City of Crystal Lake
Department of Public Works
Lifting Policy

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Approved By:	**M. Magnuson**

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PURPOSE

The Occupational Safety and Health Administration (OSHA) has no specific standard related to ergonomic lifting. However, ergonomic lifting and safe lifting techniques fall under OSHA's General Duty Clause, which requires protection for workers from recognized workplace hazards. As a result, the City of Crystal Lake Public Works Department employs feasible and useful methods to mitigate the dangers of lifting.

Lifting heavy items is one of the leading causes of injury in the workplace. Overexertion and cumulative trauma are the biggest factors in these injuries. When employees use smart lifting practices, they are less likely to suffer from back sprains, muscle pulls, wrist injuries, elbow injuries, spinal injuries, and other injuries caused by lifting heavy objects. Back safety awareness is extremely important due to the prevalence and potential severity of back injuries. The purpose of this policy is to increase employee awareness of the importance of back safety and reduce the frequency of on-the-job injuries from improper lifting.

RESPONSIBILITIES

Management Responsibilities

- Management shall implement all sections of this policy.
- Management will make available mechanical advantage when possible.

Employee Responsibilities

- Employees shall follow all applicable sections of this policy while performing work duties and utilize proper lifting techniques at all times.

SAFE LIFTING PROCEDURES

To ensure safe lifting is executed by employees:

- Proper lifting techniques will be utilized at all times to reduce the frequency of on-the-job injuries from improper lifting.
- The use of mechanical advantage will be utilized whenever possible to avoid lifting loads that are too heavy or awkward.
- Assistance will be requested for loads that are too heavy or large for a single person lift.

EMPLOYEE TRAINING

Upon initial hiring, employees will be trained to utilize proper lifting techniques while performing work duties. Additional training will be conducted as necessary, or when new or modified procedures are introduced.

See ***Appendix A*** for a training sample regarding proper lifting techniques.

POLICY REVIEW

The Public Works Department will review the Lifting Policy on a 2-year cycle and update the policy as needed.

Appendix A

Proper Lifting Techniques Training Sample

LIFTING STAGES

1. Preparation
2. Lifting
3. Carrying
4. Setting Down

Preparation

Preparation and planning are critical aspects of ergonomic lifting. First, evaluating the lifting task for safety. Know how much you can safely lift and ensure the load doesn't exceed it. Assess whether the object is too large or awkward to lift and carry safely.

You need to know where you're putting the object ahead of time. Ensure the path is unobstructed, the floor is dry, and the distance isn't too great for safety. If the load is too heavy or ungainly, will obstruct your vision, and needs to be carried too far or lifted overhead, you'll need to find a safe alternative.

Preparation questions:

- Will you be able to get a good grip?
- Are gloves or other personal protective equipment required?
- How heavy or awkward is the load?
- Is it a two-person job?
- Can mechanical advantage be used to help with the lift?
- Is it possible to break the load into smaller portions?
- Where does the load need to be moved to?
- Is the path clear of obstructions, slippery areas, overhangs, stairs, and other uneven surfaces?
- Are there closed doors that need to be opened?
- Are there adequate handholds on the load?

Lifting

Lifting with your knees, not with your back means you should never bend forward to lift a heavy object. Instead, should squat, secure the load, and stand by straightening legs while keeping your back straight or slightly arched.

Safe lifting involves:

- Standing as close to the load as possible.
- Planting your feet shoulder-width apart with one foot slightly ahead of the other.
- Bending at the hips and knees only until you're deep in a squatting position.

- Keeping your head up and straight with your shoulders back to keep your back straight.
- Holding the load close to your body at waist height.
- Engaging your core muscles as you push against the ground and straighten your legs.
- Do not twist your trunk while lifting. Use a smooth motion while lifting.
- If the load is more than 50 pounds or too heavy or awkward to comfortably lift, find someone to help you with the lift.

