



**NORTHWEST TERRITORIES  
POWER  
CORPORATION**

*Empowering Communities*

**TALTSON WINTER ROAD  
OPERATIONS & MAINTENANCE PLAN**

**TALTSON HYDROELECTRIC FACILITY  
TALTSON RIVER, NORTHWEST TERRITORIES**

**April 2019**

## DOCUMENT MAINTENANCE AND CONTROL

The Chief Technical Officer (CTO), Asset Management & Engineering is responsible for the distribution, maintenance and updating of the Winter Road Operations & Maintenance Plan (OMP). This document will be reviewed annually and changes in phone numbers, names of individuals, etc. that do not affect the intent of the plan are to be made as required. Additional copies can be provided by the CTO, Asset Management & Engineering.

DOCUMENT HISTORY				
Revision #	Revised Section(s)	Description of Revision	Prepared by	Issue Date
0	All	Prepared for 2019 Water Licence application	NTPC	April 2019

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- Appendix B NTPC LIFE-SAVING RULES CONTRACT
- Appendix C ROAD USER DECLARATION

## 1 BACKGROUND

### 1.1 SCOPE AND PURPOSE

The Northwest Territories Power Corporation (NTPC) has prepared this OMP for the Taltson Winter Road (WR) between Fort Smith and the Taltson Hydroelectric Facility (Taltson Facility) located on the Taltson River, Northwest Territories. The Taltson Facility is a remote hydroelectric power generating facility located 56 km northeast of Fort Smith. The nearest community is Fort Smith, NWT. The Taltson WR is approximately 56 km long, the start point is a temporary laydown area at the northeast corner of the Fort Smith airport. The end point is a temporary laydown area at the southern end of the airfield at the Taltson Facility (refer to Figure 1.1). The Taltson WR consists of 11 over land portions (portages) and 10 over ice portions (lakes/rivers). The total length of portages is approximately 45.3 km (81%) and the total length of lakes/rivers is 10.7 km (19%). The Taltson WR is required to support an overhaul of key infrastructure at the Taltson Facility and is tentatively scheduled for construction and operation for three to five seasons, beginning in December 2019.

### 1.2 PURPOSE

The purpose of the OMP is to describe the operations, and maintenance of the Taltson WR. It also includes the 'rules of the road' to ensure the safety of all WR users and to protect the environment. All NTPC staff, contractors, sub-contractors, and individuals are required to comply with the rules outlined in the OMP. The dangers associated with WR travel are very real and the importance of following the WR rules cannot be over-emphasized. Individuals, who choose to ignore the rules and act irresponsibly, place the safety of ALL road users and the environment at risk. Rules cannot be written for every eventuality and all road users are expected to use common sense and good judgement in carrying out their responsibilities on the WR. The overarching objective is to construct and operate a WR that will be safe and minimize environmental disturbance.

Speed/weight restrictions, haul truck spacing, convoy travel and driver rest stops are all key components of safe WR travel. The following highlight some of the key WR rules that will be discussed in the OMP:

1. Strict adherence to all speed and weight restrictions is critical to road user safety as even marginally exceeding the specified limits can compromise the integrity of the ice and increase the potential for accidents. Posted speed limits indicate maximum allowable speeds and drivers are expected to use common sense and good judgement in reducing speeds as required to compensate for changing traffic, road and weather conditions to ensure safe traffic flow.
2. Unless otherwise posted, speed restrictions on lakes and portages are as follows:
  - Driving on all lakes: LOADED – 25 kph and EMPTY – 30 kph.
  - Driving on all portages: BOTH LOADED and EMPTY – 30 kph (Note: drivers may exceed portage speed restrictions ONLY as reasonably justified to negotiate portage hills, provided they do so in a safe manner).
  - ALL vehicles must slow to 10 kph when travelling on/off lakes.

- ALL vehicles must slow to 10 kph when travelling through flood zones.
3. Drivers must maintain 500-metre spacing between haul trucks at all times when travelling on ice, including when slowing to travel onto and off of lakes.
  4. Most portages are wide enough for one-way traffic only. Loaded traffic has the right of way in all instances. In the event of two loaded vehicles meeting, the northbound vehicle will have right of way.
  5. NTPC has existing road travel procedures that will be followed by all NTPC traffic on the WR which are outlined in Safe Work Practices 1.01 Safe Driving and 1.02 Winter Driving included in Appendix A. In addition, the road travel procedures all vehicles must have a radio and call in their locations on LADD 1. Vehicles should call in at the start of the road at the designated check points and at each portage. All opposing drivers must advise of their position, and hold on lake ice, or in designated pull outs until the southbound traffic has cleared the portage.
  6. Driver fatigue is a safety concern for all road users. Drivers are responsible for ensuring that they are well rested prior to departing their start point (Fort Smith or Taltson Facility for travel on the WR).
  7. NTPC has a robust Health & Safety Management System applies to all NTPC workers, contractors, and visitors. The Taltson WR rules will be applied in addition to the existing Health & Safety Management System.

### 1.3 DEFINITIONS

Item	Definition
<b>Convoy</b>	Group of two or more vehicles dispatched to travel together on the WR.
<b>Designated Dispatch Points</b>	Dispatch point for all haulers. (Fort Smith Dispatch and Taltson Dam Dispatch)
<b>Designated Check Points</b>	Check point for all haulers. There will be one at each end of the Taltson WR.
<b>Driver</b>	Person operating a motor vehicle including haul trucks and other commercial vehicles using the WR.
<b>Empty Only Truck Status</b>	Empty haul truck status remains in effect until the payload exceeds 3,400 kg or 7,500 lbs.
<b>End Users</b>	Companies authorized by NTPC to access the WR for the purpose of transporting goods and materials.
<b>LADD 1</b>	For the purposes of the WR, LADD 1 refers to the radio channel that will be the primary means of communication on the WR. The LADD 1 frequency is 154.1 MHz, 25 kHz bandwidth.

Item	Definition
<b>One Way Traffic Lanes</b>	WR traffic lands restricted by signage to one-way traffic only.
<b>Oversized/Heavy Loads</b>	Loads 14' or wider and/or tractor trailer standard configurations up to and including "Super-Bs" in excess of 63,000 kg or 140,000 lbs.
<b>Portage</b>	A segment of the WR built over land instead of over water.
<b>Road Number</b>	Sequential number and corresponding placard assigned to each haul truck driver by NTPC.
<b>Road Maintenance Personnel</b>	Any road maintenance personnel from NTPC, contractors and/or WR construction companies.
<b>Wheel Chock Blocks</b>	Commercially manufactured 3-point wedge wheel chock blocks. Minimum dimensions of 9 1/2" wide by 6" high and must be joined with a chain or cable.
<b>WR</b>	Refers to the Taltson WR and includes any secondary and/or bypass routes.

#### 1.4 UNITS

All calculations, dimensions, and sizes shall be in the metric system (S.I. units).

#### 1.5 MAINTENANCE OF PLAN

The CTO, Asset Management and Engineering will maintain the OMP. The Plan will be reviewed annually but may also be reviewed more frequently as required (e.g. due to a new or amended legislation or changes to the scope and purpose of the Taltson WR).

A record will document all significant changes that have been incorporated in the OMP subsequent to the latest annual review. The record will include the names of the persons who made and approved the change, as well as the date of the approval.

#### 1.6 ACCESS TO ADDITIONAL COPIES

Additional copies of the plan can be obtained by contacting the CTO, Asset Management and Engineering at (867) 874-5283.

