

2017

AIR CREW BRIEFING MANUAL

ENVIRONMENT AND NATURAL RESOURCES



Government of
Northwest Territories



April 1, 2017

**WELCOME TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES'
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (ENR).**

We are pleased to have you and your aircraft working for our Department and look forward to productive and rewarding assignments together.

This information package has been designed to help you become familiar with personnel and operative procedures presently in use throughout the Northwest Territories and provide for safe and efficient operations of all aircraft.

Please do not hesitate at any time to bring forth your thoughts and ideas that could help improve our aviation system. Our Aviation Services' email address is: aviation@gov.nt.ca

Our website address is:
www.enr.gov.nt.ca or www.nwtfire.com

TO REPORT A WILDLAND FIRE CALL: 1-877-698-3473 (NWT FIRE)

TERRITORIAL 24-HOUR REPORT A POACHER LINE: 1-866-762-2437

TERRITORIAL 24-HOUR SPILL REPORT LINE: 1-867-920-8130
(collect calls accepted)

<http://www.enr.gov.nt.ca/live/pages/wpPages/publications.aspx>
Standing Offer Agreement (SOA) information.

AIR CREW BRIEFING MANUAL

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A. ORGANIZATION AND ADMINISTRATION

The Mandate of the Minister and Department of Environment and Natural Resources (ENR) is to promote sustainable development through the management and protection of the quality, diversity and abundance of natural resources and the integrity of the environment.

The following are core functions the Department executes in support of natural resource management and protection of the environment:

Forest Management

The primary role of this division is to develop plans and promote the sustainable development of forest resources and to provide wildland fire management services including fire prevention, detection, monitoring, situation assessment and fire suppression action.

The Forest Management Division (FMD) provides the policy, planning and regulatory framework for the stewardship, protection and sustainable management of forest resources on 75 million hectares of land in the Northwest Territories, 18% of Canada's entire forested area. Working with First Nations governments, communities, other governments and non-governmental agencies on such a vast land mass presents unique and complex challenges for forest managers.

The FMD co-ordinates and facilitates the implementation of forest management programs and services among the five Administrative Regions of ENR. The Regional Offices have the primary responsibility for delivery of programs. Regional staff implements forest resource and wildland fire management programs for the Department. Regional personnel receive applications for approval to harvest, supervise harvesting activities, ensure compliance with standards, support community protection planning efforts and carry out fire management activities under the direction of the Forest Management Division.

Some Regions have been further divided into districts each with their own administration and operation centre. Each Region and District is responsible for implementing the wildland fire management program at the field level within their own jurisdiction. The overall Territorial program management including activities such as establishing policy guidelines and standards for the air attack program falls under the jurisdiction of the Forest Management Division located in Fort Smith.

Environment

This Division is responsible along with several federal agencies to ensure that release of contaminants into the air, water and land are minimized and environmental impacts associated with industrial and community development are assessed and minimized. The Division also coordinates initiatives promoting energy awareness, energy alternatives and energy efficiency. Their goal is to protect and enhance the environmental quality in the North. Departmental programs are designed to control the discharge of contaminants and reduce their impacts on the natural environment. This is a shared responsibility with Federal, Territorial, Aboriginal and Municipal agencies as well as every resident of the Northwest Territories. Their goal is to promote energy conservation and the use of energy efficient technology in the Northwest Territories; identify and facilitate the development of alternative local energy sources which strengthen community economies and promote and facilitate energy planning.

Wildlife Management

The role of this division is to develop plans and strategies in partnership with co-management boards and Federal Departments to ensure the conservation and sustainable use of renewable resources through training, income support programs, wildlife and habitat research and compliance. The division also develops policies and implements initiatives for the establishment and operation of protected areas in the NWT.

Water Resources

The Department of Environment and Natural Resources is responsible for the managing water resources in the Mackenzie Valley and inland waters in the Inuvialuit Settlement Region through the administration of the Waters Act and regulations.

B. AIR ATTACK OPERATIONS

Territorial Air Attack Operations are controlled and coordinated through the Forest Management Division, Aviation Services section. Preseason helicopter and air tanker contracts are arranged for and distributed through Aviation Services. As there are very few roads in the NWT, almost all wildland fires receive some form of air attack activity. Although long-term contract helicopters and air tankers are assigned to a specific base of operations it should be remembered that as an aircraft under contract to the Department of Environment and Natural Resources' wildland fire program, you are a Territorial Resource. That is to say, you could be used anywhere in the Northwest Territories even though you are assigned to a particular base.

Essentially you are under the "user authority" of the "Director, Forest Management" who has in most cases delegated this authority to the Territorial Duty Officer, the Resource Officers, or in the case of air tanker groups, the Air Attack Officer. With helicopters and in some cases fixed wing aircraft on fires, the control will be delegated to the Incident Commander. The pilot will be kept informed when this control is delegated or withdrawn. Bypassing of this person is not acceptable unless problems arise.

Each Region is responsible for the management and utilization of its assigned aircraft within the operational guidelines set out for wildland fire management. Each Region is also expected to request (and justify) additional aircraft as required through the Forest Management Division in order to maintain resources for initial attack and ongoing wildland fire activities.

The management and operations of the Air Tanker Bases are the responsibility of the Forest Management Division. When a tanker group is stationed at a base within the Region, that Region's Duty Officer has the authority to prioritize fires and dispatch the group at his/her discretion. The group may not carry out Inter-Region dispatches unless approval has been granted through the Forest Management Division Territorial Duty Officer (TDO).

The Air Attack Officers and Tanker Base personnel are part of the Forest Management Division's staff and as such come under the general supervision of the Manager, Aviation Services. Once a group has been assigned a target and dispatched, the Air Attack Officer and his or her group must become part of the Region or District team.

C. COMMUNICATIONS

All pilots of aircraft operating under hire for Environment and Natural Resources (ENR) are required to file a Flight Note/Plan with the appropriate Region/District Office, Base Camp and/or Transport Canada (if after office hours or requested by ENR). A Flight Note/Plan must be filed with Transport Canada if the ENR Regional Radio Operator is not available (off-season etc.).

1. Flight Following/Flight Watch

Pilots on an ENR Flight/Note Plan will continuously monitor designated radio frequencies and report their position every thirty (30) minutes. Reports should take place on intervals of every 30 minutes after take-off time.

IT IS THE RESPONSIBILITY OF THE PILOT TO ESTABLISH AND MAINTAIN A PROPER FLIGHT WATCH WITH THE DISPATCH CENTRE TO WHICH THE AIRCRAFT HAS BEEN ASSIGNED.

When helicopters are assigned to a District/Region, assigned to or working on a wildland fire, the District radio will remain open and have a competent Operator on duty until the aircraft has landed and ceased operation for the day. The exception to this rule is through prior mutual agreement with the District/Region Office and the pilot. Then, flight following may be transferred from one station to another:

- ⇒ District to Region;
- ⇒ District to Fire (if aircraft terminates day at fire); or
- ⇒ District/Region to Transport Canada

The transferring station will ensure that the new flight watch transfer is established before closing down operations AND that the pilot is aware of the transfer and in agreement.

