

Forest Operations Manual

Version 3.1 - 2023

IN AN EMERGENCY

- 1) Keep yourself safe:**
Do not put yourself at risk of harm! You cannot assist if you yourself become injured or incapacitated.
- 2) Call:**
Report the incident and get help on-site!
Police/Ambulance: 911
MNR/Fire Reporting: 310-FIRE (3473)
ORC Emergency Line: 1-833-793-0990
- 3) Assess the situation:**
Can you assist in a way that does not further compromise anyone's safety?
- 4) Think before you act:**
Create a plan of action and stay calm. If you are speaking with an emergency dispatcher, ALWAYS follow their instructions.

For more information please refer to Section 1 of this handbook.

For more information visit:
obishikokaangresources.com



Lac Seul Forest

This manual contains Standard Operating Procedures and Best Management Practices for Operations on the Lac Seul

Welcome!



This booklet is a part of our continuing efforts to provide a safe and environmentally acceptable workplace for all those working on the forest. It is very important to that everyone working on the forest make a personal commitment to return to their home and family after a safe workday. It is also important that everyone familiarize themselves with the content of this booklet in order to minimize the environmental impact our operations have on the forest and to achieve the goals of the forest management plan.



Independent Third Party Review

The Lac Seul Forest has a strong commitment to independent third party verification of our commitment to sustainable forest management and protecting all forest values.

- Independent Forest Audits are completed by the Forestry Futures Trust on each SFL every five years, by a qualified team of professionals. Audit findings are documented and an action plan is developed and implemented.
- The results of the Independent Forest Audit are used to monitor the SFL holders performance and to determine whether the license will be extended.
- The Lac Seul Forest hires outside experts to conduct safety and forest fire prevention and management audits on our operations.
- Forest certification is a tool to have forest management practices assessed. The forest management practices are independently audited to a forest management standard that has been developed according to certain environmental, economic and social values.





Emerald Ash Borer

The emerald ash borer (EAB) is a highly destructive invasive beetle, which attacks & kills all species of ash. To help prevent the spread of EAB, do not move firewood. *Report any detections to one of the CFIA's offices.*



Loosestrife

This spiked, pink-purple flowering plant spreads rapidly & densely in ditches, wetlands & heavily disturbed areas. Thick root mats can spread over large areas & quickly crowd out native species. *In some areas, Purple Loosestrife has been successfully reduced through the introduction of certain leaf-eating beetles as biocontrol.*



Gypsy Moth

Adult male Gypsy Moth is brown; the female is white. Females lay egg masses on trees & in sheltered locations in July. They feed on many different species of shrubs & trees., causing defoliation & mortality. *Destroying egg masses can be effective. Do not transport infested wood.*



Wild Parsnip (aka Poison Parsnip)

Wild parsnip roots are edible, but the sap can cause skin rashes, blisters & severe burns. This plant grows up to 1.5 m tall & its yellowish green flowers form umbrella-shaped clusters 1-20 cm across. Wild Parsnip spreads quickly in disturbed areas such as waste dumps, meadows, open fields, roadsides & railway embankments,. It can form dense stands that outcompete native plants, reducing biodiversity



Asian Longhorned Beetle

Beetle feeds solely on hardwood trees. Several native insects (White Spotted Sawyer Beetle, Western Conifer Seed Bug, & Banded Alder Beetle) resemble the Asian Long-horned Beetle.

Contact OMNRF.

Area may be quarantined & infested trees cut & burned

Contents

Section 1 - Safety & Emergency Response

1A	Emergency Contact Numbers	1
1B	Emergency Response Guidelines	2
	Injury - Vehicle Accident - Fire - Spills	
1C	Health & Safety Guidelines	4
1D	Defensive Driving	5
1E	Two-way Radio Communications	6

Section 2 - Forest Fires

2A	Fire Reporting	7
2B	Fire Prevention and Preparedness	8
2C	Fire & Modifying Forest Manual	9
2D	Operational Modifications	10
2E	Fire Extinguishers	11

Section 3 - Transportation Of Dangerous Goods

3A	Regulations	12
3B	Fuel Handling	13
3C	Propane Handling	14
3D	Herbicide Transportation	15

Section 4 - Forest Management

4A	Standard Operating Procedures (SOP)	16
4B	Wildlife Tree Requirements	18
4C	Wood Utilization: Wasteful Practices	20
4D	Operations in Areas of Concerns for Riparian Zones	22
4E	Water Crossings	23
4F	Site Disturbance	24
4G	Debris Management	25
4H	Herbicide Use	27
4I	Road Construction and Maintenance	28
4J	Aggregate Pits	29
4k	Unidentified Values	30
4L	CLAGG	31

Section 5 - Species At Risk & Invasive Species

Section 6 - Independent Third Party Review

Emergency Contact Numbers:

911

Emergencies and Police

310-FIRE (3473)

Fire Reporting

1-800-268-6060

Spills Action Centre

1-833-793-0890

Obishikokaang 24-Hour Emergency Line



ORC requires all contractors and overlapping licensees to notify the Compliance Coordinator or Operations Forester in the event of an emergency.

Emergency Number: 1-833-793-0890

Invasive Species

Standard Operating Procedure

Forest pests impact our forest ecosystems by degrading the quality of wood, eliminating wildlife habitat, & recreation & cultural value. Trees are unable to defend themselves against introduced forest pests, resulting in widespread tree mortality. Stressed trees show signs of crown thinning, wilted leaves & premature colouring.

- Learn to identify invasive forest pests that are a threat In Ontario.
- Don't move firewood. Burn it where you get it.
- Don't move infested wood material to new areas.

