loader);
- use of a vehicle or tool not suitable for the environment or task.

7.4.4 Identifying the Sources of the Risk

When conducting the assessment, think about the sources of any risks that are present in the task. These will be the things that you may be able to change to eliminate or reduce the risk of MSD. For example, poor postures and movements may be due to the layout of the workplace, high forces may be due to the loads being handled, and the frequency and duration of the task may be due to the work organisation, limited staff numbers or increased work pace to meet tight deadlines.

The main sources of risk are:

- work area design and layout;
- the nature, size, weight or number of things handled in performing the manual task;
- systems of work; and
- the environment in which the manual task is performed.

These sources of risk can also make the task more difficult to perform and therefore increase the risk of MSD. For each risk factor, consider:

- where in the task are they occurring; and

- why each of these actions is occurring (source of the risk).

The answers to these questions will provide the information on how to fix the source of the risk and hence control the risk of MSD.

Workplace Factors

A work area includes work benches, conveyors, furniture and fittings and the equipment used by workers doing that job. The positioning and relationship of the different elements in a work area to each other and to the worker are important because of the effect on working postures. A work area that is designed without consideration of the risks that arise from hazardous manual tasks may impose awkward postures on workers undertaking manual tasks, for example, bent and twisted positions with shoulders raised and the need to reach for items or carry loads over long distances. Many QUU work environments may carry an inherent risk due to the nature of the work (i.e. confined spaces, trenches, water meter pits).

Nature/Characteristics of the Hazard

Loads can be a source of risk due to the amount of muscular effort needed to handle them. The harder it is to grip and control a thing, the greater the force that may be required to handle them. For instance, lifting and moving a gatic cover is risky due to the limited purchase available on the cover and the ground-level location of it.

The risk can arise from:

- size, shape and weight of load – loads that are large, bulky, or heavy and cannot be held close to the body or are asymmetric and put uneven forces on the spine;
- loads that are difficult to grip through unsuitable handles, handholds or surface textures;
- unstable or unwieldy loads can create sudden high muscle forces and result in overloading of muscles, tendons or discs.

Tools that are unsuitable for the task can be a source of risk by increasing the force required, or by promoting sustained or awkward postures. Risks can arise from:

- *Weight* – heavy hand tools, particularly if held for long periods of time, increase the force and effort required to perform a task, for example, a 3kg power drill used on an assembly line.
- *Balance* – if the heaviest part of the tool is in front of the wrist, the force required to grip the tool and stop it tilting forward is increased.
- *Handle design* – if the handle diameter is too large or too small, the grip span of the hand will create awkward postures and greater force will be required to control the tool. A handle that is too short or has prominent edges, can result in damage or compression of the palm.
- *Handle orientation* – if the handle design does not place the wrist in a neutral/handshake position, the worker will need to use an awkward posture to operate the tool. Tools that cannot be adapted for use by both hands or are designed for right-handed use only can result in awkward postures and increased force.
- *Shock loading and impact (vibration)* – tools that deliver impacts such as hammers, hammer drills, and nail guns transmit impact forces to various ligaments and can require the use of a firmer grip to maintain control. They are a particular source of risk if used repetitively and for long periods.
- *Prolonged use* – continued use of any hand tool (even tools that are well suited to the user and designed for the task) without adequate time to recover will increase risk of injury due to the sustained force to support it. In particular, vibrating tools increase risk.
- *Maintenance* – poorly maintained or irregular service of tools and equipment may increase the effort needed to use them. For example, a rusted winch which will increase force to raise a piece of equipment.

Task Factors

Task factors such as systems of work, or the way work is organised, can influence the physical and mental demands that a manual task places on a worker. The fatigue and strain (physical and mental) that may arise from the aspects of work (task demands, task control and resources and support provided) bring on physiological responses such as increased muscular tension and affect the function of muscles, nerves and blood vessels, increasing the risk of the worker developing an MSD. The sources of risk include:

- time constraints;
- pace and flow of work across the working day or shift;
- ability for workers to influence workload or work methods and changes in the workplace;
- the level of resources and guidance;
- consultation processes;
- work roles and performance requirements or processes for dealing with conflicts;
- staffing levels, skill mix and shift arrangements.

Due to the nature of responsive work such as attending to a burst water main, there may be increased demands placed on workers if they have already completed much of a standard shift and are required to do overtime. Refer to the **Fatigue Management SOP (STD80)** for further guidance on managing the risks associated with fatigue.