2. Loss of Radio Communications

It is the Department's policy that loss of radio communications in any contracted or chartered aircraft constitutes an unserviceable aircraft and is to be removed from services until the situation is rectified.

Radio communications means an air-to-air capability (VHF-AM) and air-to-ground capability (VHF-FM).

Please refer to Communications Directory (Appendix 12) for current frequencies.

3. Interagency Channel- Common Border Zone Frequency (NT/AB/WBNP/BC/Yukon)

CH	RX	TX	AIR	DESIGNATION
5	153.47Mhz	153.47Mhz	122.05/129.80	Fire

(Wideband – no tones)

NOTE: In case of interference, change to CH 8 (154.37Mhz) for Air Tanker Base Operations only.

D. AIR TRAFFIC CONTROL OVER WILDLAND FIRES

The area over and surrounding a wildland fire is a Restricted Air Space, under Canadian Aviation Regulation 601.15. This airspace restriction is defined as “over a forest fire area, or over any area that is located within five nautical miles of a forest fire area at an altitude of less than 3,000 feet AGL.” All flights between points within restricted airspace must be coordinated in such a manner as to entirely remove any possibility of collision.

When Air Tankers are deployed on wildland fires, the Birddog pilot is charged with the responsibility for control of air traffic over and in the immediate vicinity of the fire. In the absences of a Birddog, this responsibility will be assumed by the Incident Commander or his/her designate.

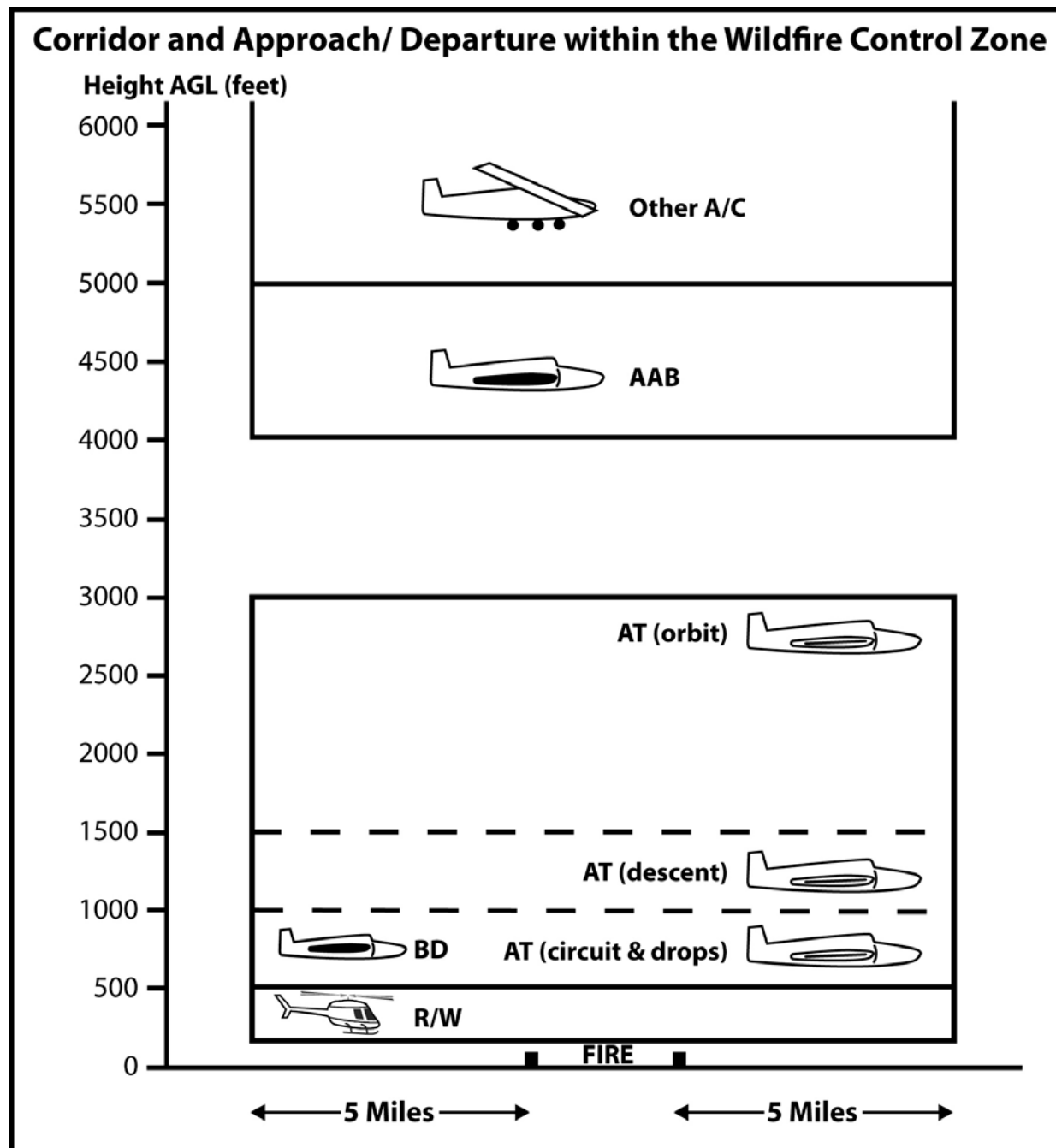
On dispatch, the Air Attack Officer will make contact with the Regional Office on the assigned FM frequency and will remain so for the duration of the mission. **ALL** aircraft enroute to a wildland fire will monitor **126.7 MHZ** after clearing the airport control zone. Once an aircraft is five ~~miles~~ minutes back of the fire, contact must be made with the Birddog pilot for clearance into the area on 122.05. All other aircraft will maintain communication on the air-to-air frequency (**122.05 MHZ**). In the event the Incident Commander is on the ground, the assigned FM frequency is to be utilized. The working Birddog aircraft will be on the dedicated primary bombing frequency or assigned – 122.65 – primary/122.25 secondary. Additional (assigned) bombing frequencies – 122.4 / 122.425 / 122.625 / 122.9 / 122.95 / 131.85.

While on the wildland fire, Air Tankers will use the bombing frequency for communication with the Air Attack Officer. The Birddog pilot must be advised of and clear all other intended aircraft movement in the zone (take offs, landings, altitude, direction, etc.) on **122.05 MHZ**. On aircraft other than tankers, **only the Pilot-in-Command (PIC)** will communicate with the Birddog regarding air traffic control.

The VHF-AM radios are only to be used by the aircraft pilots and their Air Attack Officer. Passengers will use the VHF-FM radio (if available) for communications. Passengers will announce their own call sign in conjunction with the aircraft identification when using the radio (i.e. FT12 / F-ABC). Crew names or fire numbers will be used for these individuals.

The only exception to this policy occurs when working a wildland fire within controlled airspace of a local airport. **Aircraft operations** carried out within these areas will be conducted in conjunction with the local controller. **Fire operations** remain the same as areas out of controlled airspace.