If you see suspected signs of infection on trees, contact the Canadian Food Inspection Agency (CFIA) at 1-866-463-6017 or visit www.inspection.gc.ca

Invasive plants are plants that have been moved from their native habitat to an introduced area where they are able to reproduce quickly & crowd out native species. These plants impact our forests resulting in economic, ecological or social disruption. They impact Ontario's biodiversity, as well as our economy, agriculture, forestry & outdoor recreational activities. Do not transport plants, seeds or fruit across borders.

Report all sightings to the Invading Species Hotline 1-800-563-7711.



Mountain Pine Beetle

This 5 mm long insect is responsible for widespread pine mortality. Beetles will mass together & attack a tree as one coordinated force, overcoming the tree's defenses. Adults tunnel into a tree to lay their eggs. Beetle larvae will then spend the winter feeding under the bark, destroying the tree's circulatory system. July-September, adults emerge from the bark & fly in search of a new host tree. Infected trees have red needles at the crown, while sawdust collects at the base of trees from larvae feeding. Notify OMNRF immediately.

Species at Risk

Species at Risk are species facing imminent extinction and species that are at risk of becoming endangered in Ontario.

In Northwestern Ontario, Species at Risk are classified as endangered (E), threatened (T), or of special concern (SC). Logging contractors have a vested interest in protecting wildlife by maintaining the condition of the habitats in which they operate.

Endangered (E): Wildlife species facing imminent extinction or extirpation (no longer existing in the wild in Canada, but existing elsewhere in the wild).

Threatened (T): Wildlife species likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction.

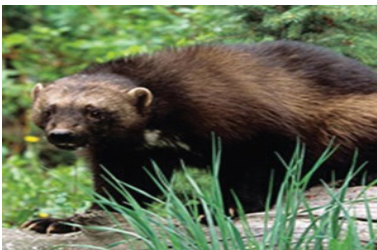
Special Concern (SC): Wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats



Bank Swallow - *Threatened*



American White Pelican - *Threatened*



Wolverine - *Threatened*



Grey Fox - *Threatened*

Emergency Response Guidelines

In an emergency, who should I call?

Police (OPP) & Other Emergencies	911
Fire Reporting (MNRFP)	310-3473 (FIRE)
Spill Reporting	1-800-268-6060
Hydro One Emergency	1-800-434-1235
Obishikokaang Resources Corporation	1-833-793-0890

In an emergency, what should I do?

Ensure that the site is as safe as possible **before** providing assistance to minimize risks to victim, self or others.

In the event of an **Injury**:

- 1) **Administer First-Aid** if necessary.
- 2) If you need emergency medical assistance, **CALL 911** to request an ambulance.
 - **Land Ambulance:** Send a vehicle to meet ambulance and guide it back to the site.
 - **Air Ambulance:** Ensure that landing area is clearly marked and free of debris. Control vehicle traffic in the area.

In the event of a **Vehicle Accident**:

- 1) **Notify OPP** of the accident. Call or delegate someone to **CALL 911** and have them report back to you
- 2) **Notify local traffic** of the accident and location by radio, whenever possible. Ensure the scene is safe or made as safe as possible.
- 3) Erect, or assign someone to **erect warning device(s)** at the scene to warn of potential danger ahead.
- 4) **Notify foreman** and Obishikokaang Resources Corporation by calling **1-833-793-0890**

Emergency Response Guidelines

In the event of a **Fire**:

- 1) **Assess the Fire.** If fire is controllable, take appropriate actions to extinguish the fire.
- 2) Immediately report the fire to the MNRF. **Call 310-FIRE (3473).** Request assistance as required and action fire until it is out, you are relieved by MNRF, or it becomes too dangerous.
- 3) Take precautions and make reasonable attempts to remove any people from danger.
- 4) Report all fires to your Supervisor. Contact the **Obishikokaang Emergency Line: 1-833-793-0890**

In the event of a **Spill**:

- 1) **KEEP SAFE.** Ensure site is as safe as possible before responding to a spill.
 - 2) Wear appropriate **Personal Protective Equipment.**
 - 3) **CONTROL** the spill by stopping it at the source.
 - 4) **CONTAIN** the spilled material to as small an area as possible. Block the spill from endangering people, entering into water bodies, or impacting upon values.
 - 5) **REPORT** the spill to:
 - i. Your supervisor. Request assistance if required.
 - ii. **ORC 24-hr Line: 1-833-793-0890**
 - iii. Ministry of the Environment Conservation and Parks (MECP) if the spill is likely to cause adverse effects to water systems, plants, animal or human life. Check with your Supervisor before reporting.
- Ontario Spills Reporting Line: 1-800-268-6060**
- 6) **CLEAN UP** the spilled material as soon as possible.
 - 7) **DISPOSE** of the spilled material at an approved site. May require the use of a MECP Licensed (Registered) carrier to assist you with the disposal of the spilled material(s). Consult your Supervisor.

Species at Risk

Standard Operating Procedure

If you encounter a Species at Risk (SAR) or its habitat (i.e. nest or den or other important habitat) or an invasive species during operations that is unmapped:

- **STOP** work immediately.
- **RECORD** SAR/Invasive Species observations as per the Species at Risk Sighting Information Form.
- **REPORT** details to your **Operations Forester (SAR Reporting Form available on the website)** for further clarification and to have the Ontario Ministry of Natural Resources & Forestry (OMNRF) investigate to determine the appropriate prescription before proceeding with operations.