#### 1.7 DISTRIBUTION LIST

The OMP and the most recent revisions are distributed internally to:

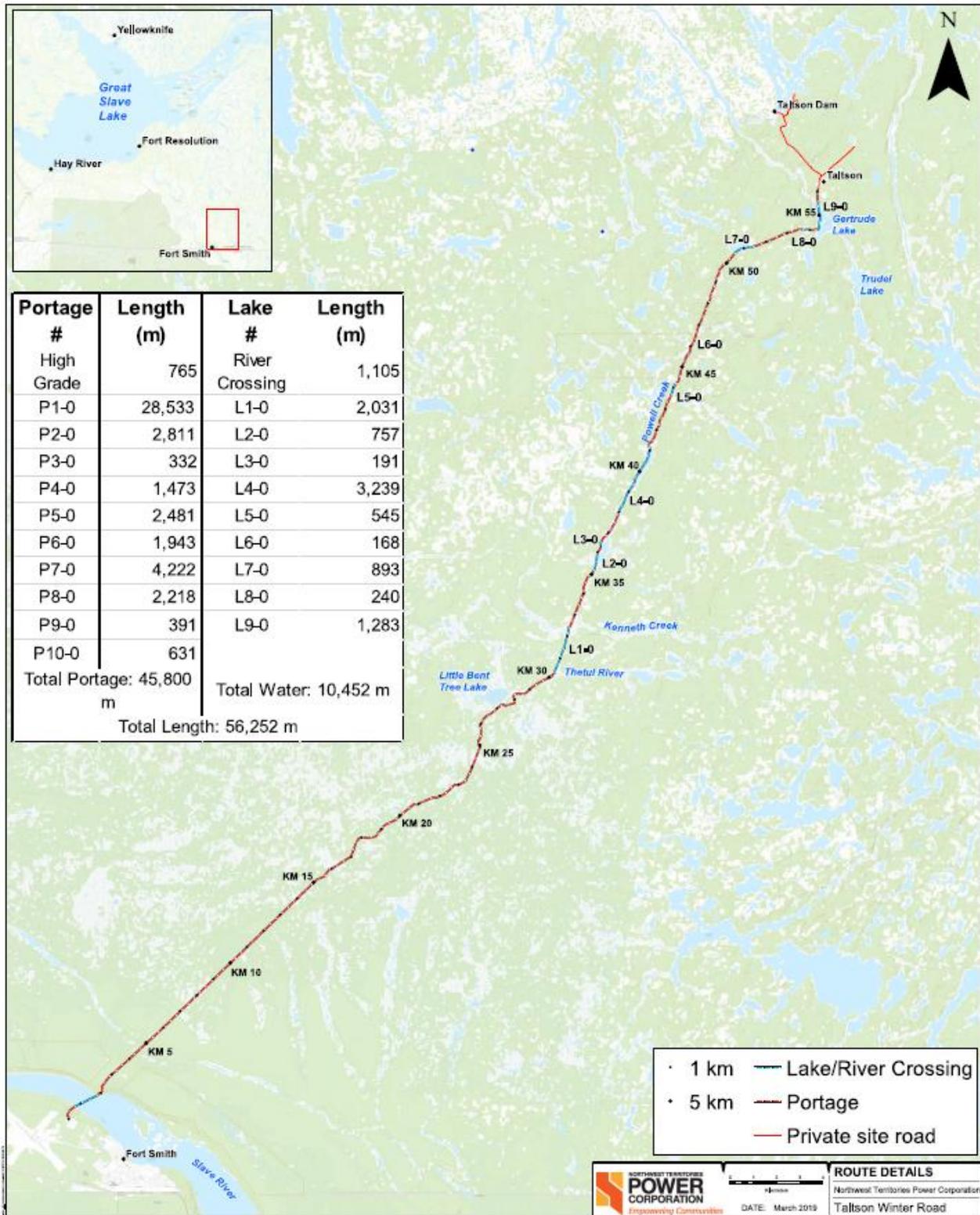
- i. Director, Health, Safety & Environment
- ii. Director, Hydro Division, Hydro Operations

- iii. Asset Manager, Hydro, Asset Management & Engineering
- iv. Manager, Project Management
- v. Manager, Operations & Maintenance SS, Hydro Operations
- vi. Project Manager, Engineering
- vii. Senior Environmental Licensing Specialist, Health, Safety and Environment
- viii. Project Manager for Contractor building/maintaining WR
- ix. SCADA Technologist, SAO

The Project Manager, Engineering is responsible for distribution of the OMP to third-party stakeholders.

Taltson Winter Road

Figure 1.1: Taltson Winter Road Map



## 2 CONSTRUCTION PROCESS

WR consist of alternating portions built over ice and over land (portages). The construction methodology employed for constructing roads over ice cover differs from the methodology for construction over portages. As environmental conditions may vary from season to season, ingenuity and flexibility are essential components of any construction activity. Competent personnel capable of conducting multiple roles within all aspects of construction are essential to efficient and cost-effective construction.

The methods employed in the construction of the WR will be based on the GNWT *Guidelines for Safe Ice Construction* (2015) which presents current industry best practices for the construction of ice roads and pads. Modern technology and innovative solutions have created an atmosphere where safety and efficiency can be achieved without significantly increasing operational costs. An example of this would be the current practice of using ground penetrating radar (GPR) to accurately measure the ice sheet thickness along a proposed route. This process has generally been adopted as the industry's best practice principle for measuring the ice thickness.

### 2.1 OVER LAND CONSTRUCTION

The construction of over land segments (portages) is generally more time consuming and equipment intensive than the ice segments. Equipment with a low ground bearing pressure is initially used to travel the route and compact the existing snow cover. Depending on snow type and humidity, varying amounts of water will be required to obtain adequate compaction. In areas of relatively high humidity, the snow will compact under the weight of the construction vehicles and very little water will be required to augment the transformation to an ice surface. In very dry areas, water is an essential component in the development of the running surface over portages.

Construction of the overland sections can begin earlier in the season than over ice sections. Generally, an accumulation of 300-degree days below freezing (0° Celsius) will be sufficient to freeze the ground and enable construction equipment to travel and begin construction.

Route selection for overland sections are made with due consideration for gentle grades that will permit standard highway tractors to climb and descend road grades safely. Depending on the natural road base, varying amounts of water will be required for construction. Rocky, gravel road bases will require less water for construction than softer soil. Overland construction can require large quantities of water, so routing of overland sections parallel to rivers or streams is desirable in reducing water hauling distance and subsequent construction times.

Transition points between lake ice and portage are achieved by ramping the entrance to a grade adequate to support the hauling vehicles. The gradually sloping of the ramp permits standard highway vehicles to negotiate the change in elevation between the two transition points.

### 2.2 OVER ICE CONSTRUCTION

Construction methodology for most WR alternates between lake/river ice crossings to over land portage crossings. The following steps/processes are considered industry best practice for the safe and efficient construction over lake or river ice.

The first step is to accurately define the minimum ice thickness (profiling) over the full length of the proposed route. A time consuming and less accurate method of determining the cross-sectional ice thickness is by manual measurement. In the past, this system of ice measurement has been used extensively by winter road builders. Technology has greatly reduced this time-consuming process through the introduction of GPR to determine ice thickness. The collection of extensive ice thickness data is quick, simple, and accurate using GPR profiling.

The primary objective of this initial ice thickness confirmation is to confirm that there is sufficient minimum ice thickness to support the construction equipment that will be used to build the WR. Once the ice has achieved the necessary minimum thickness for construction equipment, the equipment can safely be deployed to commence the over ice construction.

Once the ice sheet has been cleared of all insulating snow, both natural and artificial methods of growing the ice can be employed to achieve the desirable ice thickness to support hauling operations.

### **2.3 WATER SUPPLY**

Water will be required for construction of overland sections, construction of ramps, and for maintenance of over ice sections. All lakes and water sources along the route will be identified as suitable or not-suitable for water withdrawal. The amounts of water withdrawn from approved sources will be tracked and monitored to comply with the Department of Fisheries and Oceans (DFO) protocol for winter water withdrawal (2010) and all intakes for water withdrawal will meet or exceed DFO standards for protection of aquatic life.