Helicopter:	100-500 ft. (30-150 m) AGL
Birddog Aircraft:	100-1000 ft. (30-305 m) AGL
Orbiting Air Tankers:	1500-3000 ft. (457-914 m)
Air Tactical Group Supervisor: (formerly Air Attack Boss)	4000-5000 ft. (1220 – 1524 m) AGL
Others:	Over 5000 ft. (1524 m) AGL until cleared to another altitude by the airspace controller.



1. Flight Priorities

Flight priorities will be adjusted at the discretion of the airspace controller to suit existing conditions. Normally, the flight priorities are assigned according to fire behavior and necessity (i.e., multi-lightning starts). The following guidelines are used to assign the aircraft flight priorities as listed in order below:

1. Human emergencies;
2. Air Tankers;
3. Helicopters (bucketing);
4. Service; and
5. Reconnaissance.

E. NOTAMS**601.15 Forest Fire Aircraft Operating Restrictions**

No person shall operate an aircraft:

- (a) over a forest fire area or over any area that is located within five nautical miles of a forest fire area at an altitude of less than 3,000 feet AGL; or
- (b) in any airspace that is described in a NOTAM issued pursuant to Section 601.16

601.16 Issuance of NOTAM for Forest Fire Aircraft Operating Restrictions

The Minister may issue a NOTAM that relates to restrictions on the operation of aircraft in the case of a forest fire and that describes:

- (a) the location and dimensions of the forest fire area; and
- (b) the airspace in which forest fire control operations are being conducted

601.17 Exceptions

Section 601.15 does not apply to:

- (a) persons who are operating an aircraft at the request of an appropriate fire control authority; and
- (b) Department of Transport personnel who are operating an aircraft in the performance of duties related to surveillance and the enforcement of aviation legislation.

F. AIRCRAFT MANAGEMENT/SUPERVISION

For the purpose of this manual, Department personnel are defined as:

- a) Employees of the GNWT; AND**
- b) Department contractors and/or individuals whose duties require them to use Rotary Wing and Fixed Wing aircraft for transport or who are involved in loading or unloading such aircraft.**

1. A Department employee will be assigned the responsibility of on-site aircraft management and/or supervision when:
 - (a) more than one aircraft is assigned to a Project or Region/District;
 - (b) medium size helicopters or larger (greater than a six passenger capacity) are assigned to a Project or Region/District; or
 - (c) helicopters are being used to bucket water or fire retardants or in slinging operations.
2. All persons involved in aircraft operations will be given adequate instructions including safety procedures before operations commence.
3. Regular air crew briefing and debriefing will be conducted by ENR staff prior to and at termination of activities involving aircraft utilization.
4. It is the responsibility of the aircraft user to ensure the information on the flight ticket/loadsheet is accurate and factual and will validate the flight ticket/loadsheet by his or her signature.

G. AIRTANKER AND AIR TANKER BASE OPERATIONS

1. Air Tanker / Air Attack and Tanker Base operations are the responsibility of the Forest Management Division. Aircraft and associated support staff will be positioned at Inter-Region by fire load, hazard and risk. Once positioned at a base, Inter-Region/Inter-District dispatches can be made directly to the group as required.
2. All contact with an Air Tanker group will be via the Air Attack Officer in charge of that group only.
3. All requests for Air Tankers located/positioned outside the Region/District boundaries must be channeled through the Forest Management Division (Territorial Duty Officer) who will be responsible for actioning or denying the request.
4. Once an Air Tanker group has been dispatched by the Forest Management Division (Territorial Duty Officer) to a target or base changed to another Region, it may only be cancelled or rerouted by the Forest Management Division (Territorial Duty Officer).

5. When the Air Attack Officer and Air Tanker aircraft are over a wildland fire and no ground authority (i.e. Incident Commander) is present, the Air Attack Officer is the Incident Commander until their departure or an appointed Incident Commander assumes the role.
6. The Air Attack Officer is responsible for the safe operations of the Air Tanker group and as such may remove the group from any wildland fire he or she deems hazardous to life or property both to ground and/or aircraft crews.
7. As Air Tankers are primarily an initial attack tool, initial attack on new wildland fires shall take priority over support action on an ongoing fire with the exception where life or property may be at stake.
8. Air Tanker Group Alert System - Alerts for various tanker groups will be set by the Territorial Duty Officer with input from the Region and District offices. Local Region and District Officers may **upgrade** an individual alert to increase preparedness while undertaking smoke patrols, possible smoke patrols and unforeseen thunder shower/lightning activity. However, a local Region or District cannot lower the established alert without the approval of the Territorial Duty Officer.

Resource Alert System – The Alert Status for all resources within each Region/District will be set by respective Regional Duty Officer with the exception of Air Tanker Groups. All resource alerts will be established by the respective Regional Duty Officer after careful analysis of the most current:

- ⇒ Lightning Activity Preparedness Planning System (LAPPS);
- ⇒ Preparedness Forecast; and
- ⇒ Fire Weather Forecast.

ALERT STANDARDS are as follows:

- (a) **Red** Designated personnel, aircraft, and equipment ready for immediate dispatch. No aircraft maintenance to be done while on red alert.
- (b) **Yellow** Designates personnel, aircraft, and equipment ready for dispatch within thirty (30) minutes of call out. Minor maintenance may be carried out with prior approval.
- (c) **Blue** Designated personnel, aircraft, and equipment ready for dispatch within a predetermined time greater than sixty (60) minutes. Significant maintenance may be carried out with prior approval.
- (d) **Green** Designated personnel, aircraft, and equipment are stood down usually for a predetermined period of time.

H. AIRCRAFT SAFETY

1. Unserviceable Radio Equipment

All aircraft employed on fire operations will have operative radio equipment capable of communication with other aircraft, ground crews and Department base facilities (VHF-AM, VHF-FM). No aircraft will be allowed on operations without radio communications. Chartered aircraft without acceptable or serviceable radios will be considered unserviceable.

2. Unserviceable Emergency Locator Transmitter (ELT)

All aircraft must be equipped with a **serviceable** 406 MHZ Emergency Locator Transmitter (ELT). An unserviceable ELT will render the aircraft unserviceable for operational use.

3. Overload of Aircraft

Load Calculations will be completed before each loaded Initial Attack Operation for rotary wing and before each loaded dispatch for fixed wing transport. Under no circumstances will Department staff or aircrews overload an aircraft. The pilot is responsible for securing internal loads, so they do not block exits or shift in flight. The pilot will be provided with the weights required to calculate weight and balance. The pilot or a responsible aircraft company representative must be in attendance for loading of the aircraft for safety reasons.

4. Refueling

- (a) Department personnel **WILL NOT** refuel aircraft.
- (b) During refueling operations, Department personnel will vacate the aircraft until the refueling has been completed.
- (c) Hot refueling of rotary wing aircraft **WILL NOT** be allowed at any Department of Environment and Natural Resources operated heliport facility. Department personnel are NOT to be involved in **any way** in hot refueling operations away from an Environment and Natural Resources' facility.
- (d) Aircrews must ensure there is proper grounding and bonding of refueling equipment.
- (e) Pilots may refuse refueling aircraft from any storage facility. Including unsealed, improperly sealed, or aged drums. The Department **WILL NOT** use fuel that is more than 12 months past the fill or recertification date.