Woodland Caribou



Threatened

Prefers open bogs & conifer forests. *Habitat protection is implemented through application of Dynamic Caribou Habitat Schedule (DCHS), monitoring of habitat through the Caribou Conservation Plan, road decommissioning strategies & additional techniques, as specified. Specific AOC prescriptions pertaining to calving locations provide protection & are mapped (i.e. CCM, CCM2, CCR). If you encounter an unmapped, caribou calving area that lacks an AOC prescription, keep operations at least 1 km away until an AOC prescription has been developed in consultation with ORC & OMNRF.*

Golden Eagle



Endangered

Slightly larger than Bald Eagles, Golden Eagle adults are dark brown with golden-brown colouring at the back of the head, around the neck & on the upper side of the wings. Nests on ledges on steep cliffs or riverbanks, in large trees or on the ground. *Keep operations a minimum of 400 m away from an unmapped, occupied nest until an AOC prescription has been developed in consultation with ORC & OMNRF.*

CLAGG

Careful Logging Around Advance Growth

Where: Spruce Lowland (SPL) forest units.

When: Winter harvest on frozen ground to reduce damage to advance growth, seed bed, and site.

How: Limit machine traffic to distinct trails that provide access to the entire stand.

Feller Bunchers



Harvest Trails

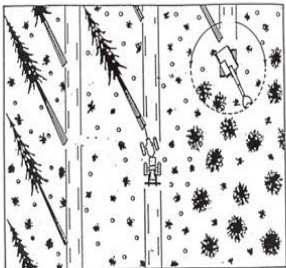
- Parallel to one another
- Maximize distance between trails
- Minimize width of harvest trails
- Follow a linear cutting pattern

Bunches

- As large as possible
- Place at a 20 to 30 degree angle to trails
- Grapple wood placed behind buncher, in harvest trail, on return trip to road

Felling Head

- Move up and over regen
- Avoid 'cleaning' of regen



Skidders



Harvest Trails

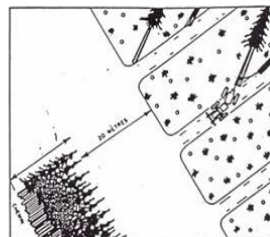
- Remain on harvest trails
- Minimize detours off of trails
- Avoid having 2 skidders meet along the same trail
- Back-up to piles

Turn Arouds

- As few as possible
- Locate in areas of little or abundant regen
- Spaced 40 to 50 m apart
- Follow proper technique (2 point turn)

Skidding

- Skid one pile at a time
- Avoid widening trails except 20 m behind landings



Health and Safety Guidelines

All contractors and overlapping licensees are required to meet or exceed applicable laws and/or regulations covering health and safety of their employees and families and adhere to Occupational Health and Safety Act (OHSA) and Canada's Labour Laws.

REMEMBER: It is your responsibility to be aware of all the requirements of the OHSA that pertain to your operation.

All contractors and overlapping licensees must follow their own safety procedures. In the event that you do not have your own safety procedures, please follow these minimum requirements:

- ✓ Continually monitor the condition and functionality of equipment.
- ✓ Regularly review work schedules and hours of work.
- ✓ Utilize the appropriate safety equipment for forest workers and woodlands staff (e.g., hardhats, eye protection, gloves, hearing protection, suitable footwear, etc.).
- ✓ Identify safety training needs, the provision of safety training, safety coordinators, and safety specifications of their responsibilities.
- ✓ Maintain safety inspection records, equipment inspection records, training records, records of lost time injuries, safety audits and inspection/ review on first aid training and facilities.
- ✓ Ensure that all forest workers are covered by mandatory worker's safety insurance, in accordance with provincial laws and regulations (WSIB).

Defensive Driving

- 1) Seat belts **must** be worn and headlights must be turned on.
- 2) All vehicles **must** come to a stop at all posted stop signs.
- 3) **Drivers shall obey all posted speed limits and traffic signs** on all roads and highways. Always adjust your speed to road and weather conditions.
- 4) At junctions and bridges, all vehicles must **slow down** and use caution.
- 5) On narrow roads and one lane bridges all vehicles must slow down and proceed only when the way is safe and clear. When meeting other traffic on narrow roads and one lane bridges, vehicles in both directions must **be prepared to stop**.
- 6) Always keep to the right and absolutely **no passing on curves and hills**.
- 7) No passing when visibility is reduced, such as dusty or snowy conditions.
- 8) Watch out for soft shoulders and winter over-plowing.
- 9) All drivers must have a **valid driver's license** to operate motor vehicles on forest access roads and in all of our operations.
- 10) All drivers must abide by the rules and regulations as set out by the Highway Traffic Act.
- 11) All drivers must **slow down** when meeting or passing graders, sanders, road repair crews, and camp sites (20 km per hour or less depending on road conditions).
- 12) **All vehicles upon approaching a railway crossing that is not protected by gates or railway crossing lights must stop.** Having stopped, the driver shall look in both directions along the track and open windows of the vehicle to listen for approaching trains. When it is safe to do so, the driver may cross the railway tracks.

All contractors and subcontractors must hold public liability and employer's liability insurance

Unidentified Values

Values include (but are not limited to):

- Nesting sites
- Water bodies
- Buildings
- Trails (trap line, portages, vehicle, snow machine, hiking)
- Traps and boxes
- Mining claim posts/markers
- Cultural heritage sites
- Fish spawning areas
- Moose aquatic feeding areas
- Utilities (hydro line, telephone line, pipeline, cable)
- Boat caches
- Species at Risk



IF YOU DISCOVER AN UNIDENTIFIED VALUE:

- 1) STOP work immediately.
- 2) Notify supervisor.
- 3) Document:
 - a. Type of value
 - b. Exact location
 - c. Date and time of discovery
 - d. Was the value impacted? How?
- 4) Notify company superintendent.
- 5) If instructed to continue work, ensure that the value is given the appropriate level of protection.