Daily water use will be recorded by all Road Maintenance and Construction Personnel and reported to the Senior Environmental Licensing Specialist, the Mackenzie Valley Land & Water Board (MVLWB) and the Department of Environment & Natural Resources (ENR) as required.

### **3 ROAD DESIGN**

#### **3.1 ROADS OVER ICE**

The road over ice will be constructed to a minimum width of 35 m. Transitions from lakes to portages will be constructed using snow and ice built to a maximum grade of 6-8% where possible. Some portages may exceed the maximum grade for a short distance as long as the transition on and off the portages are within the 6-8% maximum. Design speed limits are listed in Section 6.2.

#### **3.2 ROADS OVER LAND (PORTAGES)**

Portages will be constructed using a combination of snow and ice to provide a minimum of 10 cm ice thickness over the native muskeg and soil to permit traffic. Additional snow fill will likely be required in areas to create a smooth and trafficable running surface that will enable highway tractors to safely operate at a speed of 30 kph.

The alignment over portages will follow natural topography along the historical cleared route, as there are limitations in the amount of fill and construction that can be achieved using snow and ice.

The travel way over portages will be constructed to a width of 10 m where feasible. In sections where the full 10 m width may not be feasible, a minimum 5 m width is permissible, provided that these sections are signed as restricted, one-way traffic only. Pull out sections will be constructed on either side of these restricted areas that will enable opposing traffic to wait for traffic to clear the restricted width section. Radio traffic control will be used by drivers to coordinate movement through restricted sections.

Maximum grade of portages should be limited to 10% for lengths of 500 m or greater. Shorter sections with increased grades may be acceptable if approaches are of sufficient length. Sanding units will be used to place sand to assist in traction over all hills and critical turns throughout the operations phase.

The cross fall of the travel way may vary; however, cross fall should be limited to a maximum of 3-5%.

In general, curves should be gradual. There will likely be a requirement for sharp turns in some areas to negotiate difficult terrain. Speed reductions in these areas will be used to control traffic and promote safety.

Vegetation clearing will be minimized to brushing and danger tree removal only. These activities will occur during winter months only.

Where the WR passes over a beaver dam, care will be taken to construct the WR over the beaver dam in such a way as to protect the integrity of the dam. This will include encasing the portion of the dam under the WR in ice and constructing snow and ice ramps on either side of the beaver dam to support the weight of the heavy haul vehicles travelling on the WR.

#### **3.3 PARKING AND SUPPORT AREAS**

It is recommended that one expanded parking area be constructed at the midway point of the WR for WR staff in a non-vegetated area. This parking area should be large enough to accommodate up to 6 trucks on a prepared area of snow and ice. The purpose of these areas is to provide a safe parking area for trucks and drivers during storms or other circumstances where the WR may be temporarily closed.

There will also be two additional parking areas for members of the public to access recreational/traditional use trails in the area. These parking areas were requested as part of the public engagement in Fort Smith in March 2019 to accommodate members of the public and local trappers that will be unable to travel the WR on their snowmobiles without overheating and will need transport the snowmobiles by trailer out on the WR. These parking areas will be at approximately KM 15 and KM 30 at existing non-vegetated areas near the junction of existing trails.

### **3.4 SNOW BANKS & JUMP OUTS**

The height of the snow banks along the WR will maintained so that they do not prevent wildlife from crossing over the WR. In addition, gaps in the snow banks along the portages will be maintained to serve as “jump outs” so that large wildlife, such as moose, are able to get off the portage and away from the WR when there is traffic on the WR.

## **4 SIGNAGE**

### **4.1 GENERAL**

Road maintenance personnel are responsible for all WR signage. All traffic signs are to be of a size and construction so as to be clearly visible to all road users in daylight and darkness. Traffic signs will be posted along the WR to clearly show current speed limits, restricted travel lanes, road maintenance areas, road hazards and other information as required to ensure the safe flow of traffic.

### **4.2 SPEED SIGNS**

Speed signs should be placed at regular intervals throughout the route to remind drivers of speed restrictions while on the ice cover, and to highlight specific areas where normal speed limits have been amended.

Speeds signs are recommended to be placed, as a minimum, in areas where changes in allowable speed vary. For road sections that have little variability, speed signs are recommended to be placed every 5-10 km along the route. Signage should be standard highway sizing with high visibility reflective properties.

### **4.3 PORTAGE SIGNAGE**

High visibility signs identifying portage entrances should be placed at each end of all portages to advise drivers of their location and assist in driver communication.

### **4.4 COMMUNICATIONS SIGNAGE**

Communications signage should be placed at the entrance and exit of the WR, and along the WR to advise and remind drivers to use LADD 1 to announce themselves at portages and checkpoints. Signage may also include an emergency phone number or contact information. Details will be outlined in the Public Safety and Awareness Plan.

#### **4.5 WILDLIFE SIGNAGE**

Wildlife crossing signage and other wildlife-related signage recommended by ENR (e.g. hunting prohibited) will be placed along the WR based on ENR guidelines.

#### **4.6 VEHICLE SPACING**

There will be signs on each lake 500 m away from the transition points for each of the portages for northbound and southbound vehicles. These signs will assist vehicles in maintaining the minimum 500-metre spacing each time they travel off a portage and onto a lake.

## **5 WINTER ROAD OPERATIONS**

### **5.1 GENERAL**

The WR rules are intended to ensure the safety of all users while protecting the environment. NTPC reserves the right to amend the WR rules at any time. For safety reasons, the designated working language of the road and radio communications is English. The following general WR policies are intended to help guide decision making and establish the baseline philosophy for the WR rules presented, later, in Section 6. The WR rules will be implemented in addition to the robust contractor safety management and project safety planning programs that NTPC has in place.

### **5.2 NTPC SAFETY MANAGEMENT SYSTEM**

NTPC has a robust Health & Safety Management System applies to all NTPC workers, contractors, and visitors. The structure of the Health & Safety Management System has been developed in accordance with the 14 elements of the NSA Safety Program to be eligible to achieve COR safety certification. The Health & Safety Management System is comprised of various policies, elements, forms safe work practices, safe job procedures, contractor safety management procedures, emergency response plans, project safety planning procedures and work protection policies. The Taltson WR rules will be applied in addition to the existing Health & Safety Management System.

### **5.3 RULE ENFORCEMENT**

NTPC employees, third-party road contractors (both construction and hauling) as well as any other agency or organization involved with and/or using the Taltson WR are expected to know and follow the WR rules and NTPC policies. Compliance with the rules will be enforced by NTPC management, their delegates, and safety personnel on the WR. Enforcement can take the form of verbal cautions, incident reporting and follow up investigations, infraction notices/driver suspensions, conduct of traffic-related investigations, provision of general assistance to road users, and response to emergency situations.

At the discretion of NTPC or their delegate, as justified by the circumstances, verbal cautions may be issued in lieu of infraction notices for minor violations of the WR rules. Verbal cautions will be recorded and drivers/operators who are found to be the subject of repeated verbal cautions may be issued an infraction notice and penalized in accordance with the WR rules.

Unless otherwise specified in the WR rules, suspension will normally take effect upon completion of the current WR trip. If deemed necessary in the interest of public safety, NTPC may suspend a driver/operator immediately. Drivers are prohibited from operating any motor vehicle on the WR during any period of suspension imposed under the WR rules.

Notwithstanding the penalties provided for elsewhere in the WR rules or NTPC policies, upon application by safety staff, NTPC may impose additional restrictions as deemed appropriate, upon any driver who has demonstrated a serious disregard for the WR rules. Such restrictions may include, but are not restricted to, probationary periods and revocation of site privileges for an indeterminate period of time.