5. Transporting Fuel

Outlined in the International Air Transport Association (IATA) Dangerous Goods Regulations (DGR) manual states that passenger and cargo are forbidden to carry petroleum distillates UN1268 in excess of 60 liters when a passenger is onboard. For specific information regarding the Transportation of Dangerous Goods (TDG), please refer to the DGR manual.

6. Pre-Job Briefing
All persons involved in aircraft operations will be given adequate instructions, including safety procedures prior to commencement of operations (See Appendix #9).
7. Flying in Helicopter during Bucketing /Slinging/Drip Torch Operations
Department personnel will NOT fly in helicopters being used in a bucketing role, slinging operations, and/or using incendiary devices, such as a drip torch.
8. Hover Exit Operations: **CARS 602.25 Entering or Leaving Aircraft in Flight**
 CARS 702.19 Entering or Leaving a Helicopter in Flight

602.25 Entering or Leaving an Aircraft in Flight

- (1) No person shall enter or leave an aircraft in flight except with the permission of the pilot-in-command of the aircraft.
- (2) No pilot-in-command of an aircraft shall permit a person to enter or leave the aircraft during flight unless:
 - (a) the person leaves for the purpose of making a parachute descent; or
 - (b) the flight is authorized under Subpart 3, or the entering or leaving is permitted in accordance with Section 702.19.

702.19 Entering or Leaving a Helicopter in Flight

For the purposes of paragraph 602.25 (2) (b), the Pilot-in-Command of a helicopter may permit a person to enter or leave the helicopter in flight:

- (a) where:
 - (i) the helicopter is operated at a low hover;
 - (ii) the person is able to enter directly from or alight onto the supporting surface;
 - (iii) the air operator is authorized to do so in its air operator certificate; and
 - (iv) the air operator complies with the Commercial Air Service Standards.

NO EMPLANING: Department employees **WILL NOT** emplane a helicopter while in a hover unless it is considered an emergency. The Department will consider emplaning a helicopter to be an emergency procedure, used only to evacuate employees that are in immediate danger. Helicopter emplaning will be considered an aircraft incident and will be reported as such.

Deplaning will only be conducted by trained personnel engaged in wildland fire suppression or specialized wildlife work who have received Department training. Department personnel must receive training *every* season **BEFORE** hover exiting.

Deplaning from Hover can be done only during day VFR conditions while the helicopter maintains a stabilized hover with a **maximum skid height of FIVE feet above the ground.**

PROCEDURES FOR HOVER EXITING ARE SET OUT IN THE DEPARTMENT'S HOVER EXIT MANUAL AND AIR CARRIER'S OPERATIONS MANUAL.

9. Air Crew and Aircraft Considerations

To ensure safety is not compromised by factors contributing to pilot fatigue, the following guidelines will be followed provided they do not exceed the flight time limitations or flight duty time limitations and rest periods as specified in the Air Carriers' Operations Specifications or Flight Operations Manual.

Environment and Natural Resources (ENR) Directorate has determined that the guidelines below apply to all flying. **The Superintendent or appropriate Director may approve exceptions in accordance with the guidelines below. To be clearer, exceptions are caused by events, i.e. emergency and are not planned.**

These approved exceptions require a detailed explanation written on the applicable flight ticket by the ENR representative.

- a. **Flight Duty Day:** Aircrews working for the Department will be limited to fourteen (14) hours of duty time in any one-day (24 consecutive hour period).
- b. **FLIGHT TIME:** Air crews working for the Department will **NOT** fly more than eight (8) hours in any 24 hour period (8 hours per day). The EIGHT-hour maximum daily flight time will also include any non-Departmental flying. If a pilot flies for another customer, the EIGHT-hour limit shall be reduced accordingly.

For example: If a pilot flies two (2) hours on another job, he/she will only be allowed to fly six (6) hours for the Department during that 24 hour period.

- c. **Exceptions:** When in extenuating circumstances, a need exists to exceed the flight time and flight duty time limitations and rest periods as specified in the Commercial Air Service Standards, it will be the pilot-in-command / Air Operators' responsibility to ensure that the necessary authorizations are obtained.
- d. **Rest Periods:** For every four (4) hours of flying time; pilots must have a half-hour rest period **AWAY** from the aircraft. This half-hour does **NOT** include aircraft maintenance or refueling time.
- e. **Maintenance:** Maintenance is an essential function for the safe operation of all aircraft. Maintenance requirements vary greatly depending on aircraft type and operator requirements. To ensure safety is not compromised by lack of, or the inability to perform maintenance adequately, engineers are not to be separated from

their aircraft for any period longer than 24 consecutive hours. When in extenuating circumstances, a need exists to exceed these limits, it is the responsibility of the user to advise the pilot, engineer, and Regional Superintendent/Director, Forest Management before the limits are exceeded. The Regional Superintendent/Director, Forest Management may extend these limits only after all factors contributing to aircraft safety have been considered and an agreement reached with the aircrew concerned.

- f. **Food and Lodging:** It is the responsibility of all Department staff involved in aircraft operations to ensure the aircrew is provided with adequate accommodations and nutrition. Accommodation for air crews should not be shared with other personnel, only with the aircraft company's crewmembers, or where required with other aircrew. Every effort is to be made to provide or locate aircrew accommodations that ensure an atmosphere conducive for sleep and relaxation. (Note: Aircrews, especially engineers' hours of work may differ from those of the general work place.)

The air crew will be expected to camp out at field locations. Air crew are expected to have in their possession adequate personal effects (sleeping bag, pillow, toiletries, medication, cot and or foam mattress etc.) to work from remote locations.

The Department will supply air crew with suitable accommodations. This means a single occupancy bedroom that is subject to a minimal level of noise, is well ventilated and has facilities to control the levels of temperature and light. Where such a bedroom is not available, an accommodation that is suitable for the site and season is subject to a minimal level of noise and provides adequate comfort and protection from the elements as outlined in Canadian Air Regulations.

- g. **Rotations From Remote Bases:** The positioning of air crews at remote Fire Attack Bases, Base Camps, Staging Areas or Work Projects will only be for a short duration, with a maximum 3 to 5 days before rotated out to a regional center or closest community where commercial accommodations are provided. Determination of the application for this rotation will be based upon the Regional Duty Officer's evaluation of the following factors:

- i) requirement of aircraft on site;
- ii) status of air crew fatigue and morale factors;
- iii) living conditions and facilities on site; and
- iv) location and availability of alternate resource.

These limitations are guidelines and may vary depending upon the situation. Aircrews rotated out from a remote base must be relocated to a community or base location with access to the following services and facilities:

- i) electrical and washing facilities for aircraft maintenance;
- ii) secure storage for aircraft equipment and spares;
- iii) commercial transportation for movement of spares and air crew personnel;
- iv) commercial or Department accommodation complete with beds, showers and telephone access; and

- v) laundry and incidental services.

The rotation period should NOT be LESS than 36 hours.