Aggregate Pits

- Topsoil and overburden to be stripped and stored on site.
- Pits must not be established within 15 meters of block boundary or AOC boundary.
- Aggregate must not be removed below the ditch line within 15 meters of a road.
- All excavation faces are to be sloped to a stable angle of repose when the pit is inactive. All aggregate pits must be sloped before equipment is moved out.
- No extraction of material within 1.5 meters of the groundwater table if the proposed site is within:
 - a) 500 meters of a coldwater stream
 - b) 1000 meters of a water-well, whether dug or drilled
 - c) 5000 meters of a sensitive receptor (municipal water source, school, hospital, etc.).
- No ponding allowed. Offsite drainage is to be directed away from riparian values.
- All trees within 5 meters of the excavation face must be removed.
- All scrap metal and refuse must be removed from the pit and disposed of at an approved disposal site.
- Progressive rehabilitation to be ongoing within a 10 year period. Only allowed 3ha active at one time with progressive rehabilitation of extraction area ongoing.
- All excavation faces are to be stabilised as necessary to prevent erosion into the setback area.
- No undercutting of the working face shall be permitted.
- The vertical height of the working face shall not be more than 1.5 meters above the maximum reach of the equipment.

Two-Way Radio Communications

Haul channels are for announcing locations or hazardous situations on all forest access roads. All other communications should be conducted on the general logging channel in your area.



- Two-way radios are to be used as a safety device for announcing locations or hazardous situations while in the company working areas. Unnecessary talking or profanity will not be tolerated.
- Two-way radios are mandatory for all haul trucks.
- All haul trucks or vehicles equipped with radios should announce their location on bush roads every 5-km and at any road junctions and bridges.
- Drive according to road and weather conditions.
- Radio communication is a helpful tool to improve hauling safety and efficiency. Do not rely on your radio to determine if the road is clear of traffic. These roads are travelled by other users including the public, tourists, fishermen, and hunters, who may not have radios or may not be familiar with radio communication protocol.

Haul Channel 5: Frequency 170.310 MHz
Haul Channel 6: Frequency 171.000 MHz

Fire Reporting

MNRF: 310-FIRE (3473)

ORC 24-hr Emergency: 1-833-793-0890

Call MNRF and ORC immediately and report the following information:

- ✓ LOCATION
- ✓ CONDITION
- ✓ FUEL
- ✓ SIZE
- ✓ SPREAD POTENTIAL
- ✓ VALUE(S)
- ✓ ACTION(S)



Modifying Industry Operations Protocol Information
(Daily Fire Codes):

Sioux Lookout District: 1-888-917-3330

Road Construction and Maintenance

Road Construction

CONSIDER:

- Planning
- Purpose
- Use
- Location
- Design
- Approvals
- Layout
- Equipment
- Operators



Minimize road construction as much as possible to reduce the loss of productive land-base

REMEMBER:

- ✓ Stay inside the approved corridor.
- ✓ Avoid water bodies as much as possible.
- ✓ Stockpile vegetation and black organic material where possible for later rehabilitation (crossings).
- ✓ Maintain natural drainage patterns where possible.
- ✓ Ensure cross drainage pipes are installed where required to prevent flooding of productive forest land. Forest operations are not allowed to impede, block or divert water movement on the landscape
- ✓ Ensure that ditches are constructed and cleaned out where required.
- ✓ Erect appropriate signage as required.

Herbicide Use

Storage

All herbicide products MUST:

- ✓ Be safely stored so they will not harm the health or safety of any person, or come into contact with any other commodities (food, clothing, linens, etc.).
- ✓ Be stored in a clean, secure area to prevent the herbicide from contaminating the natural environment, or any other herbicides stored in the same area.
- ✓ Be stored in an area that is placarded with the appropriate warning sign on each entrance.
- ✓ Require the express permission of the person responsible in order to enter the storage area.
- ✓ Be stored where a list of emergency telephone numbers are prominently displayed and adequate respiratory protection and protective clothing is readily available for emergency purposes.

Handling

- Wear the appropriate Personal Protective Equipment (PPE) for the herbicide being handled (e.g., rubber or neoprene boots and gloves, coveralls, goggles, respirators, etc.).

Herbicide Emergencies/ Reporting (Fire, Spill or Theft)

- Please refer to the Emergency Response Guidelines on page 2-3.



Fire Prevention & Preparedness

Be Ready

Ensure that you have serviceable suppression equipment that meet minimum requirements.

- **No smoking** while walking in the forest.
- Know the **location** of suppression equipment .
- Ensure you have sufficient training to respond to a fire.
- Have adequate 2-way communications available
- Be familiar with the Fire Plan.
- Invoke Prevention Measures.
- Understand the Modifying Industry Operations Protocol and how it relates to you.
- Know what modifications are applicable to your operation.
- Know the location of the relevant (nearest) weather station(s) for your operation.
- Be aware of escape routes, safe zones and water sources.
- Ensure that you have sufficient training to respond to a fire.
A minimum of 25% of workers on site at all times must have S-102 training to be considered a Trained and Capable Operation.

Know What to Do

Whenever possible, action the fire immediately and request assistance, as required.