## **5.4 ROAD MAINTENANCE**

Road maintenance personnel are responsible for WR construction and maintenance during the operating season. To the maximum extent possible, major WR maintenance initiatives will be scheduled to minimize interference with road traffic. Road maintenance personnel are responsible for the provision of adequate traffic control for all work areas.

Road maintenance personnel are responsible for monitoring and ensuring the safety of all their team members and equipment on the WR. Road maintenance personnel must be familiar with the WR rules and NTPC policies and employ them properly. Road maintenance personnel are responsible to ensure that the WR rules and current speed/load restrictions for all WR maintenance vehicles/equipment are posted in a clear, concise and consistent manner at all construction camps for the information of their personnel and other vehicle operators that they employ. Road maintenance personnel are responsible for reporting all required information to NTPC and regulators regarding the Taltson WR.

## **5.5 DISPATCHING**

### **5.5.1 General**

NTPC WR Designated Dispatch Points are responsible for controlling the dispatching of traffic for the WR, in consultation with road construction, hauling company, and Taltson Facility staff. Dispatch will, upon presentation of a signed copy of a WR "Road User Declaration" (see Appendix C), assign drivers of authorized companies a Road Number. Designated Dispatch Points are responsible for ensuring that the WR rules and all current amendments/updates, including changes in speed, spacing and load restrictions, are posted in a clear, concise and consistent manner at all WR Designated Dispatch points for the information of all users.

### **5.5.2 Designated Dispatch Points and Check Points**

Dispatch Points will be established at Fort Smith and at the Taltson Facility. These Dispatch Points will coordinate WR dispatching. Dispatch Point personnel are responsible for monitoring WR traffic, dispatching, controlling, and recording WR traffic. Dispatchers will have two radios. Each radio will be used for a dedicated channel. LADD 1 will be used for communications with drivers, and DISPATCH will be used for dispatcher-dispatcher communications. Dispatchers will notify each other when drivers are entering or exiting the WR.

Loaded, northbound (towards the Taltson Facility) haul trucks are required to report to the Fort Smith Dispatch in person with appropriate weigh bill documentation prior to dispatch. Convoys will be dispatched from Designated Dispatch Points at regular intervals as authorized by NTPC. Trucks will not be dispatched alone for travel on the WR unless otherwise directed by NTPC.

Drivers are required to report their departure and arrival at Designated Dispatch Points and Check Points along the WR to dispatch/check point personnel via radio on the LADD1 channel. Drivers will call in their locations at each portage and at kilometer markers (KMs) at the south end of the road will of which will be marked with signage.

NTPC employees will also employ the use of InReach devices as per standard NTPC remote travel procedures and policies.

### 5.5.3 Load Weight and Size Restrictions

NTPC will publish, and update as required, the loading weight and size restrictions for operations along the WR. The weights in effect will be clearly posted at Dispatch Points and will be briefed to drivers prior to their departure.

Loaded haul trucks departing Designated Dispatch Points must have payload weights certified by Dispatch personnel and drivers must be in possession of all payload documentation indicating the weight when travelling on the WR.

Loads more than 4.3 m (14 ft) wide will be identified to the Dispatch Points and communicated by respective Dispatch Points to all road users. Communication will include a description of the load, as well as the departure time of the load.

### 5.5.4 Pilot Vehicle

A pilot vehicle will escort convoys travelling on the WR to and from the Taltson Facility when possible.

## 5.6 ORIENTATION

All personnel working on and travelling the WR are required to successfully complete a WR orientation session. NTPC, or a designate, may provide this orientation. The program must include:

- Completion of NTPC Online Orientation for construction/maintenance staff (not required for deliveries).
- Review and signature of NTPC Life-Saving Rules Contract (Appendix B)
- Taltson WR orientation which includes a thorough review of the WR rules, pertinent NTPC policies and WR Risk Awareness.
- Provision of a valid 24-hour contact telephone number for emergency response assistance.
- Review of the communications plan and radio check.
- General overview of WR travel and trip preparation.
- Identification of common WR travel problems/solutions.
- Instruction on the use of tire chains, wheel chock blocks, and troubleshooting malfunctioning trailer braking systems, including clearing frozen air lines.
- Review of Appendix J of the Taltson Facility Spill Contingency Plan and instruction on dealing with dangerous/emergency situations, in particular to working on ice. Any contractors must have a copy of this plan on the work site with required spill response material.

- Familiarization with NWT legislation regarding the reporting of spills, logbooks, reporting of accidents, reporting of water use, reporting of wildlife and load restrictions.
- Procedures for wildlife encounters.

Upon completion of the orientation, trucking companies will ensure each driver signs a “Road User Declaration” (Appendix C), certifying that he/she has read and understands the current WR rules. NTPC Life-Saving Rules Contract must be signed as well.

All haul trucks are to be equipped with spill response equipment described in Appendix J of the Taltson Facility Spill Contingency Plan (SCP).

Contractors are responsible for ensuring their drivers are properly rested and comply with NWT legislation with respect to hours of work and logbooks.

## **6 RULES OF THE ROAD**

The WR rules of the road ensure the safety of road users and the environment while assisting with the smooth execution of WR operations. Compliance with both the details and spirit of these rules will be enforced. Sound judgement and common sense are key characteristics required of all WR users.

NTPC or their delegate may suspend travel on the WR at any time and without prior notice.

The WR rules of the road will be applied in addition to the existing safety management system that NTPC employs for all of its projects and operations.

### **6.1 NTPC LIFE-SAVING RULES CONTRACT**

The NTPC Life-Saving Rules (Appendix B) are safety rules that, if broken, could result in serious injury or death. All employees, contractors, and visitors at NTPC sites must understand and adhere to these rules at all times. If these Life-Saving Rules are not followed, immediate and appropriate action shall be taken in accordance with the NTPC Progressive Discipline Policy.

### **6.2 SPEED RESTRICTIONS**

Speed restrictions will be clearly posted through signage along the WR and bulletins at all WR Designated Dispatch Points. Unless otherwise posted, the following speed limits will apply:

- Driving on lakes: loaded 25 kph and empty 30 kph.
- Driving on portages: loaded and empty 30 kph.
- All trucks must slow to 10 kph when travelling through flood zones.
- All trucks must slow to 10 kph when travelling on/off lakes.
- When two loaded trucks meet on a lake, travelling in opposite directions, both must slow to 15 kph when passing.
- Trucks must slow to 10 kph while passing other loaded trucks stopped on lakes.
- Maximum speed for construction equipment will be 40 kph while clearing snow.
- The maximum speed limit for pick-up trucks (one-ton rating or less) is 80 kph.

All posted speed restrictions will designate maximum loaded speeds.

Specific sections of the ice road may require further speed restrictions. These sections will be signed accordingly as required.

### **6.3 TRUCK AND CONVOY SPACING**

Drivers will be dispatched from Designated Dispatch Points in convoys at regular intervals. Drivers are responsible for ensuring interval spacing between convoys is maintained when travelling the WR.

Convoys will be limited to 4-6 heavy vehicles and will be led by a light duty pilot vehicle when possible.

Drivers must maintain 500 metre spacing between trucks within convoys when travelling the WR. Travelling alone on the WR is prohibited unless authorized by a NTPC representative or designate.

#### **6.4 MECHANICAL BREAKDOWNS AND ALL VEHICLE RECOVERIES**

It will be the responsibility of hauling companies to remove any disabled or otherwise stranded trucks and/or equipment, operating under their authority, from the WR or WR access area or camp as soon as possible. Disabled and stranded vehicles must be recovered within six hours.