Team or Individual Factors

Environmental conditions may also increase the likelihood or severity of a MSD:

- *Cold environments* such as working outside in cold and/or wet weather can lower body and hand temperature and make handling and gripping objects more difficult. Increased grip force can also result from reduced sensitivity in cold hands or from wearing gloves. Cold environments can also significantly increase the risk of hand-arm vibration. Working in a cold environment requires thick or heavy protective clothing that restricts movement which can increase the risk of MSD. It can also cause overheating of the body as the clothing does not allow heat or sweat to dissipate. Cold may decrease the blood flow to muscles, increasing fatigue. Even a cold office environment may cause a worker to tense up around the neck and shoulders, increasing the risk of pain or discomfort;
- *High temperatures* - (including radiant heat), for example, in pumping stations, STPs or working in hot weather can make handling and gripping objects more difficult. Workers may have difficulty grasping objects due to perspiration on the hands or there may be sudden or unexpected forces due to loads slipping;
- *Humid environments* - such as sewer pits or humid weather can also increase the risk of developing MSD. Handling wet or damp objects may require increased force. Humidity may also increase discomfort and fatigue;
- *Wind* - may increase the force required to handle items and reduce control while handling large objects, especially those that are flexible and have a large surface area. When working in windy conditions and in low temperatures that are also windy, the resultant wind chill may lower the body temperature further;
- *Slippery and uneven floor surfaces* - may increase the exertion required to perform manual tasks due to difficulty maintaining stability. Unsuitable floor coverings (for example floor mats and carpet and inadequate cover such as leads across walkways) may increase friction when moving objects such as trolleys or office chairs;
- Obstructions – caused by poor housekeeping and cleaning can lead to awkward postures such as reaching or bending over obstacles;
- Lighting - low or high levels of lighting, as well as glare and reflection, may lead to awkward or sustained postures to either improve vision or to avoid glare.

7.5 CONTROLLING THE RISK

The ways of controlling the risk of MSDs are ranked from the highest level of protection and reliability to the lowest. This ranking is known as the hierarchy of risk control. The WHS Regulations require duty holders to work through this hierarchy to choose the control that most effectively eliminates or minimises the risk in the circumstances. This may involve a single control measure or a combination of two or more different controls. QUU has outlined its process for managing risk in WHS Hazard and Risk Management Procedure (PRO363). Examples for controlling manual task hazards at QUU in hierarchical order include:

- **Elimination -** The most effective control measure involves eliminating the hazardous manual task and its associated risk. Eliminating hazards and risks is usually easier and cheaper to achieve in the planning or design stage of an item, process or place used for work. For instance, when constructing a new STP hazards associated with manually winching a pump from a settling tank can be eliminated using an electric winch. Robotic designs or fully automated processes in the sewerage treatment process can eliminate manual task hazards from lifting, pushing and pulling.
- **Substitution -** Replace heavy items with those that are lighter, smaller and/or easier to handle. Replace hand tools with power tools to reduce the level of force required to do the task. For instance use a driver/drill in preference to a screwdriver to remove screws from a pit cover; use an electric winch in preference to a block and tackle.
- **Isolation -** isolate vibrating machinery from the user, for example by providing fully independent seating on mobile plant; use a remote control for the power pumper rather than operate via the truck control panel.
- **Engineering –** This can include a range of mechanical controls such as the use of trolley jacks, trolleys, adjustable height workstations, tools for removing pit covers, leverage, etc.
- **Administrative –** Administrative controls for reducing the risk of MSD at QUU work sites will include task rotation, training in use of mechanical aids and safe manual handling, safe work procedures, work scheduling and Safe Work Method Statements.
- **Personal Protective Equipment –** For manual task risk management, there are few examples of PPE, however some include vibration absorbent shoes and gloves and heat resistant gloves.

Other principals and practices that QUU will use to minimise risk of MSD include:

- Consultation must occur with key stakeholder, HSR and end users prior to the purchase of plant and equipment to ensure it is fit for purpose e.g. ergonomics;
- Purchase of equipment accordance with procurement procedure manual that takes into account ergonomic considerations and minimises vibration;
- Purchase of appropriate office furniture and equipment that is adjustable, ergonomic and meets Australian Standards.
- Purchase of adjustable height work surfaces and/or a range of working heights for the work shop environment and for work in the field;
- Purchase of consumable goods in boxes/packages that are safe to handle;
- Ensure that all items of plant and equipment are placed on a regular maintenance schedule and are tagged out of service if defective;
- Advise staff to risk assess jobs and processes that have hazardous manual tasks and to report any equipment defects promptly to team leaders;
- Advise staff to push rather than pull loads;
- Provide adequate staff and resources to enable work to be performed at a reasonable pace and with a minimum of physical exertion and with regular breaks provided; and
- Ensure that environmental conditions are optimised for comfort and safety so far as is reasonably practicable.