- **Report all fire starts immediately** to both the MNRF and ORC.
- Action the fire to the best of your ability until the fire is out, or you are relieved by the MNRF, or the fire cannot be worked upon safely.



Fire & Modifying Forest Operations

Prevention measures apply April 1st to October 31st or as stated by MNRF.

Keep records of fire codes. Document:

- Daily fuel group
- Fire intensity code
- Modified shift information for your operations

Contact MNRF for next day's codes after 15:00 hrs (3:00 pm)

Sioux Lookout District: 1-888-917-3330

Operational modifications start at 00:01 hrs (*local daylight savings time [DST]*).

Suppression Equipment Legal Requirements

Operations	Number of Machines	Number of Equipment Caches	Backpack Pumps*
Heavy equipment with tire chains or tracks, working in forest fuels.	1-5	0	1/machine
	6+	1	
OR**: Heavy equipment at work within a 10-km radius of each other (Includes hot work).	1-9	0	1/machine or hot work operation
	10+	1	
Tree plant, manual tending or other labour-intensive operations		0	1 for every 4 workers (maximum 10 per site)

* A serviceable pressurized water delivery system located on a machine can replace a backpack pump. ** Only one fire equipment cache will be required on site providing it is within 20 minutes (by ground transportation) of all equipment.

Source: Table 1: Suppression Equipment, Modifying Industrial Operations Protocol, MNRF

Debris Management



Debris management is important to achieving goals in the forest management plan, minimizing loss of productive forest land base, and reducing negative impacts to the visual landscape.

Chipper Debris Piles (upland and lowland):

- Debris should be pushed or bailed up into elongated piles and should not exceed 20 meters in length (i.e.: creating Fire fuel breaks).
- Piles should not be > 3 meters in height.
- Piles are not to be pushed into areas of standing timber, advanced regeneration, or pockets of lowland organics.
- Mineral soil, mosses or snow layer should be exposed between piles, within the corridors.
- Minimum width of corridors should average 2.5 meters.
- Corridors must not pond or hold water.

ON UPLAND SITES carry back as much chipper debris as possible and evenly distribute throughout cutover. Do not leave in large clumps. Reduce road-side volumes by utilizing chipper debris for road construction, bank stabilization or pit rehabilitation.

ON LOWLAND SITES (winter operations), there is to be no carry back to cutover or spreading onto/ down roads. Debris may be used to fill in wet spots if skidders are breaking through.

Debris Management

Delimber Slash Piles

- Limber debris will be piled or pushed up into large, individually aerated piles in order to enhance the drying of the debris.
- The piles will not be compacted in any way and will not be located on top of chipper debris pads. The piles will be kept free of mineral soil and will be located a safe distance from other forest values (i.e., standing timber, advanced regeneration, structures).
- The piles will be situated as close to the road as possible, with adequate fire breaks, hardwood limber debris is to be mixed in with the conifer limber debris.



Operational Modifications

P = Prevention (Normal Operations)

SS = Short Shift

- Operations are **not** permitted between 12:00 and 19:00 (7:00 pm, local DST).
- Prevention measures still apply and **a dedicated patrol* of the area must be carried out for one hour** after operations shut down.

RS = Restricted Shift

- Operations are **not** permitted between 08:00 and 22:00 (10:00 pm, local DST).
- Prevention measures still apply and **a dedicated patrol* of the area must be carried out for one-hour** after operations shut down.
- Identify water sources close to operations prior to commencing any operations.

SD = Shutdown

- Operations are **not** permitted starting at 06:00, local DST on the first day of shutdown.
- Operations will remain suspended until conditions change and Prevention, Short Shift or Restricted Shift is indicated.
- Prevention measures still apply and **a dedicated patrol* of the area must be carried out for one hour after operations cease.**
- Once this initial patrol is complete, lower risk operations working in the vicinity can offer dedicated fire patrols during the shutdown period.

Modifying Industry Operations Protocol Information
(Daily Fire Codes):

Sioux Lookout District: 1-888-917-3330

Fire Extinguishers

Fire Extinguisher Requirements

Minimum Fire Extinguisher Rating for Logging Equipment is 10 Lb **6A 80BC**

Involved in the following forest operations:

- Felling
- Forwarding/Skidding
- Processing
- Chipping and hogging
- Log loading
- Road/Water Crossing construction and maintenance
- Service Truck for Welding/Grinding

Fire Extinguisher Maintenance Requirements

- **Record of monthly inspection** on a tag or in log book to ensure:
 - Fully charged
 - No damage or corrosion
 - Proper rating and size
 - Legible operation instructions
- **Recharge after use** or as indicated after an inspection, or after performing a maintenance check
- Annual fire extinguisher inspections must be done by a third party.



Fire Extinguisher Legal Requirements

Minimum Fire Extinguisher Ratings

Logging Equipment Involved in: felling, forwarding/skidding, processing, chipping, hogging, loading, road/water crossing construction and maintenance **10 lb 6A80BC**

Fuel (hwy) Tanker Trucks 5BC in cab +10 lb 6A80BC

Service Trucks for Welding/Grinding 10 lb 6A80BC

Power Saws and Brushsaws 225g ABC

Site Disturbance

- Identify sensitive areas prior to harvest or site preparation (e.g., lowland sites, clay, silty soils, very shallow rocky sites).
- Implement detailed felling/skidding plan where warranted and as identified on Sign Off Maps.
- Monitor operations, especially during wet periods, to ensure that excessive site disturbance is not occurring.