In the event of a vehicle becoming immobilized on the WR for any reason including “spin outs”, driving off the roadway, accidents, and mechanical failures; the following procedures will be followed in effecting the recovery of the vehicles:

- If the vehicle is immobilized on the ice:
  - The driver must report the situation to road maintenance personnel, safety, and Dispatch as soon as possible.
  - Simple recoveries can be completed with assistance of other drivers travelling in the convoy involved provided the recovery operation can be carried out in a safe manner.
  - Drivers must use extreme caution in seeking support from other drivers and be aware that ice conditions adjacent to the normal travelled portion of the WR are not routinely monitored (snow banks and snow-covered ice beyond the banks are not monitored). Recovery operations along the edge of the roadway and in snow banks pose increased risk.
  - If drivers are uncertain or have any concerns regarding the integrity of the ice or their safety in general, they should not attempt a recovery and should wait for assistance from road maintenance personnel.
  - If drivers choose to attempt a recovery, they must maintain as much vehicle spacing as possible, ideally no less than 300 metres. Should less vehicle spacing be required to effective recovery, drivers should plan the recovery process as to minimize the time in which vehicles are positioned closely together on the ice.
  - During the recovery process on ice, ONE HAUL TRUCK ONLY will be permitted to be closer than 300 metres from the immobilized vehicle.
  - Upon attendance, safety personnel will provide traffic control and may contact road maintenance foremen for assistance and direction in safely affecting the recovery of any vehicle.
- If the vehicle is immobilized on a portage, on the access road to the Facility, or other land location:
  - The driver must report the situation to safety, road maintenance personnel, or Dispatch as soon as possible.

- Drivers are encouraged to self recover or seek assistance of other drivers in effecting the recovery provided the recovery operation can be carried out in a safe manner.
- Upon attendance, safety will provide traffic control and may contact road maintenance foremen for assistance and direction in safely affecting the recovery of any vehicle.

## **6.5 DANGEROUS DRIVING AND UNSAFE PRACTICES**

Operating a vehicle in a dangerous or unsafe manner is prohibited and includes, but is not restricted to, the following:

- Operating a haul truck more than 10 kph above the designated speed limit.
- Operating a truck on the WR during any period that travel has been suspended.
- Loaded trucks overtaking and passing other trucks.
- Not following dispatch and check in procedures.

## **6.6 DRIVING WITHOUT DUE CARE AND ATTENTION**

Operating a vehicle without due care and attention is prohibited and includes but is not restricted to the following:

- Operating a haul truck continuously too close to the snow bank when travelling on lakes.
- Failing to obey WR signage or other traffic control devices.

## **6.7 STOPPING ON LAKES**

Stopping a loaded truck on lakes is prohibited unless unavoidable and authorized by NTPC or their delegate. Should a truck/trailer be required to remain parked on a lake for mechanical or other unavoidable reason, the driver must:

- Ensure the truck/trailer is parked and clearly marked so as not to present a safety hazard to other traffic. Do not pull over and park on the snowbanks (side of the road) as normally done on traditional highways. Rather, park the disabled vehicle/equipment centred in the driving lane for the direction of travel.
- Obtain authority from safety or dispatch personnel to remain parked on the ice.
- Make arrangements to have the disabled truck/trailer recovered as soon as possible.

Any driver stopping to offer assistance must use extreme caution and maintain reasonable spacing between the trucks. Drivers involved in the recovery of any immobilized vehicles on the WR must comply with WR rules Section 6.4.

## 6.8 STOPPING ON PORTAGES

Should any truck/trailer be required to remain parked on a portage or other WR access area for mechanical or other reason, the driver must:

- Ensure the truck/trailer is parked and clearly marked so as not to present a safety hazard to other traffic.
- Obtain authority from safety or dispatch personnel as soon as possible.
- Make arrangements to have the truck/trailer recovered as soon as possible.

Any driver stopping to offer assistance must use extreme caution. Drivers involved in recovery of any immobilized vehicles on the WR must comply in accordance with WR rules Section 6.3.

## 6.9 LOADED VEHICLES

Loaded haul trucks must travel with emergency flashers and/or rotator lights on. Loaded haul truck drivers must be in possession of documentation verifying the payload weight when travelling on the WR.

## 6.10 RIGHT OF WAY

Traditional application of the concept of right of way applies with the exception of the following WR applicable scenarios:

- Road maintenance vehicles have the right of way over all WR traffic.
- Northbound (Taltson Facility) loaded trucks have the right of way over all other haul trucks.
- Travel across portages is always restricted to one-way traffic . Southbound trucks are to cede right of way to northbound trucks at all portages. Southbound trucks are to hold on lake ice, or in designated pull out locations when encountering northbound trucks.
- Safe driving practices and common sense will dictate the right of way in other instances.

## 6.11 DESIGNATED DISPATCH POINTS AND CHECK POINTS

Designated Dispatch and Check Points control the flow of traffic on the WR to ensure safety. Drivers must check in and receive authority prior to departure and must report their arrival at Designated Dispatch Points and Check Points via LADD 1. Drivers are required to monitor LADD 1 while travelling on the WR. Drivers will call in their locations at each portage and at KMs at the south end of the road will of which will be marked with signage.

NTPC employees will also employ the use of InReach devices as per standard NTPC remote travel procedures and policies.

## **6.12 PORTAGE TRAFFIC**

All convoy leaders (regardless of travel direction) must broadcast the portage number they are entering, the convoy direction of travel, the number of trucks in the convoy and identify any oversize/heavy loads via LADD 1 prior to entering all portages. All drivers must advise opposing traffic of their progress through portages (regardless of direction) via LADD 1 as required to ensure safe traffic flow and to prevent accidental collisions on portages. Southbound traffic is to yield right of way to northbound bound traffic at all times.

## **6.13 INTERFERENCE WITH SECURITY/ROAD MAINTENANCE PERSONNEL**

All drivers will stop when requested to do so by safety personnel or any other designated NTPC representative. Drivers stopped by safety personnel or another NTPC representative will remain stopped until advised otherwise. Any verbal abuse of safety or NTPC personnel is prohibited. Knowingly misleading safety or NTPC personnel is prohibited.

## **6.14 DRUGS, ALCOHOL, AND FIREARMS**

The possession of drugs, alcohol or firearms on the WR and at all camps is strictly prohibited as per NTPC standard policy. Safety or designated NTPC personnel who have reason to believe a driver is in possession of alcohol, drugs, or firearms may, with the individual's consent, conduct a search of their person and any vehicle under their control. Refusing to consent to a search in accordance with this section constitutes a violation under this section.

## **6.15 LITTERING AND REFUSE DISPOSAL**

Drivers must always carry garbage bags in their trucks for the purpose of storing their refuse for proper disposal at WR camps. Littering on or near the WR is prohibited. More details are available in the Taltson WR Waste Management Plan.

## **6.16 SAFETY RESTRICTIONS AND EQUIPMENT**

Drivers are not permitted to transport passengers on the WR unless authorized by NTPC or their delegate.

While operating a vehicle on the WR, all drivers must be in possession of survival equipment suitable for arctic climates including but not restricted to a parka, wind pants, winter footwear, headwear, and mitts. All haul truck drivers operating on the WR are responsible for ensuring their truck is equipped with tire chains, wheel chock blocks, flashlight, reflective traffic triangles, a tool kit, methyl hydrate, a roll of heavy mil poly plastic, and spill pads.

## 6.17 HOURS OF WORK/LOG BOOKS

Drivers must comply with Territorial and Federal statutory requirements relating to hours of work, rest periods, and logbooks. Drivers must maintain an up-to-date logbook. Drivers and trucking companies must surrender logbooks to safety personnel for examination upon request.

