



# Lake Manitou Association

## Process & Procedure Documentation

### Equipment Operations

<b>Process 9</b>	The electronic version of this document is controlled; all other versions are uncontrolled (reference only)	
Process Owner:	Date Approved:	Version Number:
Lake Manitou President	06/29/06	1.0

#### 1. OBJECTIVE/PURPOSE:

The purpose of the Equipment Operations processes are to ensure the safe and correct operation of the Lake Manitou equipment by Lake Manitou employees, volunteers, or contractors.

#### 2. RESPONSIBILITIES:

**Employment Committee Chairperson** – responsible for training the Association employees in the safe and proper application of weed control chemicals/algacides and in the safe operation of the Lake Manitou Association equipment.

#### 3. DEFINITIONS:

**By-Laws** – the document that governs the incorporation of the association, the operation of the association, roles, responsibilities, committees, and overall management of the association.

#### 4. PROCEDURE / DESCRIPTION:

The overriding priority when operating the Lake Manitou equipment is SAFETY. The Lake Manitou equipment is never to be used in a way that is unsafe or in a way that will put a person's safety at risk.

To be clear, it is never acceptable to use the Lake Manitou equipment in a way that places anyone at the risk of being injured.

The Employment Committee Chairperson is responsible for training the Association employees in the safe and proper operation of the Lake Manitou equipment.

The following lists the equipment addressed by this process. If there are other pieces of equipment that should be added to this list, please contact the Employment Committee Chairperson or Association President to discuss the equipment proposed to be added.

- Diesel Powered Weed Cutter
- Pontoon Weed sprayer
- 1982 GMC Pick-up Dump Truck
- Weed Whacker / Cutter
- Y-shaped weed cutter
- Bubbler air compressors
- Weed Cutter Trailer

The sections that follow will describe, in detail, the considerations for safe and normal operation of the Lake Manitou equipment listed above. Each section (if applicable) will address:

- Safety considerations
- Energized equipment considerations
- Normal safe operating procedures
- Maintenance
  - Preventative maintenance items
  - Normal wear/tear expected
- Start-up checklist
- Winter storage procedure
- Spring prep procedure
- Operator training



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- Other considerations (e.g. weedcutter in/out)
- Equipment personality and quirks
- Lessons learned

**Weed Cutter:** The biggest and most complex piece of equipment owned by the Lake Manitou Association is the diesel powered weed cutter. The weed cutter's primary purpose is to safely cut and remove aquatic weeds in Lake Manitou. The following sections will detail the safe operation of the weed cutter. (Include pictures where appropriate)

**Safety considerations** – a life jacket or floating cushion is to be carried on the weedcutter at all times in a location that would facilitate ready access in the case that the weedcutter is no longer seaworthy. Other safety considerations is taking along a self contained compressed air horn to alert people on shore and a cell phone to call for help or to report problems.

**Energized equipment considerations** – the weedcutter is powered by a diesel motor that operates a hydraulic pump/system. During normal operation, this hydraulic system operates the cutter head, propulsion system, and anchoring system through a series of operator controls. This hydraulic system has the ability to store limited hydraulic pressure after the pump has stopped. This stored pressure is sufficient to operate the cutter head or other hydraulic component for a few seconds and could cause injury if such operation were unexpected / unanticipated. Before working on components of the equipment that could cause injury if operated, the person working on the weed cutter should de-energize the system by....

### Normal safe operating procedures -

#### Preflight Verification:

##### Assessment of seaworthiness

- is it taking on water

##### Pre-ignition checks

- oil level
- fuel level
- hydraulic leaks
- bilge pump operation

##### Safety Equipment checks

- vest
- horn
- lights
- cell phone

##### Engine Starting

##### Verification of Hydraulic operation

##### Verification of weedcutter maneuverability

- Start
- Stop
- Turn

##### What to do if any of the preflight checks fail

- go/no go decision
- communications

#### In-flight Verification:

##### Verification of proper weed cutting operation

- Weed cutting



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- Weed discharge

Procedure to dislodge a foreign object from the cutter bar

- what tools to use
- who to call for help
- what if help is not available
- how to de-energize the system
- how to verify that there is no unspent hydraulic pressure that could sever a finger

Considerations when working with a partner

Unsafe behaviors that could get someone injured

What to do if the weedcutter becomes stuck on an underwater obstacle or beached

What to do if an Association member's property is unintentionally damaged

Loss of power

Other things that have or could likely go wrong and how to prevent or guard against it

- run out of fuel
- low oil pressure
- blows smoke
- vibrations, rattles, noises

Landing:

Docking procedure

Shutdown procedure

- de-energizing the system

Preventative maintenance

Equipment care / tarping

**Maintenance -**

**Preventative maintenance items -**

**Normal wear/tear expected -**

**Start-up checklist -**

**Winter storage procedure -**

**Spring prep procedure -**

**Operator training -**

**Other considerations (e.g. weedcutter in/out) -**

**Equipment personality and quirks -**

**Lessons learned -**

**Pontoon Sprayer:** The pontoon sprayer's primary purpose is to apply chemicals and aid in the physical removal of aquatic weeds (raking) in Lake Manitou. There are three primary considerations in operating the pontoon sprayer: safe pontoon motor operation, safe sprayer motor operation, safe sprayer operation. The following sections will detail the safe operation of the pontoon sprayer system. (Include pictures where appropriate)



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- Normal safe operating procedures -**
- Maintenance -**
- Preventative maintenance items -**
- Normal wear/tear expected -**
- Start-up checklist -**
- Winter storage procedure -**
- Spring prep procedure -**
- Operator training -**
- Other considerations (e.g. weedcutter in/out)**
- Equipment personality and quirks -**
- Lessons learned –**

### 5. REQUIREMENTS / NOTIFICATION:

The equipment is to be used only by individuals trained on their safe operation and that can ensure they will operate them safely.

The driver of the Pick-up dump truck must have a current drivers license in the State of Michigan and have no outstanding wants or warrants from the State of Michigan or local community law enforcement jurisdictions.

The user of the diesel weed cutter and Y-shaped weed cutter must be by someone responsible enough to ensure safe operation.

### 6. REFERENCES, SUPPORTING PROCESSES, AND TOOLS:

- Lake Manitou Weed Control (process 6)
- Lake Manitou Equipment Usage (process 2)
- Lake Manitou Administrative Processes (process 7)
- Equipment Maintenance Schedule and Forms
- Equipment Problem Reporting Process and Forms
- Accident / Safety Incident Reporting Process and Forms
- Equipment Safety Training Process and Forms

### 7. KEY CRITICAL SUCCESS FACTORS:

- All personal must be instructed on the safe operation of the equipment prior to first use.
- All equipment guards, that are to be in-place for safety, must be present before operation of the equipment.
- Equipment must be maintained to ensure safe operation.



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#### 8. CHANGE CONTROL:

Version	Changed By	Date	Description
1.0	J. Forsythe	06/29/2006	Initial Draft

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