10. Accident Definition

All **accidents** involving Departmental use of aircraft will be reported immediately in a confidential manner to the Director, Forest Management and the Manager, Aviation Services.

An accident is an occurrence in which a person suffers injury or death and/or an aircraft is damaged.

SEE THE DEPARTMENT'S **AIRCRAFT ACCIDENT RESPONSE MANUAL** FOR FURTHER INFORMATION REGARDING AIRCRAFT ACCIDENTS, AS WELL AS MISSING OR OVERDUE AIRCRAFT.

11. Incident Definition

All **incidents** involving Departmental use of aircraft will be reported immediately in a confidential manner to the Director, Forest Management and the Manager, Aviation Services.

An incident means an aviation occurrence, other than an accident, that affects or could affect the safe operation of an aircraft.

Some examples of incidents are:

- ⇒ any illuminated warning lights at any time (chip lights etc.);
- ⇒ any aborted take-offs;
- ⇒ any problems with landings (flapless landings, etc.);
- ⇒ dropping a load during slinging operations;
- ⇒ unsecured items at landing sites including debris;
- ⇒ low fuel problems;
- ⇒ weather related problems;
- ⇒ helipad construction problems;
- ⇒ fuel pump failure;
- ⇒ engine starting problems;
- ⇒ unauthorized hover exiting;
- ⇒ loading/weight problems;
- ⇒ where an object comes in contact with an aircraft where contact was not intended or is detrimental to the aircraft;
- ⇒ an deviation from standard operating procedures; or
- ⇒ dangerous goods unlawfully transported.

The above are just a few examples of incidents that must be reported for the following reasons:

- ⇒ to monitor aircrew and passenger safety;
- ⇒ to monitor pilot fatigue;
- ⇒ to monitor individual aircraft capabilities;
- ⇒ to monitor various aircraft components (i.e., if several incidents were reported on the dropping of water buckets, perhaps it might be a malfunction with the hook);
- ⇒ to detect any patterns or trends in the incidents and then take a preventative course of action (this was one of the reasons for developing the Hover Exit Procedure Manual);
- ⇒ to explain delays in departures/arrival; or
- ⇒ to identify what the Department needs to improve.

12. SHELL Analysis

SHELL ANALYSIS

A Shell Analysis report is to be ***completed by the air crew*** involved in the incident. (An incident report is to be ***completed by the ENR personnel*** involved in the incident).

IDENTIFY UNACCEPTABLE RISKS AND HAZARDS: PRIORITIZE AND REDUCE OR ELIMINATE THEM.

The Shell Analysis is made up of five (5) categories that are to be reported to the Aviation Services section for any aircraft incident.

The five (5) categories are:

SOFTWARE: POLICY, REGULATIONS, MANUALS,
PROCEDURES, PAMPHLETS, POSTERS, CHARTS, MAPS...

HARDWARE: AIRCRAFT - TYPE, CONDITION, A/C SYSTEMS,
AUXILIARY EQUIPMENT, FUELLING AND LOADING SYSTEMS,
INSTRUMENTATION, COMMUNICATIONS EQUIPMENT...

ENVIRONMENT: WEATHER, WORK AREA CONDITIONS,
TIME FACTORS, TERRAIN, VISIBILITY, DAYLIGHT, TYPE OF
FLYING - REMOTE, PRODUCTION...

LIVEWARE (OTHER PEOPLE): THE PEOPLE WHO
INTERACT WITH THE PILOT AND WHO HAVE THE OPPORTUNITY
TO INFLUENCE THE PILOT...

LIVEWARE (PILOT/AIRCREW): PERSONALITY (HUMAN
FACTORS), PRESSURES, TRAINING AND EXPERIENCE, FATIGUE
(FLIGHT HOURS/DUTY DAYS, REST, and MEALS), BRIEFING AND
PREPARATION...

The following pages contain an example of an Incident Report and the accompanying Shell Analysis.

The following is an example of a completed Aircraft Incident Report. This report to be *completed by the ENR personnel* involved in the incident.



AIRCRAFT INCIDENT / OCCURRENCE REPORT

- a) Date and time of incident/occurrence: June 24, 2017 at 1030 hrs.
- b) Name of carrier: XYZ Helicopters Ltd.
- c) Name of pilot: Joe Pilot
- d) Type of aircraft: Astar 350B2
- e) A/C registration: C-GOLF
- f) A/C assigned to: Hay River Duty Officer – John Smith
- g) Function of aircraft: Mountain Pine Beetle bait traps
- h) Purchase order number: 123710
- i) Routing of aircraft: YHY – Cameron Hills - YHY
- j) Location of Incident/Occurrence: Cameron Hills
- k) Passenger Name(s): Sam Black, Jane Jones
- l) Nature of Incident/Occurrence: The aircraft was required to land on the cutlines as these were the only suitable landing areas. Hover exits were not intended and both the pilot and the passengers were instructed that hover exits would not be permitted. The pilot took the necessary precautions before landing to ensure the landing site was suitable. As well, the passengers were watching nearby trees to ensure clearance was adequate. The pilot adjusted the aircraft slightly to his right just before touchdown and the machine went a little too far to the right and the end tip of the main rotor clipped a black spruce tree, hitting the bark of the tree. Nothing was felt during the landing but after shutting down a portion of bark was noticed missing from a tree and the tie down strap at the end of the rotor blade was bent from the impact. Another aircraft was ferried in to return the passengers to Hay River. The pilot tested the blades by hovering and the machine operated normally, whereas it ferried to the highway where engineers determined there was no damage to the rotor blade and the tie down clips could be repaired with little effort.

Reported by: Sam Black

Date: 24/06/2017
(dd/mm/yyyy)

Time: 18:30
(24 hr)

SHELL ANALYSIS ATTACHED: ☒

The following is an example of a completed Shell Analysis. This report to be *completed by the air crew* involved in the incident.

SHELL ANALYSIS

Please fill-in all the fields below and submit to: **Aviation Services: Fax: (867) 872-2148 or
Email to: Aviation@gov.nt.ca**

Aircraft Registration: **C-GOLF**

Date of Incident: **June 24, 2017**

Software: All aspects of XYZ Helicopters Ltd. flight operations are covered in the class, referenced, or experienced in flight during the training period.

In the classroom, general discussion is encouraged and varies from class to class. Annual incidents and accidents are de-sensitized and discussed along with TC CADORS with all classes.

Specifically, confined areas and situational awareness are dealt with during the "flight" phase of the training. Certain aspects of these items would be discussed, if they were noted, as incidents/accidents in the previous year as a weak area operationally.

All helicopter pilots receive confined area theory and practical training constantly from the start of their career. It is one of the most experienced aspects of a bush pilot's job. It is also one of those high risk aspects of the job.

I would venture to say that as long as we are dealing with humans and mother nature we will not eliminate this risk. We are constantly modifying our recurrent training programs to mitigate this and other risks of the job.

Hardware: From the pilot's line of sight or view, in this particular aircraft, the pilot does not have 360 degree visibility to see all external physical hazards. The helicopter AS350 BA was equipped and met the standards of the contract.