## 6.18 REST STOPS AT NON-DESIGNATED AREAS

Unscheduled rest stops present safety concerns and should not normally be necessary given the length of the road. Drivers must be well rested prior to departing on their WR trip. Drivers who do find themselves unable to safely continue a trip due to fatigue will as soon as possible:

- Notify the convoy leader of their intentions, stop in a pull-out area, ensuring their truck is parked well off the travelled portion of the roadway so as not to present a hazard to other traffic.
- Take reasonable steps to ensure that safety personnel are notified of their situation.
- Convoys are not permitted to leave a convoy member alone. As a minimum, drivers must travel and if required, stop, in groups no smaller than two.
- Remain stopped until sufficiently rested so as to be able to continue the trip safely.
- Resume travel by communicating their intentions to other road users in the area.
- If stopped with another truck(s), then await a break in convoy traffic and carefully rejoin the traffic flow as a convoy, ensuring proper convoy/truck spacing is maintained.

## 6.19 COMMUNICATIONS

All vehicles, including road maintenance equipment, must be equipped with a LADD 1 radio. Drivers will monitor LADD 1 at all times while operating on the WR.

For safety reasons, English is the working language for all WR communications. LADD 1 communications will be conducted in a professional and courteous manner.

Drivers are required to report their departure and arrival at Designated Dispatch Points and Check Points along the WR to dispatch/check point personnel via radio on the LADD 1 channel. Drivers will call in their locations at each portage and at KMs at the south end of the road which will be marked with signage.

Dispatch Point personnel are responsible for monitoring WR traffic, dispatching, controlling, and recording WR traffic. Dispatchers will have two radios. Each radio will be used for a dedicated channel. LADD 1 will be used for communications with drivers, and DISPATCH will be used for dispatcher-dispatcher communications. Dispatchers will notify each other when drivers are entering or exiting the WR.

NTPC employees will also employ the use of InReach devices as per standard NTPC remote travel procedures and policies.

## **6.20 SPILLS, MOTOR VEHICLE ACCIDENTS, AND DANGEROUS/EMERGENCY SITUATIONS**

NTPC and/or their safety delegate will respond to all spills, motor vehicle accidents, and dangerous/emergency situations. Anything that results in a contamination/spill will be reported in accordance with Appendix J of the Taltson Facility Spill Contingency Plan including notification of the NWT Spill Report Line at (867) 920-8130.

Notwithstanding statutory requirements under Territorial or other legislation, all drivers operating on the WR shall report any spill, property damage/injury accident or other dangerous/emergency situation, regardless of size/severity. In the event of an accident, spill, or dangerous emergency situation, the incident will be reported to safety and/or dispatch personnel by the most expeditious means available. Responsible parties will be held liable for any injuries; equipment damage, and any immediate or subsequent short term/long term environmental clean up.

Changing motor oil along the WR or in general locations at the Taltson Facility is not permitted. Drivers are expected to have oil changes and any other maintenance completed at appropriate maintenance facilities, prior to travel on the WR.

Drivers involved in a motor vehicle accident with another vehicle must provide their name and company to the other driver as soon as possible. Drivers are responsible for reporting motor vehicle accidents in accordance with any Territorial statutory requirements and/or trucking company policy. Trucking companies may apply to NTPC for release of information related to traffic accidents or other incidents, which occurred on the WR.

## **6.21 REMOVING, ALTERING, OR TAMPERING WITH SIGNAGE OR TRAFFIC CONTROL DEVICES**

Removing, altering, or otherwise tampering with WR signage or other traffic control devices is prohibited.

## **6.22 WILDLIFE**

As per the Taltson WR Wildlife Management and Monitoring Plan there is strict no chase policy for any wildlife encounter along the WR and all traffic must yield to any wildlife till it is clear of the WR. Feeding wildlife while operating/travelling on or near the WR is strictly prohibited.

Signage will be in place to warn of wildlife high use areas and there will be plowed areas along the bank of the road that will act as jump outs for wildlife to escape the WR alignment.

As per the Taltson WR Wildlife Management and Monitoring Plan all drivers must report concerns or inappropriate activity involving wildlife including but not limited to abandoned carcasses, injured wildlife and incidents of wildlife harassment. Sightings/incidents should be reported to NTPC at the end of each trip. Reports should provide as much information as possible, including date, time, location, and description of the event, and vehicle descriptions/registration plate numbers.

## **7 REFERENCES**

### **7.1 DESIGN CODES, REGULATIONS, AND STANDARDS**

The Taltson WR will follow the design standards set out within the OMP. While other guidelines are available for reference, the guidance within this document will take precedence.

### **7.2 OTHER DOCUMENTS**

DFO (Department of Fisheries and Oceans). 2010. DFO Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut.

GNWT (Government of the Northwest Territories). 2015. Northern Land Use Guidelines – Access: Roads and Trails.

GNWT. 2015. Guidelines for Safe Ice Construction.

NTPC. 2018. Taltson Winter Road Feasibility Study (Issued For Use).

TAC (Transportation Association of Canada). 2011. Guidelines for the Construction and Operation of Winter Roads.

WSSC (Worker' Safety & Compensation Commission). 2015. Northwest Territories & Nunavut Codes of Practice – Thermal Conditions.

## **APPENDIX A**

### **SAFE WORK PRACTICES 1.01 SAFE DRIVING AND 1.02 WINTER DRIVING**

<b>1 Purpose</b>	To outline safe winter driving requirements.
<b>2 Application</b>	Applies to all NTPC employees and contractors who are required to operate a motor vehicle in winter conditions.
<b>3 Definitions</b>	<p><b>Black Ice</b> A thin, transparent layer of ice on a road.</p> <p><b>Road Travel</b> Travel on highways between communities and on winter roads.</p>
<b>4 References</b>	<ul style="list-style-type: none"> <li>• Department of Transportation Motor Vehicles Act</li> <li>• Health &amp; Safety Management System Element 14.10: Working Alone</li> <li>• SWP 1.01: Safe Driving</li> <li>• SWP 1.15: Vehicle Reversing</li> </ul>
<b>5 Equipment</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
<b>6 PPE</b>	<ul style="list-style-type: none"> <li>• Winter clothing (e.g., parka, snow pants, boots, mitts, hat)</li> <li>• Winter sleeping bag</li> </ul>
<b>7 Training</b>	<ul style="list-style-type: none"> <li>• Valid driver's licence</li> </ul>
<b>8 Work Practice</b>	<p><b>General</b></p> <ul style="list-style-type: none"> <li>• Refer to <i>Safe Work Practice 1.01: Safe Driving</i> for year-round safe driving guidelines.</li> <li>• Refer to <i>Safe Work Practice 1.15: Vehicle Reversing</i> for guidelines on safely reversing a vehicle.</li> <li>• Refer to <i>Health &amp; Safety Management System Element 14.10: Working Alone</i> for communication requirements during Road Travel.</li> <li>• Vehicles used for winter driving should be equipped with winter tires, which provide far greater traction on snow and ice than all-season tires.</li> <li>• Driving in winter weather (e.g., snow, ice, cold and wet) creates a great challenge for vehicles and drivers.</li> <li>• Ensure vehicles are kept in good technical repair to reduce the potential of incidents while driving.</li> <li>• Ensure the vehicle has the required amount of fuel before setting out.</li> <li>• Clear all snow and ice from all windows, lights and mirrors.</li> <li>• Accelerate and brake gently to reduce skids or spinouts.</li> </ul>

- Ensure winter clothing does not restrict movement, vision, or hearing.
- Confirm weather and road conditions before setting out.
- Ensure seatbelts are available and worn while the vehicle is in motion.
- Before driving in extreme weather conditions (e.g., extreme cold, blizzards, Environment Canada weather warnings) travel shall be approved by the manager.
- When conducting Road Travel in the winter workers shall bring winter clothing (e.g., parka, snow pants, boots, mitts, hat) suitable to the conditions, and may also sign out a winter sleeping bag.
- Prior to Road Travel in the winter workers shall sign out a Road Kit from the warehouse and place it in the vehicle, confirming contents before departure (see Table 1 below).