7.6 OFFICE ERGONOMICS

Assessment of tasks associated with office workers can be accomplished using the same methodology incorporated into this SOP. Office Ergonomic Risk Assessment (FOR539) is to be completed by all office based staff to assess work station setup for office-based tasks. This self-explanatory tool contains advice about assessment, posture, equipment and controls for routine assessment of office ergonomics.

All staff shall be given the Office Ergonomic Risk Assessment upon commencement of work at QUU and upon moving work areas or substantial change in work role. Completed office ergonomic assessments must be returned to Supervisor / Manager for review and escalation to QUU Health and Safety Team. If staff members have more complex issues or are receiving treatment or operating on a suitable duties program, it is recommended that advice is obtained from an Ergonomist or Allied Health Professional.

Some of the key considerations in office ergonomic risk assessment and controls for an office worker/environment include:

- The work station should be adjusted to suit the worker and not the other way around;
- Office chairs shall, as a minimum meet Australian Standards for office ergonomic chairs;
- Monitors should be height adjustable and external monitors should always be provided where workers are using laptop computers routinely;
- External monitors, keyboards and mouses are highly desirable for laptop users;
- Document holders should be used if data entry is a key job component or if there is a higher percentage of transcription or reading required by a worker;
- A footrest should be provided for workers whose feet do not easily sit flat on the floor when the chair is at the appropriate height;
- Where a risk assessment outlines the need for a telephone headset, these should be provided to the workers;
- The correct sitting posture is with feet flat on the floor or foot-rest, hips and knees at 90 degrees, back upright with lumbar support, forearms resting flat on the desk, head in a neutral position with the eyes looking straight ahead at the top one third of the monitor;
- To prevent eye-strain, loss of focus, headaches and fatigue, workers should endeavour to shift their focus from near to far (at least 10 metres away) on a regular basis.
- Regular micro-breaks from continuous computer work are **essential** and should occur at least every 30 minutes.

7.7 Training

All new employees will need to complete an online manual handling training program as part of QLD Urban Utilities' induction process. It is intended that this online training program will provide the basic foundations of manual handling techniques and injury prevention strategies until practical manual handling training is provided. Within 3 months of commencing with QUU new employees are to receive training in the practical manual handling program. The manual handling training program will be closely aligned with the principles of Workplace Health and Safety QLD's PErforM program and leaders within each work area will be nominated to provide ongoing delivery of the PErforM principles to employees. Coordination of this training will be the responsibility of the relevant work area to ensure QUU is meeting its WHS requirements. It will be a mandatory training requirement that site-based practical manual handling refresher courses are run every 2 years to ensure that all employees are up to date with their training. On alternate years employees will be required to complete the online manual handling training package.

Ergonomic for Office Environment Training:

It will be a requirement of all QUU staff that perform part of their role in an Office / Desk Based Environment to undertake Office Ergonomic Training. The training will cover:

- Manual Handling specific to office based environments;
- Prevention strategies to reduce the risk of MSD (including Neck, Back and Upper Limbs);

- Good posture and working techniques and how to apply these in a practical situation relating to computer stations, work layouts and design;
- Principles to apply to the work environment to support good posture and reduce potential for injury; and
- Appropriate stretches and posture rotation

Session Length:

Approx. 1-2 hour sessions either on line or face to face sessions.

Frequency:

Online Training within 2 weeks of commencement with QUU and annually (alternate year to face to face training.

7.8 DOCUMENTATION AND RECORD KEEPING

A copy of all manual tasks records (i.e. completed Manual Tasks Risk Assessments, Office Ergonomic Risk Assessments) will be held in TRIM with physical hard-copies securely kept / held at site in a manner that affords confidentiality (where required), easily accessible for audit and review process.

8. REFERENCES

The following references contain information used in the preparation and development of this Manual Tasks SOP:

- Queensland Work Health and Safety Act 2011
- Queensland Work Health and Safety Regulations 2011
- Queensland Hazardous Manual Tasks Code of Practice 2011