Environment: Two environments here; the internal environment in the aircraft between passenger and pilot and the external physical environment (the landing zone). Lots of human factors happening within the internal environment. The external environment (landing zone) could have been modified by physically making it larger or by choosing another landing area. The landing zone should be preplanned and approved in advance of utilization. It is assumed that the traps would be monitored and the helicopter would have to land again at least once again at this site. The weather conditions on June 24 were excellent. The pilot was requested to land on the Cameron Hills, which is an area that is difficult to find a landing area. The pilot found a cutline and circled 3 times before deciding to land.

The pilot felt the area was large enough to accommodate the helicopter. He hovered over the site and checked the left side clearance. The pilot inadvertently moved the helicopter too far right and the main rotor blades hit a Black Spruce tree.

He moved the helicopter a little to the left and landed. He then observed that the tree bark had been skinned and the main rotor blades were bent.

Liveware:
(Other People)

The pilot's decision to accept the landing area could have been influenced by a natural desire to please the customer and carry out their request.

Liveware:
(Pilot/Aircrew)

The pilot is a very experienced pilot and has worked in many different geographical areas. He has had annual recurrent flight training every year during his career. He felt there was no question of fatigue because the air crew has excellent accommodations and meals. He also felt flight hours and duty days were not a factor. There has never been any pressure from ENR in his role as the pilot. The customer was briefed on the day of the occurrence and the usual preparations were made for the job that day. He had accumulated 80 hours of flight time so far this year.

Observations and recommendations:

It is well known that it can be difficult to find a proper safe landing area below the tree line. Initial attack crews have one power saw operator on board which allows a hover exit. The power saw operator exits and cuts out a pad suitable for the landing.

Trap landing sites and other project sites should possibly be treated the same way. Especially if the landing site is going to be used time and time again.

It would be prudent to have these project sites preplanned, prepared and approved prior to the project start.

Completed by: Joe Pilot

Date: 30/06/2017
(dd/mm/yyyy)

The Shell Analysis Report to be completed by the aircrew involved in the incident.

I. PILOT RESPONSIBILITY

- i) Ensure the aircraft is fuelled, serviceable and available for dispatch in accordance with the Regional/Territorial Alert Standards.
- ii) Advises the local ENR authority of any deficiencies or problems in the operation.
- iii) Records all flight times and crew expenses on the appropriate flight documents.
- iv) Ensures all flight tickets/loadsheets are certified by a designated Department employee.
- v) Conducts operational checks of all navigational, safety, communications, and cargo/water dropping systems prior to alert time.
- vi) May assist in training of fire crews, wildlife crews and resource staff in the safe and efficient use of helicopters.
- vii) Keeps the current dispatch authority of their whereabouts at all times while on contract with the GNWT.
- viii) Ensures that all routine checks and maintenance are scheduled and carried out in accordance with current regulations and specifications.
- ix) Ensures that the aircraft is kept reasonably clean and ready for missions as and when required.
- x) Maintains flight operations in accordance with the NWT's Flight/Duty Time and Rest Period Regulations and Limits.
- xi) Advising if relief pilot is required due to fatigue.
- xii) Being prepared to remain over night at camps (i.e. sleeping bag, foamie, air mattress and other camping accessories).
- xiii) It is the pilot's sole responsibility as to whether it is safe to land or takeoff. The pilot must **ALWAYS** make his or her determination on the side of safety first!
- xiv) Directs the loading and/or off-loading of the aircraft. Aircraft will not be overloaded.
- xv) Operating the aircraft in accordance with the Canadian Aviation Regulations.

J. MANIFESTING

In the interests of safety, the Pilot-in-Command shall ensure that a manifest of all crewmembers and passengers on board has been completed. A copy of this manifest shall remain at the point of initial departure. Manifest changes will be left at subsequent points of departure when practical. In those instances where multiple short flights will be made in a specific geographical area, which involves frequent changes of passengers, a single manifest of all passengers involved may be left with an appropriate person to preclude unreasonable administrative burden.

However, the Department will also maintain a passenger manifest. Each crewmember, contractor, and Departmental staff will be assigned a number by their respective Regional Office. This number will be utilized instead of first and last names. Each Regional Office will maintain a master list of all their personnel with their assigned numbers. In a case of an Inter-Regional dispatch, this list will be forwarded to the applicable Region. It will be the responsibility of an assigned Departmental Representative (Crew Leader/Radio Operator) to ensure that a manifest is recorded for each flight. In instances which involve frequent changes of passengers this manifest **MUST** be updated. This manifest must be relayed to an appropriate Departmental Representative on the ground (Radio Operator at a Base Camp/Regional Office/Fire Camp).

K. WEATHER

Aviation weather is available from Flight Service stations in: Fort Smith, Yellowknife, Hay River, Fort Simpson, Norman Wells, and Inuvik. In addition to this, complete coverage and forecasts will be available from the Forest Management Division (867-872-7700) and at Regional Offices on a daily basis during the summer months.

L. GOVERNMENT VEHICLE POLICY

All Government vehicles, whether owned or rented by the Department, are restricted to use on Government business. Government vehicles may **ONLY** be operated (driven) by Government employees due to insurance restrictions. The Department disclaims any responsibility in cases of any accident where the driver was not carrying out business for the Department.

M. ALCOHOL AND DRUGS

The possession and/or consumption of alcoholic beverages and drugs in any aircraft, vehicle or on any premise owned, occupied or under the control of the Department is strictly prohibited. As ENR Camps and Fire Attack Bases are classified as Departmental premises, this policy will apply to all locations. All personnel under employment, contract or on hire to the Department will be made aware of this policy and adhere to it.

N. AIR CHARTER PURCHASE ORDERS

The Air Charter Purchase Orders are formal agreements between the Department of Environment and Natural Resources and the Air Carrier.

When do short-term contracts start?

If a helicopter is hired from the location it is presently located and *ferry time is agreed upon by the Department*, then the *contract starts the “minute” the helicopter leaves in order to ferry to or within the NWT.*

This information can be obtained from the Air Charter Purchase Order under the section “Point of Hire”.

If the helicopter company has a machine located elsewhere (Point A) but tells us they will be positioned at some other point (Point B) within the NWT or some closer point and we agree to hire them if they arrive at Point B by a certain time, then the contract will start only when the helicopter arrives (and is ready to work) at Point B.

Note: If the helicopter arrived at Point B very late in the day, which would not allow flight minimums to be flown off, **then the contract would start the following morning OR there would be no flight minimums for that day.**

Also see “Point of Hire” on the Air Charter Purchase Order.

On the Air Charter Purchase Order see **“Point of Release”** to determine what locations we will pay ferry time to when the helicopter is released at the end of the contract.

An example of an Air Charter Purchase Order is on the next page.