Carrying

While carrying a load to its destination, maintain good ergonomics:

- Holding the load as close to your body as possible, level with your belly button.
- Keeping your shoulders in line with your hips as you move. Don't twist your trunk.
- Changing direction with your feet and leading with your hips.
- Taking small steps and keeping a good grip with all your fingers.
- Use mechanical means (e.g. hand trucks, pushcarts, etc.) when possible for heavier or awkward loads.
- If you feel fatigued, set the load down and rest. Don't let yourself become so fatigued that you cannot perform proper setting down and lifting techniques.

Setting Down

Setting down a heavy object is just as dangerous as picking it up. Reverse the lifting process, following the same ergonomic lifting principles:

- Keep the load close to your body and you're back straight or slightly arched.
- Squat down, bending only at the knees and hips.
- Tighten your stomach muscles, engage your core, and keep your head up as you lower yourself.
- Wait until the load is securely placed to release your handhold.

Do not to rush the lifting process and to carry a heavy load. Keep in mind that the most dangerous lifting tasks are repetitive and for sustained periods. Monitoring for self-exertion level and take breaks. Stop before becoming too tired to lift safely.

SMART LIFTING PRACTICES

Consider the Weight of Objects

Potential Hazards:

- Heavier loads place greater stress on muscles, discs, and vertebrae.
- Lifting loads heavier than about 50 pounds will increase the risk of injury.

Possible Solutions:

- Ramps can be helpful when moving heavy items from one level to another.
- Ensure that proper lifting principles are used and limit the weight being lifted to no more than 50 pounds.
- When lifting loads heavier than 50 pounds use two or more people to perform the lift or mechanical advantage.
- Remember to obtain training and authorization before using a forklift.

Be Aware of Awkward Postures

Potential Hazards:

- Bending while lifting places additional strain on the back as it adds the weight of the upper body to the weight of the object being lifted.
- Bending while reaching positions the load away from the body and significantly increases the effective load on the back. This causes stress on the lower spine and leads to muscle fatigue.
- Carrying loads on one shoulder, under an arm, or in one hand creates uneven pressure on the spine.

Possible Solutions:

- Move items close to the body to minimize the need to reach.
- When lifting a load from a low position use the legs to reduce bending and twisting of the spine. Place materials that need to be manually lifted at the "power zone." The power zone is mid-thigh to mid-chest height. This can be accomplished by storing objects on shelves, tables, racks, or stacked pallets.
- Use ladders or aerial lifts where necessary to elevate yourself and minimize overhead reaching.
- Use proper lifting principles, avoiding twisting and hold the load close to your body.

High-Frequency and Long-Duration Lifting

Potential Hazards:

- Holding items for long periods, even if loads are light, increases the risk of back and shoulder injury.
- Repeated exertion can fatigue muscles by limiting recuperation time.
- Inadequate rest periods do not allow the body time to recover.

Possible Solutions:

- Plan ahead when beginning work that will require high-frequency and long-duration lifting.
- Work should be organized to minimize the amount of time workers spend holding loads.

- Adequate rest breaks should be planned as well as job rotation between employees.
- Planning the pre-assembly of work items to minimize the time spent lifting.

Inadequate Handholds

Potential Hazards:

- Inadequate handholds, such as boxes without handles or oddly-shaped items, make lifting more difficult.
- Poor handholds move the load away from the body, increase the risk of contact stress and increase the likelihood of dropping the load.

Possible Solutions:

- Whenever possible utilize handholds such as handles, slots, or holes that provide enough room for gloved hands.
- Wear protective gloves to avoid finger injuries and contact stress.
- Ensure that gloves fit properly and provide adequate grip.
- Use materials that are packaged with proper handholds or move materials into containers with effective handholds.
- Suction devices are helpful in lifting materials with smooth flat surfaces.
- Other tools that create temporary handles may also be available.

Environmental Factors

Potential Hazards:

- Be aware of extreme temperatures that can affect lifting and material handling. Muscle flexibility decreases in cold temperatures and hot temperatures can lead to heat stress.
- Low visibility and poor lighting increase the likelihood of trips and falls.

Possible Solutions:

- Appropriate clothing should be worn for the environment in which work is to be performed.
- Drink water to avoid dehydration in excessive heat.
- Provide proper lighting for areas with low light and schedule work during daylight hours when possible.