9. REVIEW

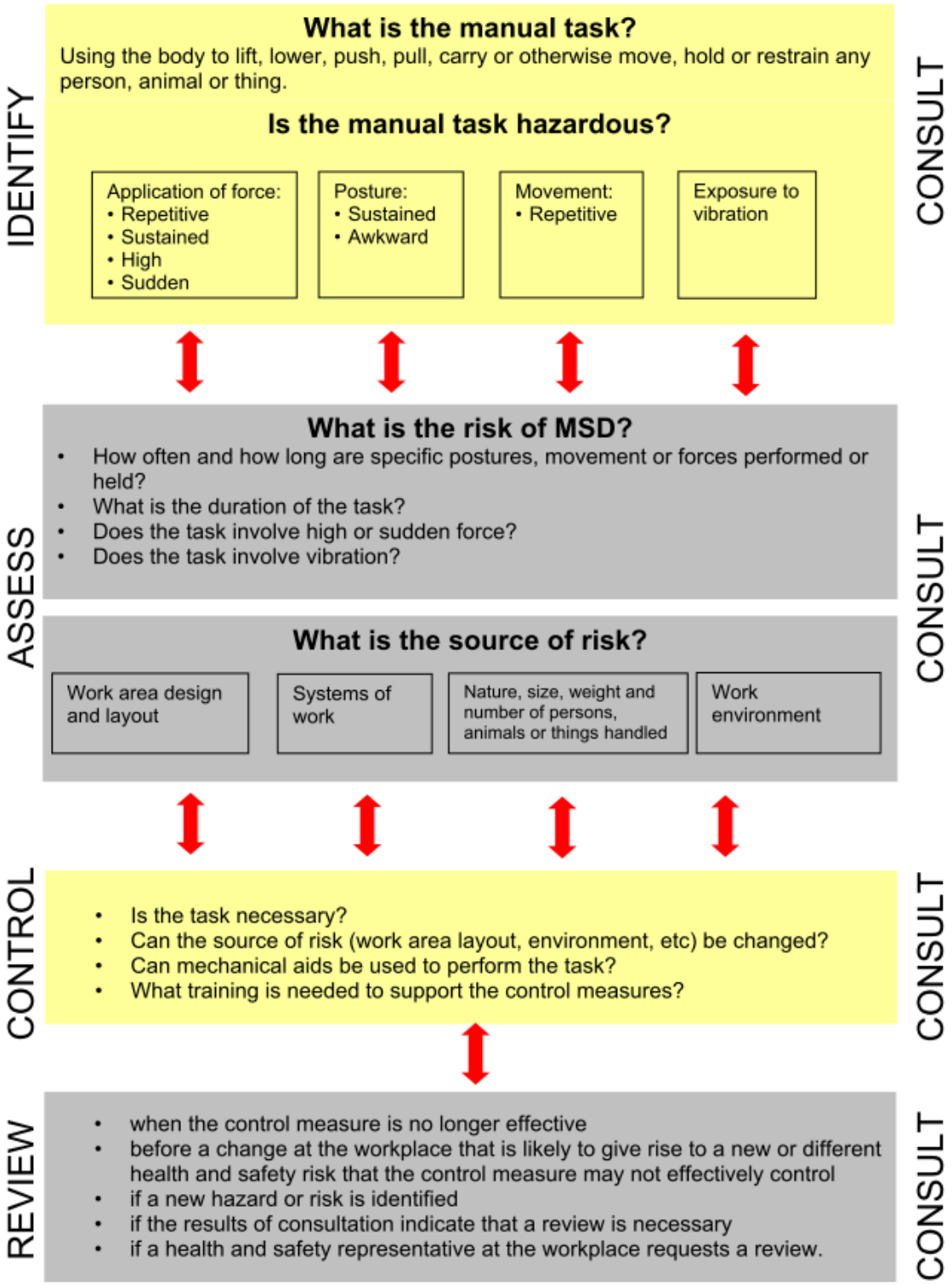
The Manual Tasks SOP is to be reviewed every 2 years or earlier if:

- There is an identified risk to business;
- A significant safety or serious injury event occurs;
- Incident investigation or audit results show that application of the standard fails to deliver the required outcomes;
- There are changes in associated legislation; or
- There is evidence that the standard is not having a positive impact on safety-related KPIs.

10. FURTHER INFORMATION

For further information, contact your Health and Safety Representative or the QUU Health and Safety Team.

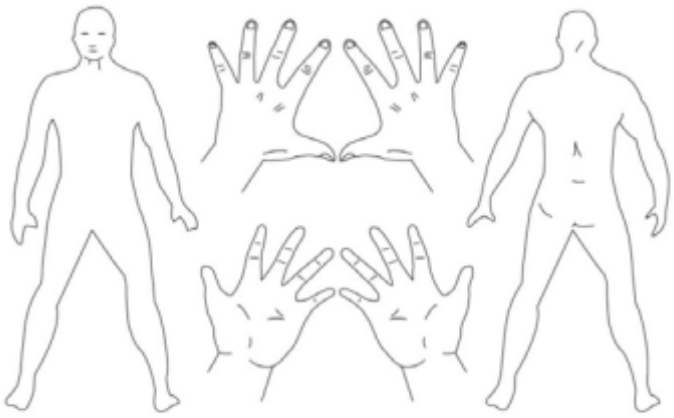
APPENDIX A – THE RISK MANAGEMENT PROCESS FOR MANUAL TASKS



Source: *Hazardous Manual Tasks Code of Practice- Qld 2011*

APPENDIX B – DISCOMFORT SURVEY

Provide this survey to QUU workers and contractors who may be experiencing discomfort with work tasks.