**IS EXCESSIVE SITE DAMAGE
OCCURRING/LIKELY TO OCCUR?**

YES

=

**Relocate or shutdown operations
before this happens!**

Apply these good practices in sensitive areas:

- Operate during frozen or drier summer conditions.
- Plan roads, skid trails and landings to: minimize their extent, keep to upland routes and avoid advanced regeneration.
- Modify load size to minimize the loss of traction during skidding and forwarding.
- Reinforce soft, wet areas with slash/chipper debris of corduroy and remember to measure corduroy (linear scale) for crown dues.
- Retain residual trees, organic matter and surface vegetation on steep slopes.
- Avoid site preparation of wet or rocky shallow soiled sites to minimize removal of organic matter.
- Avoid or minimize bulldozing landing areas on shallow soil sites.

Water Crossings

Before Starting

- ✓ Confirm proper location of crossing, as per AWS/FMP or other approval
- ✓ Keep road right-of-way (ROW) as narrow as possible within the AOC, < 20 meters or as per the AWS/FMP.
- ✓ Ensure proper diameter culvert or structure (determined by hydrology analysis).
- ✓ Ensure proper length culvert ($L = 4 \times \text{fill height} + \text{road width} + 1$)
- ✓ Ensure work is scheduled to occur as per approval(s) and operating conditions and is within window for in-stream work. (Refer to the approved Forest Management Plan or Operational Guidelines).
- ✓ Ensure workers are adequately trained.
- ✓ Schedule for proper equipment to be on-site during installation (culverts must be installed with an excavator).
- ✓ Ensure equipment is clean and free of leaks.

Installation:

- Minimize any grubbing within 100 meters of a crossing.
- Water crossing spill kit must be on-site for crossings of special significance or sensitivity, and set-up if required.
- Care must be taken to not damage culvert (culverts > 20% "out of roundness" should not be used).
- Culvert should be installed with a minimum 10% of its diameter below the original streambed.
- Use only good packing material for backfill (Packers for culverts > 1800 mm in diameter).
- Complete the installation in a timely manner and do not allow equipment to leave the site until the water crossing has been completed: erect signage as required.
- Stabilize all slopes for the short and long term (e.g., slope 2:1, rip-rap, brush mat, seed mix, geotextile).
- Divert run-off.
- Make every effort to prevent and/or control any potential erosion.



Transportation of Dangerous Goods

REGULATIONS

Dangerous Goods (DG) are regulated under numerous laws and policies including the Transportation of Dangerous Goods Act and Regulations.

TRAINING

Training is required for anyone who:

- Handles DG
- Prepares DG for transport
- Transports DG



CERTIFICATE

Must be on your person and/or immediately available for inspection.

DOCUMENTATION

All regulated DG must have a shipping document accompany them when being transported, regardless of the amount. *

SAFETY MARKS (LABELS & PLACARDS)

All DG must be clearly marked with the appropriate Safety Marks, as required.

TRANSPORTATION

All means of containment of DG must be secured to the vehicle or means of transport.

*Some **EXEMPTIONS** to the above do exist.

Ensure that you understand how the legal and policy requirements relate to your job.

Fuel Handling

All Fuel Tanks Must Be:

- ✓ Constructed to an approved design standard
- ✓ Meet all legal and policy requirements
- ✓ Tested as required
- ✓ Properly secured
- ✓ Display safety markings & labels
- ✓ Protected from impact/damage

During Refueling:

- ✓ Nozzle must be constantly attended.
- ✓ Always store nozzle safely in holster
- ✓ Appropriate spill kit must be available.
- ✓ Legal fire extinguishers must be available.



Safety Reminders:

- Refueling & fuel storage must be >100 meters from water bodies.
- **NO SMOKING** while refueling or in fuel storage area.
- Do not fill tanks >95% capacity.
- Always store nozzle safely in holster
- Fuel trailers must be chocked and blocked.
- Check refueling system (tank, pump, hose, nozzle and fittings) on a regular basis to ensure that it is in good condition.
- No sources of ignition <3 meters of fuel (e.g. portable generators, cell phone, cigarette, etc.).

Operation in Areas of Concern for Riparian Zones

Riparian Zones include bodies of water and the banks of lakes, rivers, creeks, intermittent creeks, wetland complexes and vernal pools

- Avoid operating in moving and still water.
- Leave a minimum 3 meter filter strip of undisturbed forest floor measured from the normal high water mark of the riparian zone.
- An Area of Concern (AOC) of variable width (as determined in the FMP) will protect the quality of water, lake bottoms and streams.
- Trees must not be felled across or into the riparian zone.
- Sites that are sensitive to erosion, compaction or rutting should be operated in the winter or using high-flotation equipment during frost-free periods.

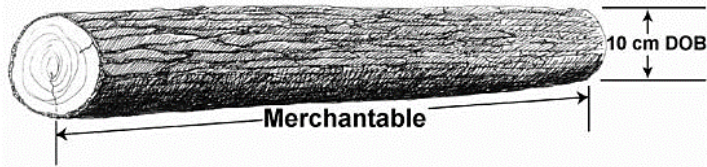


- Do not move equipment across any body of water or filter strip unless instructed to do so by a supervisor.
- No roads, skid ways, etc. are allowed within riparian zones, unless specifically prescribed or approved.
- Never refuel or service equipment within 100 meters of a riparian zone.
- Fuel, oil and other petroleum products must not be stored within 100 meters of a riparian zone.
- Wood must be landed at least 100 meters away from a riparian zone.
- Equipment must not be washed within 100 meters of a riparian zone.