**Table 1: Road Kit Contents**

Booster Cables	Flares	Rope
Candles	Flashlight	Safety Vest
Candy	Gloves	Sugar
Collapsible Shovel	Granola/Energy	Tea
Combo Knife	Hand Warmers	Thermal Blanket
Cook Stove & Fuel	Heat & Serve Meal	Tire Sealant
Cooking Pots	Light Sticks	Tow Strap
Duct Tape	Matches	Whistle
Fire Starter	Radiator Sealant	Refill Checklist

- Posted speed limits are meant for ideal conditions. Driving at reduced speeds will reduce risk while driving on slippery roads.
- Do not use cruise control. Winter driving requires the driver to be in full control of the vehicle at all times.
- Allow for extra travelling time.
- Drive with headlights on at all times.
- Lengthen following distances from the vehicle ahead. Stopping distance is twice as far on an icy road as it is on a dry surface.
- Steer with smooth and precise movements. Changing lanes too quickly and jerky steering while braking or accelerating can cause skidding.

**Black Ice**

- Black ice usually forms just above the freezing point, though

it can also form at colder temperatures.

- Black ice is formed when moisture from precipitation, the air, vehicle exhaust, or nearby water bodies lands on a road whose temperature is below 0°C. The moisture freezes creating a thin sheet of clear ice.
- It is especially dangerous because it is very difficult to detect in advance.
- Be alert for black ice, which makes a normally dull road surface look shiny.

#### **What to do if the Vehicle Starts to Skid**

- Do not panic.
- Gently steer in the direction you want your vehicle to go.
- Do not brake.
- Do not accelerate.
- Shift into neutral (automatic transmission) or declutch (manual transmission).

#### **Braking on a Slippery Road**

- Slowly squeeze the brakes (also known as threshold braking) along with declutching (manual shift) or shifting to neutral (automatic transmission).

#### **When Stuck or Stranded in Snow**

- Attempt to get the vehicle back in operation (e.g., repair the problem, shovel out if stuck, etc.).
- Stay in the car if you cannot fix the problem or shovel the car out of the snow.
- Avoid over-exertion and over-exposure to the cold. Cold weather can put extra stress on the heart and contribute to the hazards of over-exertion. Sweaty clothes next to the skin are not good insulators against the cold.
- Do not leave the vehicle for assistance unless help is visible within 100 m.
- Turn on hazard lights to ensure vehicle is visible to other drivers. Set up flares in dark conditions.
- Run the engine occasionally to provide heat while conserving fuel (e.g., 10 minutes every hour). Ensure that the exhaust pipe is free of snow and keep the window opened slightly (on the side shielded from the wind) to prevent the buildup of carbon monoxide when the engine is running.

	<b>Safe Work Practice:</b> Winter Driving	Page 4 of 5
	<b>Monitor:</b> Director, Health, Safety & Environment	SWP #: 1.02

	<ul style="list-style-type: none"> <li>• Stay warm. Put on winter clothing and bundle up in a blanket.</li> <li>• Monitor vehicle occupants for signs of hypothermia or frostbite.</li> <li>• Do not fall asleep. If there is more than one person in the car, take turns sleeping.</li> <li>• Do not stay in one position too long. Do some exercises to help circulation (e.g., move arms and legs, clap hands, etc.).</li> <li>• Keep looking for traffic or rescuers.</li> </ul>
<b>9 Documentation</b>	<ul style="list-style-type: none"> <li>• Form 9.3: Vehicle Inspection</li> <li>• Valid driver's licence (i.e., Class 1, 3, or 5)</li> </ul>

### Development

Name	Position	Date
Prepared by: P. Pascoe	Pozniak Safety Associates	May 15, 2014
Reviewed by: J. Clark	Environmental Analyst	Jun. 13, 2014
Approved by: E. Smith	Director, Health, Safety & Environment	Jul. 10, 2014

### Revision History

#	Revised Sections	Description of Revisions	Revised by (name, position)	Approved by (name, position)	Issue Date
01	8	Added road kit contents, info on black ice	E. Smith Director HSE	E. Smith Director HSE	11-26-15
02	6, 8	Added requirement for winter clothing	K. Bell Manager O&M SS	E. Smith Director HSE	01-30-17
03					
04					
05					
06					
07					

<b>1 Purpose</b>	To outline general safe driving requirements.
<b>2 Application</b>	Applies to all NTPC employees and contractors required to operate a motor vehicle.
<b>3 Definitions</b>	<p><b>Circle Check</b> An inspection of a vehicle and the surrounding area to note any obstacles and/or hazards prior to driving.</p> <p><b>Road Travel</b> Travel on highways between communities and on winter roads.</p>
<b>4 References</b>	<ul style="list-style-type: none"> <li>• Department of Transportation Motor Vehicles Act</li> <li>• Health &amp; Safety Management System Element 14.10: Working Alone or in Isolation</li> <li>• SWP 1.02: Winter Driving</li> <li>• SWP 1.15: Vehicle Reversing</li> </ul>
<b>5 Equipment</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
<b>6 PPE</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
<b>7 Training</b>	<ul style="list-style-type: none"> <li>• Valid driver's licence</li> </ul>
<b>8 Work Practice</b>	<p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>• A valid driver's licence is required to operate a vehicle while on NTPC business, premises, or worksites.</li> <li>• The driver's licence shall be applicable to the type of vehicle (i.e., Class 1, 3, or 5).</li> <li>• Refer to <i>Safe Work Practice 1.02: Winter Driving</i> for safe winter driving guidelines.</li> <li>• Refer to <i>Safe Work Practice 1.15: Vehicle Reversing</i> for guidelines on safely reversing a vehicle.</li> <li>• Refer to <i>Health &amp; Safety Management System Element 14.10: Working Alone or in Isolation</i> for communication requirements during Road Travel.</li> <li>• Never operate a vehicle while fatigued.</li> <li>• Never operate a vehicle when under the influence of alcohol, drugs, medications or other substances that may affect your ability to drive.</li> <li>• Never operate a portable electronic device (excluding hands-free) or radio while driving a vehicle.</li> <li>• Stay focussed and drive defensively.</li> <li>• Ensure vehicles are kept in good technical repair to reduce</li> </ul>

the potential of incidents while driving.

- Drive with headlights on at all times.

### **Conducting a Circle Check**

Get into the habit of conducting circle checks.

- Do not assume that the area around a vehicle is clear because it was clear a few minutes prior.
- Before operating a vehicle, always conduct a circle check: walk around the vehicle and check for hazards before getting in and driving away.
- Return to the vehicle immediately and start driving. This will allow very little time for people and/or obstacles to change around the vehicle.
- If uncertain about positioning or obstacles, stop and conduct another circle check.
- Circle check reminder decals shall be in place on all NTPC vehicles.

### **Before Leaving**

- Ensure *Form 9.3: Vehicle Inspection* is completed daily prior to operating the vehicle.
- Ensure vehicle operator has a valid driver's licence.
- Ensure vehicle operator is familiar with the functions of the vehicle (e.g., how to operate four wheel drive, how to access the jack and spare tire).
- Plan the route.
- Confirm road conditions (e.g., winter roads, ferry crossings, forest fires) with the Department of Transportation.
- Confirm weather reports from Environment Canada.
- Ensure a fire extinguisher, first aid kit, road hazard signals, jack, and lug nut wrench are present in vehicle.
- Confirm the operation of the cell phone, inReach device, radio, satellite phone, and/or other means of communication.
- Ensure the vehicle has the required amount of fuel.
- Ensure adequate food and water are taken.
- Ensure seatbelts are available and worn while the vehicle is in motion.
- Ensure that all loads and equipment are properly secured.
- Adjust seat, mirrors, steering wheel, climate controls, etc. to the optimum settings.