	Workplace name	
	Date	
1.	Which work tasks do you think are a problem i.e. the most likely to cause you or others in your team injury, the ones you hate doing?	**Tasks:**
2.	Do you suffer from swelling, numbness, tingling, pins and needles, stiffness aches and pains in any parts of your body? (circle) **Yes / No** Please show on the body diagram where you feel discomfort or pain What do you think caused the problem? _____ _____ _____ _____ _____ _____	 **Rate the discomfort / pain on a scale of 1 to 5** 1. ___ 2.___ 3.___4.___ 5.___ Slight Moderate Unbearable
3.	Do you have any improvement ideas that would reduce the risk of injury?	

APPENDIX C – CHARACTERISTICS OF HAZARDOUS MANUAL TASKS

Table 1: Characteristics of Hazardous Manual Tasks		
Characteristic	**Examples in QUU**	**Pictures**
Repetitive Force- using force repeatedly over a period of time to move or support an object	• Lifting and stacking pipes, connectors or boxes in a QUU store; • Lifting vacuum pipe lengths out of or into a wet/dry well; or • Lifting and stacking files/boxes of files in a QUU office. • Raking rags from a sewer main screen. • Winching a pump out of an aerating pond; • Operating a sticking valve on a rising main; • Digging a trench using a shovel or crow bar.	
Sustained force - occurs when force is applied continually over a period of time.	• Pushing or pulling a trolley; • Continuously squeezing the trigger on a jet-rodding job; • Carrying heavy tools or equipment over a distance from the truck to the asset; • Supporting a length of pipe whilst it is being welded or fixed in place; • Using a quick-cut saw.	
High force – may be exerted by the back, arm or leg muscles or by the hands and fingers. *High force occurs in any tasks that*: -a worker describes as very demanding physically; - a worker needs help to do because of the effort it requires; - require a stronger person or two	• Lifting, lowering or carrying a heavy item of plant or equipment, e.g. valve casing, motor (can affect back, shoulders, wrist, fingers) • Lifting a gatic cover; • Operating hand tools with high force- e.g. multi-grips • Lifting a screen at an STP;	

persons to do the task.		
Sudden force – jerky or unexpected movements while handling an item or load are particularly hazardous because the body must suddenly adapt to the changing force. Tasks where force is applied suddenly and with speed also generates high force	• Throwing or catching objects; • Sudden release of pressure by a tight bolt or valve; • Cutting reinforcement steel with bolt cutters; • Sudden movement of a high pressure hose or vacuum hose.	
Repetitive movement- using the same parts of the body to repeat similar movements over a period of time.	• Painting; • Using a computer mouse and keyboard; • Using a screwdriver or ratchet on multiple bolts/screws/nuts; • Preparing multiple water samples in the laboratory.	
Sustained posture – where part of or the whole body is kept in the same position for a prolonged period.	• sitting for long periods at a computer; • driving; • bending over a water meter pit whilst changing a meter. • Operating a robotic camera in a sewer main.	
Awkward posture – where any part of the body is in an uncomfortable or unnatural position, such as: -postures that are unbalanced or asymmetrical -postures that require extreme joint angles or bending and twisting.	• squatting while servicing pumps, equipment; • working above head height servicing STP plant; • Bending over a workbench servicing a pump; • Using a pair of multigrips or a screwdriver with wrist bent to side; • Kneeling in a pit or on the ground; • Working from a laptop without a separate screen or keyboard.	

Whole body vibration- occurs when vibration is transmitted through the whole body, usually via a supporting surface, such as a seat or the floor in heavy vehicles or machinery. This may result in lower back pain, degeneration of the lumbar vertebrae and disc herniation.	• Operating a back-hoe; • Driving a truck with poor seat or vehicle suspension; • Driving off-road.	
Hand-arm vibration- occurs when vibration is transferred through a vibrating tool, steering wheel or controls in heavy machinery to the hand and arm. Localised vibration contributes to 'vibration-induced white finger' and 'carpal tunnel syndrome'.	• Using impact wrenches, chainsaws, jackhammers, grinders, drills or vibrating compacting plates; • Operating vacuum truck (vibrations transmitted to hose).