TERMINATION OF THE CONTRACT MAY RESULT FROM THE FOLLOWING SITUATIONS (*also see current Standing Offer Agreement (SOA) for aircraft services*):

1. Non-compliance with Transport Canada regulations;
2. Prolonged unserviceability of aircraft;
3. Aircrew is either insufficiently experienced or incompatible with the Department’s management team;
4. Unserviceable radios/ELT;
5. Failure to carry out reasonable orders from authorities in charge or by mutual agreement;
6. The aircraft fails to perform according to the manufacturer’s specifications; or
7. Failure to operate the aircraft within the normal safety guidelines that are acceptable within the Resource Management Industry.

SAMPLE AIR CHARTER PURCHASE ORDER



Northwest Territories Environment and Natural Resources

PURCHASE ORDER - CH-123610

(This report was generated on 01/Mar/2013 at 11:26)

TO: No Name Air Ltd.	INVOICE TO: Environment and Natural Resources
PO Box 1, Fort Simpson, Northwest Territories, X0E 0N0, Canada	PO Box 7, 149 MacDougal Rd, Fort Smith, Northwest Territories, X0E 0P0, Canada
Vendor ID No.: 0001001000	S.O.A. No.: 40001 Order Date: 02/Mar/2013

Region/Division: ENR-HQ-Aviation

Aircraft Registration: GGEE

Aircraft Type: 206-(Cessna)

Special Equipment:

Aircraft Assigned To Name: Jane Biologist

Aircraft Assigned To Phone: (867)587-3518

Aircraft Assigned To Alt. Phone:

Pilot: Gordon, Bob

Co-Pilot:

Purpose: Aerial reconnaissance survey of BWH barren ground caribou below treeline in Sahtu.

Routing three daily trips from Norman Wells to follow survey lines between Great Bear Lake, treeline, Inuvialuit/Sahtu border and Mackenzie River as per emailed map. Company to have jerry cans of fuel on board for refuelling at Ft Good Hope.

ENR HQ's budget

Comments: Three passengers including One ENR Biologist and two Norman Wells observers. Variable low level flying to allow observation of wildlife and tracks. End points of survey lines to be provided to pilot as per emailed map. We will not be landing at Colville. We will veer off transect to avoid Colville by 50 km then resume transect flying. Based from Norman Wells we will go to Fort Good Hope to pick up observer(s) before the survey and drop the observer off at Ft Good Hope each day.

PERIODS OF HIRE

02/Mar/2013 - 05/Mar/2013

Departure: NORMAN WELLS Time: 09:00 Arrival: Time:

Routing Information

Start Location	End Location	Passengers	Cargo	Weight	Unit
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COST

Number of Days: 4 Total Guaranteed Hours: 0

Daily Minimum: 0.00 Hours

Costing Details

Commodity	Unit	Rate	Quantity of Unit	Days	Total	Comments
Flight Service	Hours	\$1.00	30.00	1	\$30.00	
AC Company Fuel	Hours	\$1.00	30.00	1	\$30.00	
Other	None	\$1.00	1.00	1	\$1.00	ferry costs incl fuel, nav can & landing fees
Other	Estimate	\$1.00	1.00	4	\$4.00	est. crew expense AFHB
Calculated Total:					\$65.00	

ESTIMATED COST

Org	Account	Fund	Area	Sett	Program	P.C. Bus	Project	Activity	Amount
53018	53485	01	11	005	55130				\$100.00
Estimated Total:									\$100.00

We certify that the goods being purchased by the G.N.M.T. are being purchased with Crown funds and therefore not subject to the Goods and Services Tax.

The terms and conditions of the standing offer agreement (SOA) shall apply whenever the SOA number appears on the face of the purchase order.

CERTIFIED PURSUANT TO SUBSECTION 44(1)(X/A) OR 49(2)(X/A) OF THE FINANCIAL ADMINISTRATION ACT

SPENDING AUTHORITY

AUTH NO.

O. FLIGHT TICKETS & AIRCRAFT LOADSHEET/TRIP LOGS

Flight tickets and the Aircraft Loadsheet/Trip Log **must** be filled out daily. A flight ticket is still required if no flying is done, a loadsheet is not necessary. Note on the flight ticket the reason no flying was done. If the aircraft is unserviceable, enter the start time as well as the time the aircraft becomes serviceable. Flight tickets and Loadsheet/Trip Logs (white and yellow copies) are to be submitted at the end of each day and verified correct and complete by the Officer in charge, preferably the Regional Duty Officer. This procedure is **important** to ensure our daily expenditures are current.

Should an air carrier provide a substitute aircraft due to unserviceability, it must be indicated on the Loadsheet/Trip Log and the accumulative hour totals must be carried on until the original aircraft is back on line.

HOW TO COMPLETE EACH SECTION OF THE AIRCRAFT LOADSHEET/TRIP LOG

Section One – Aircraft Information

Flight Date _____ enter the date the flight occurs

Aircraft Company _____ enter the full company name of the Aircraft
Company

Aircraft Registration _____ enter the last four letters of the current aircraft
registration

Aircraft Type _____ enter the model and type

Flight Ticket No. _____ enter the “Aircraft Company’s” flight ticket number

Contract No. _____ enter the air charter purchase order (PO) number
(i.e. CH 169810) or the long-term contract number

Pilot / Engineer _____ enter the first and last names of the Pilot and/or
Engineer

Section Two –Flight Information

Departure Location _____ record the location of takeoff
(i.e. Fire #, Base Camp, Tower, Settlement, etc.)

Departure Time _____ record the time of the takeoff using the 24-hour
clock

Arrival Location _____ record the location of landing (i.e. Fire #, Base
Camp, Tower, Settlement, etc.)

Arrival Time _____ record the time of the landing using the 24-hour
clock

Passengers (number) _____ record the number of passengers on each flight

- Cargo – or – # of Drops* _____ record what type of cargo **OR** the number of drops of water made when bucketing.
- Fire # / Project* _____ Fire # - if working on a fire, record the fire number
Project – if working on a project, the ENR Officer will enter the project code.
- Flight Code* _____ enter the Aircraft Flight Purpose code for each flight.
(see Appendix #1)

Section Three – Flight Time

Rotary Wing _____ enter the total time from the moment the helicopter first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight (or in other words, from the time the helicopter commences hovering until it ceases to hover after landing).

When operations involve a continuous succession of flights, each **LESS** than ten minutes duration **AND** the engine is **NOT** shut down between such flights, flying time shall be computed from the time the helicopter commences to hover for the first flight until the helicopter ceases to hover after the final landing.

This flight time should be recorded to the nearest six minutes using the decimal system in Appendix 3.

Fixed Wing (excluding Air Tankers) _____ This flight time **MUST** be entered in **MILES** for all point-to-point flights where flight distances are measurable.

The flight time will **ONLY** be entered by the **HOURLY** IF engaged in operations involving flights or parts thereof where flight distances are **NOT** measurable, such as reconnaissance flights or detection patrols. The flight time for fixed wing aircraft where the distances are **NOT** measurable will be the total time from the moment the aircraft first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight.

When applicable, flight time should be recorded to the nearest six minutes using the decimal system in Appendix 3.

Section Four – Remarks

Remarks _____ enter any **new fires discovered** and any additional information or explanations of the flight. When transporting fuel drums, enter the number of drums and whether they are empty or full.