### While Driving

- Operate vehicles in accordance with the Motor Vehicles Act.
- Pay attention.
- Keep distractions to a minimum. Activities that can cause distractions include:
  - Eating and/or drinking
  - Adjusting audio, climate, or other controls
  - Adjusting features such as pedals or steering wheel
  - Objects or events outside the vehicle
  - Moving objects in the vehicle (e.g., food containers, insects, etc.)
  - Talking with other passengers inside the vehicle
  - Using communication devices
- Be aware of changes to driving conditions, such as the amount of traffic, weather, etc.
- Do not reach for items that have fallen or shifted unless absolutely necessary and where it can be done safely.

### Cell Phones

- Do not use touch-activated cell phones (this includes the text feature, applications, web-browser, etc.) while driving.
- Have voicemail option pick up messages or use a hands free device (e.g., voice activation).
- Pull over to a safe location to take any calls or have a passenger answer or place the call.

### In Case of Accident

- Stop:
  - Stop as soon as it is safe to do so.
  - If anyone is injured, call for help.
  - Move vehicles and debris off the road if safe to do so.
  - If unsafe to move vehicles and debris off road, assign someone to warn oncoming traffic.
- Get driver & vehicle details (record for all vehicles and drivers involved – take photos where possible):
  - Driver's name, contact info, driver's licence number & territory/province.
  - Year/make/model of vehicle, licence plate number.
  - Insurance details.

	<ul style="list-style-type: none"> <li>○ Avoid discussing who is at fault.</li> <li>● Witnesses <ul style="list-style-type: none"> <li>○ If there are any witnesses, record their names and contact information.</li> </ul> </li> <li>● Describe the accident scene (take photos, draw sketches, and take notes), noting: <ul style="list-style-type: none"> <li>○ Time, date, location, and weather conditions.</li> <li>○ Direction vehicles were travelling and in which lanes.</li> <li>○ Whether other objects, animals, or vehicles were involved and where they were located.</li> <li>○ Where vehicles, objects, and/or animals ended up.</li> <li>○ Posted speed limits, any signage, and the surroundings (e.g., buildings, hills, railings, etc.).</li> </ul> </li> <li>● Report <ul style="list-style-type: none"> <li>○ Report the incident to your manager as soon as possible.</li> <li>○ Report the incident to the RCMP if damage is likely over \$5,000.</li> <li>○ If you hit a bird of prey (e.g., eagles, owls) or big game animals (e.g., bison, bears, moose, wolf) report the incident to the GNWT Department of Environment and Natural Resources.</li> </ul> </li> <li>● Assess <ul style="list-style-type: none"> <li>○ Assess the condition of the vehicle and ensure it is safe to drive before driving it.</li> </ul> </li> </ul>
<b>9 Documentation</b>	<ul style="list-style-type: none"> <li>● Form 9.3: Vehicle Inspection</li> <li>● Valid driver's licence (i.e., Class 1, 3, or 5)</li> </ul>

**Development**

<b>Name</b>	<b>Position</b>	<b>Date</b>
Prepared by: P. Pascoe	Pozniak Safety Associates	May 15, 2014
Reviewed by: J. Clark	Environmental Analyst	Jun. 13, 2014
Approved by: E. Smith	Director, Health, Safety & Environment	Jul. 10, 2014

**Revision History**

<b>#</b>	<b>Revised Sections</b>	<b>Description of Revisions</b>	<b>Revised by (name, position)</b>	<b>Approved by (name, position)</b>	<b>Issue Date</b>
01	8	Added bullets to "Before Leaving" section	E. Smith Director HSE	E. Smith Director HSE	11-26-15
02	8	Added "In Case of Accident" section	L. Thomson Const. H&S Coord.	E. Smith Director HSE	07-19-16
03	8	Added requirement for circle check and valid driver's licence.	E. Smith Director HSE	E. Smith Director HSE	04-20-18
04					
05					
06					
07					

**APPENDIX B**  
**NTPC LIFE-SAVING RULES CONTRACT**



**Health & Safety Management System Form:**  
NTPC Life-Saving Rules Contract

**Monitor:**  
Director, Health, Safety & Environment

Form #:  
5.1

*The NTPC Life-Saving Rules are safety rules that, if broken, could result in serious injury or death. Adherence to these rules helps keep us safe.*

*NTPC takes these rules very seriously. They shall be understood and adhered to at all times by all employees, contractors, and visitors at NTPC sites. If these Life-Saving Rules are not followed, immediate and appropriate action shall be taken in accordance with the Progressive Discipline Policy.*

**10 NTPC Life-Saving Rules**

- |    |   |
|----|---|
| 1  | <p><b>Work Protection</b></p> <ul style="list-style-type: none"> <li>○ For all work that requires work protection I will verify the isolation of hazardous energy, lock-out, and tag-out before work begins.</li> </ul> |
| 2  | <p><b>Isolated Equipment</b></p> <ul style="list-style-type: none"> <li>○ I will never interfere with or use equipment that has been locked and/or tagged out.</li> </ul>   |
| 3  | <p><b>Electrical</b></p> <ul style="list-style-type: none"> <li>○ I will only work on electrical equipment that I am qualified and authorized to work on.</li> </ul>  |
| 4  | <p><b>Fall Protection</b></p> <ul style="list-style-type: none"> <li>○ I will use fall protection when working at heights in excess of 3 m.</li> </ul>  |
| 5  | <p><b>Drugs &amp; Alcohol</b></p> <ul style="list-style-type: none"> <li>○ I will not work or drive while under the influence of alcohol or drugs.</li> </ul>   |
| 6  | <p><b>Safe Driving</b></p> <ul style="list-style-type: none"> <li>○ While driving I will operate in a safe manner, follow speed limits and road rules, wear my seatbelt, and not use my phone.</li> </ul>               |
| 7  | <p><b>Personal Protective Equipment (PPE)</b></p> <ul style="list-style-type: none"> <li>○ I will wear the required PPE at all times.</li> </ul>  |
| 8  | <p><b>Mobile Equipment</b></p> <ul style="list-style-type: none"> <li>○ I will not operate any mobile equipment unless I am competent and authorized.</li> </ul>  |
| 9  | <p><b>Confined Spaces</b></p> <ul style="list-style-type: none"> <li>○ I will not enter a confined space unless I am qualified and authorized.</li> </ul>   |
| 10 | <p><b>Incident Reporting</b></p> <ul style="list-style-type: none"> <li>○ I will report all incidents, including injuries and near-misses.</li> </ul>   |

**Contract**

**"I, \_\_\_\_\_, have read and understand the NTPC Life-Saving Rules."**

Date:

Signature:

Manager name:

Signature:

Send completed form to Training & Development Specialist by email or fax (1-888-696-5406).

**APPENDIX C**  
**ROAD USER DECLARATION**

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## ROAD USER DECLARATION

**I have read, fully understand and agree to comply with the WR rules dated April 2019.**

Driver's or Road Contractor Employee's Name (PRINT): \_\_\_\_\_

Driver's or Road Contractor Employee's Signature: \_\_\_\_\_

Driver's or Road Contractor Employee's Company \_\_\_\_\_

Name of Company Rep Conducting Orientation (PRINT) \_\_\_\_\_

Signature of Company Orientation Rep \_\_\_\_\_

Dated: \_\_\_\_\_

Driver's Road Number (if applicable): \_\_\_\_\_

Note: A copy of this declaration, duly signed by the trucking company or Road Contractor's representative who conducted the orientation, and a copy of the competency quiz must be filed at the Trucking or Road Contractor Company's office upon completion of the orientation and prior to a driver/contractor being dispatched from Fort Smith for their first WR trip. As a Driver on the WR, you may be required to provide a second signed copy of this document at Fort Smith Dispatch for the purpose of authorizing and identifying your assigned Road Number (if applicable).