Wood Utilization: Wasteful Practices

Leaving Merchantable Timber of Any Length

- Any conifer, Po or Bw log in which more than one-half of the total content is sound wood and, in the case of:
- Any felled Pj, Sp, Bf, La or Ce that has a diameter ≥ 10 cm (diameter class) outside bark at smaller end.



- Any felled Po, Bw, Pw, or Pr that has a diameter ≥ 14 cm (diameter class) outside bark at the smaller end is a merchantable piece and must be brought to roadside and utilized.

Leaving Merchantable Trees

- Leaving any merchantable tree(s) standing that the Licensee has the right to harvest or any part of an approved area.

Leaving Lodged Trees

- Leaving any lodged tree (for other than natural causes) in a harvesting area, that has been partly or wholly separated from its stump or displaced from its natural position.

Not Utilizing Wood Chip Fibre

- Not utilizing chipped wood fibre of any species at a chip manufacturing facility, whether fixed or mobile.

Mobile Fuel Tank Legal Requirements

- Placards (1202/1203) must be visible and legible. Small Tanks (<450 L) must have one (1) placard visible from outside the vehicle. Large Tanks (>450 L) must have four (4) placards, minimum of one visible from outside the vehicle.
- Tank ID Plate must be visible and legible.
- Record of Retest/Inspection must be visible and legible. Last inspection must be within 5 years for diesel >450 L and gasoline any size.
- Nozzle Dyed diesel tag, nozzle stored safely in holster, 95% limiting.
- The fuel tank must be secured to the vehicle/mode of transport and straps must be capable of restraining weight of a full tank in motion.
- Safety stickers must be on tank (e.g., no smoking, dyed diesel/coloured fuel)

Propane Handling

All Propane Cylinders Must:

- Display safety markings, labels
- Not be damaged
- Use an approved regulator
- Be used with an approved hose
- Be stored upright and secured
- Be protected from impact/damage
- Be stored outside and away from buildings

Users must ensure that:

- Propane equipment inside accommodation trailers is checked by a certified gas fitter at least once per year and records of service are retained
- They have been trained in the procedure for soap testing fittings
- A soap test for leaks is done every time a cylinder is changed
- A soap test for leaks is done on all fittings every time a trailer is moved

Herbicide Transportation

Herbicides are generally defined as any substance that is registered under the Pest Control Products Act (Canada) and is manufactured, represented, sold or used as a means of directly or indirectly altering the growth, development or characteristics of any plant life. For more information, refer to Canada's Pest Control Products Act, S.C. 2002, c.28.

- ✓ All herbicide products **must be transported in a secured manner**.
- ✓ Herbicide products **must not be transported together with other commodities** (e.g. food or drink, household furnishings, toiletries, clothes, bedding, etc.) unless the herbicide is contained and separated from such commodities to prevent contamination by the herbicide
- ✓ All **herbicides must not be left unsupervised in a vehicle** unless the vehicle is located in a place inaccessible to the public, or the herbicide is locked in an enclosed part or compartment of the vehicle and each entrance is properly secured and placarded.

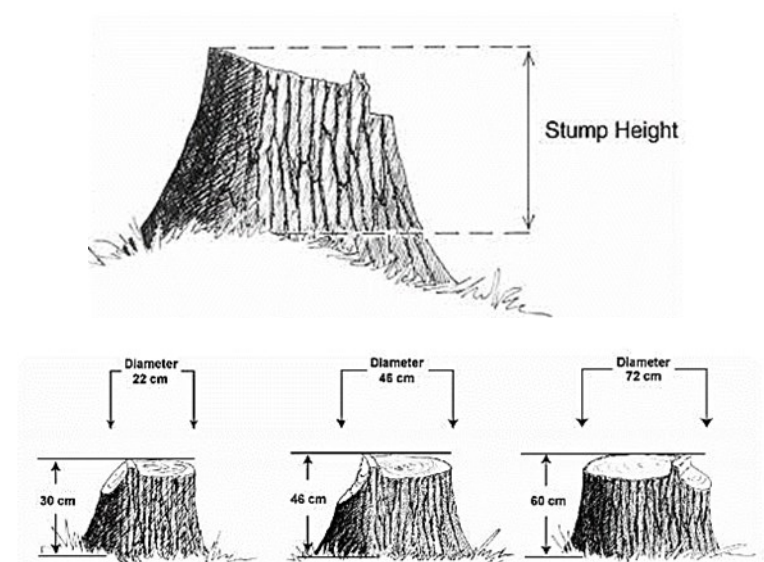
Herbicide Legal Requirements

- All companies and personnel engaged in herbicide operations must be properly licensed by the Ontario Ministry of the Environment Conservation and Parks (MECP).
- All herbicide operations will be conducted in accordance with the Ontario Pesticides Act, Regulation 63/09 under the Act, and all amendments and revisions made to the Act and/or Regulation.
- In advance of all herbicide applications, the general public will be notified following the legal requirements contained in the Ontario Pesticides Act, Regulation 63/09 and Ontario Ministry of Natural Resources and Forestry policies and procedures.
- All herbicide products will be transported, stored, handled and applied according to the requirements and recommendations contained in the herbicide product labels.
- In the event of an emergency (e.g. fire, spill, theft, or other occurrence) that may result in a herbicide being discharged into the environment out of the normal course of events, the person responsible for the herbicide shall, as soon as practicable, notify the MECP Director and Spills Action Centre.

Wood Utilization: Wasteful Practices Be Efficient!

High Stumps

- Any stump can be ≤ 30 cm in height, regardless of diameter,
- Stumps 30 cm – 60 cm in diameter, height cannot exceed diameter.
- No stump can be > 60 cm in height.



Stump Height

The vertical distance between the highest point of the stump to the highest point of the ground at its base

Types of Large Wildlife Trees



Living cavity trees

Cavity trees have existing cavities in the trunk or on main limbs, or characteristics suggesting they may develop cavities in the near future (e.g., fungal conks). In the past, these trees were sometimes referred to as 'snags' or 'snag trees'.



Stubs

A stub is a live tree that has been cut (and killed) well above the normal stump height (i.e., 3-5 m high). In managed forests, the 'stubbing' of live trees is increasingly being used when the objective is to emulate some of the physical properties of a tree that died quickly during a catastrophic natural event (e.g., wildfire).



Supercanopy trees

Supercanopy trees are large, living, individual trees that tower over the forest canopy.



Veteran trees

Trees with characteristics (e.g., thick bark) that allow them to survive a stand initiating disturbance, such as a fire, and eventually grow to become supercanopy trees in the future mature stand.



Mast trees

Mast trees are trees that produce edible fruits. Mast is usually described as hard mast (e.g., acorns) or soft mast (e.g., cherries).



Diversity trees

Diversity trees are tree species that occur infrequently or are uncommon for the forest type.



Safe dead trees

Only dead trees that are clear of roadways and work zones, or that do not pose an obvious, immediate threat to safety should be selected as safe dead trees.

FOREST MANAGEMENT STANDARD OPERATING PROCEDURES

- Before commencing harvesting operations, be sure that all appropriate licenses and approvals are in place.
- **Review the Block Sign Off Map** with the Overlapping Licensee/Contractor Supervisor to ensure that all AOC symbology and prescriptions are clearly understood.
- **Confirmation signatures on Block Sign Off Maps are required prior to start of operations.**
- **Be Familiar with all AOC symbology** and ensure that AOC prescriptions are understood.
- **Cutter/Feller Buncher operator must have a signed Block Sign Off Map in machine at all times** identifying where the harvest boundaries and/or control lines are located.
- **Trees with ribbons attached must be left standing.**






- **Supervisor and Cutter/Feller Buncher operator must meet on-site** to confirm and discuss starting position, as well as any additional detail(s) associated with the harvest block before any harvesting operations may commence.
- Make yourself aware of any AOC(s) and FOP(s) (e.g., CLAAG) associated with the operating area/block.
- Ensure that all relevant guidelines, such as leaving Wildlife Trees, are adhered to.

FOREST MANAGEMENT STANDARD OPERATING PROCEDURES



- Protect values, leave trees and regeneration.
- **Do not fell trees across boundary lines.**
- Control lines must be established and blocks closed off before any harvesting is to occur.
- Ensure that appropriate snag trees are left.
- Minimize disturbance to sensitive sites.
- Ensure GPS data for the forest is up-to-date.
- Consider the significance of Visual Quality within the area of operations (e.g., debris management, standing timber, buffers, FMP prescriptions, etc.)
- Ensure that ribbons are attached to stable, visible trees and that they are visible from one point to another.
- Ensure that relevant workers are aware of ribbon colors and their meanings, as indicated below
- Harvesting adjacent to boundary lines must only occur during daylight hours, and harvesting conducted during night shift must only occur within already cut boundaries.

Ribbon Colours

HARVESTING OPERATIONS RIBBONS

-  **PINK:** No-Cut boundary
-  **ORANGE & BLACK:** Roads
-  **BLUE:** Block division, sensitive sites, unidentified riparian zones, compliance

GRAVEL PIT RIBBONS

-  **PINK:** Permit boundaries (pits)
-  **PINK & BLACK:** Set back line

IF IN DOUBT, STOP AND ASK

Wildlife Tree Requirements

The following is required in any given 20 ha area within a harvest block or for the entire block when the block is less than 20 ha:

All requirements below include the provision 'when available'; in situations where wildlife tree requirements cannot be achieved because trees are too small, requirements will be considered to be met if suitable types of trees are retained from the largest size class available.

- **Wildlife trees must be ≥ 10 cm DBH and ≥ 3 m in height** unless 'large' wildlife trees/stubs or cavity, veteran trees or supercanopy trees are to be retained in which case the minimum DBH is ≥ 25 cm.
- Retain an average of ≥ 25 stems/ha
 - Wildlife trees will generally be well dispersed;
 - Retain an average of at least 15 individual stems/ha and the remaining stems may occur in clumps.
- Of the ≥ 25 stems/ha, retain an average of ≥ 10 large stems/ha
 - Of these a minimum of **5 large living trees** on each ha;
 - **Large wildlife trees must be a minimum of ≥ 25 cm DBH and ≥ 38 cm DBH are preferred**, however supercanopy trees will generally be ≥ 60 cm DBH.
 - The ≥ 10 large trees/ha will be a mix of living cavity trees, stubs, supercanopy trees, veteran trees, mast trees, diversity trees, and safe dead trees.
- Underutilized species such as larch, cedar and birch will receive a high priority for retention. Smaller proportions of black spruce, poplar and jack pine will also be left as retention trees.
- Large hollow trees and those providing existing nesting or denning sites are preferred as cavity trees.
- When the number of large wildlife trees averages < 25 /ha, additional wildlife tree requirements may be met by retaining small safe standing dead trees, small stubs or any other living trees.
- Do not stub or knock down trees retained to meet specific wildlife functions such as cavity trees, mast trees, veteran trees and supercanopy trees.
- Do not stub trees being relied upon as a seed source.
- When stubbing, stub to a minimum height of ≥ 3 m (5 m is preferred) and have stubs scattered throughout the clearcut.