Section Five – Hours

Total Hours Flown Today _____ enter the total of **ALL** flight time for the day.

Previous Accumulated Hours _____ enter the total of ALL previous hours flown for the contract.

Total Accumulated Hours to Date _____ enter the total hours flown to date.

Section Six – Fuel Obtained

This section is to record the amount of **DEPARTMENT (ENR) FUEL ONLY** by location and number of drums or litres. For drummed fuel, note the **date** and **batch number** of the fuel. This procedure is required to keep our fuel inventory records up-to-date.

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S DRUMMED FUEL ON THE DEPARTMENT'S LOADSHEET/TRIP LOG.

Note: **AIRCRAFT COMPANY FUEL**, fuel the company pays for themselves, should be indicated on **COMPANY** flight tickets **ONLY!**

Failure to record Company Fuel Charges on the COMPANY flight ticket will result in non-payment.

Section Seven – Crew Expenses

Meals _____ check off all applicable meals that were **NOT** provided by the Department. Record the dollar amount of accommodations and transportation (**EXCLUDING GST**). These are the expenses incurred for company payment.

*Failure to record expenses incurred in the Crew Expenses Section of the Loadsheets / Trip Log will result in **NO** reimbursement to the company*

Section Eight – Expense Authorization





This section **MUST BE** approved, signed and dated by the ENR Officer in charge.

***NO CHANGES** will be permitted on the Aircraft Loadsheet / Trip Log and Company Flight Tickets **AFTER** Certification. Changes made prior to certification must be initialed by the appropriate Authority.*

Persons certifying the Loadsheet / Trip Log and flight tickets should **CHECK ALL ENTRIES** to make sure they are correct before signing the documents. This includes verifying that claimed expenses were authorized and correct.

Note: Double check up and down times and conversions to hours system (see Appendix #3). These amounts **MUST** match the Flight Time Conversion Table. **Any discrepancies will be calculated to the lowest time entered by the Department.**

If the flight time for the day is over eight (8) hours (for which prior approval was given), a detailed explanation as to why must be written on the applicable flight ticket/loadsheet by the ENR representative.

 <div style="display: inline-block; text-align: center;">  AIRCRAFT LOADSHEET/TRIP LOG  </div> 		Page <div style="border: 1px solid black; padding: 2px; display: inline-block;">1 of 1</div>	
Flight Date July 5, 2013		Aircraft Company Fixed Wing Aviation Ltd.	
Aircraft Registration C-GOLF	Aircraft Type Cessna 185	Flight Ticket No. 1348	
Contract No. 123610	Pilot Jimmy Likestofly	Engineer	

Time Reported for Duty:					Time Released from Duty:				
Departure		Arrival		Passengers (number)	Cargo - or- # of Drops	Fire #/ Project	Flight Code	Flight Time Hours / Miles	Remarks
Location	Time	Location	Time						
1. YFS	14:31	YSM	17:06	1			WRO	336 Miles	Ferry flight - pick up Joe Biologist
2. YSM	17:23	YSM	18:26	1			WRO	1.1 hrs	Caribou productivity survey
3. YSM	18:19	YSM	19:31	1			WRO	1.2 hrs	Caribou productivity survey
4. YSM	19:48	YFS	21:00	1			WRO	336 Miles	Ferry flight home to YFS
5.								-----	
6.								2.3 hrs +	(Where distance is not measurable, the usage must be calculated in HOURS.) (Where the flight is Point A to Point B, the usage must be calculated in MILES.)
7.								672 miles	
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

HOURS

Total Hours Flown Today:	672 miles/2.3 hrs
Previous Accumulated Hours:	-----
Total Accumulated Hours to Date:	-----

FUEL OBTAINED

Location	No.	Date of Fuel	Batch Number	Bulk - Litres
4-mile (ENR fuel)	1	May 2013	54326889	

CREW EXPENSES

MEALS:	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	\$	\$
Engineer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X Joe Biologist's signature
 Signature of ENR Representative

July 05/13
 Date d/m/y

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON LOADSHEET/TRIP LOG.

		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto;"></div> <div style="text-align: center;"> AIRCRAFT LOADSHEET/TRIP LOG </div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto;"></div> </div>							
Page <div style="border: 1px solid black; padding: 2px; display: inline-block;">1 of 1</div>									
Flight Date July 5, 2013		Aircraft Company No Name Helicopters Ltd.							
Aircraft Registration C-GDAD		Aircraft Type Astar 350B2			Flight Ticket No. 56890				
Contract No. CH 123810		Pilot James Brown			Engineer Jane Wrench				
Time Reported for Duty:				Time Released from Duty:					
Departure		Arrival		Passengers (number)	Cargo - or # of Drops	Fire #/ Project	Flight Code	Flight Time Hours / Miles	Remarks
Location	Time	Location	Time						
1. YZF	15:46	ZF014	17:00	3		ZF14	H	1.2 hrs	IA ZF14 w/Crew C
2. ZF014	17:27	ZF014	17:46	3		ZF14	H	0.3 hrs	P/U crew @ base --> ZF014
3. ZF014	18:00	ZF014	18:20	----	7	ZF14	E	0.3 hrs	Bucketing
4. ZF014	18:30	YZF	19:43	----	1 drum	ZF14	H	1.2 hrs	Rtn w/drum, discovered ZF015, rtn ZF
5.								-----	
6.								3.0 hrs	
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

HOURS

Total Hours Flown Today:	3.0 hrs
Previous Accumulated Hours:	10.0 hrs
Total Accumulated Hours to Date:	13.0 hrs

FUEL OBTAINED

Location	DRUMS			Bulk - Litres
	No.	Date of Fuel	Batch Number	
ZF base (ENR fuel)	---	May 2013	A1-73-12	120 litres
Awry Lake (ENR fuel)	1	Apr 2013	124670278	-----

CREW EXPENSES

MEALS:	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ 150.00	\$ 200.00
Engineer:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ 150.00	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X Duty Officer's signature
 Signature of ENR Representative

July 05/13
 Date d/m/y

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON LOADSHEET/TRIP LOG.

P. AIR CREW EXPENSES AND AIR CARRIER INVOICING

All aircraft crew must record their full daily expenses, meals, accommodations and transportation in the “Crew Expenses” section of EACH Aircraft Loadsheets/Trip Log. Each Aircraft Loadsheets/Trip Log must be approved and signed by a Department representative. Failure to indicate the total daily aircrew expenses on the Aircraft Loadsheets/Trip Log will result in NO reimbursement being made to the carrier.

THE GNWT CANNOT ACCEPT AND IS NOT LIABLE FOR THIRD PARTY BILLING. CREW EXPENSES, SUCH AS ACCOMODATIONS OR VEHICLE RENTALS CANNOT BE BILLED DIRECTLY TO THE GNWT.

Crew Expenses are reimbursable ONLY when indicated as such on the Air Charter Purchase Order. Generally, they are reimbursable if the aircrew is away from home base or point of hire.

Meals

Aircrews will be responsible for paying their own meals and the aircraft company will invoice the Department as per the current GNWT Duty Travel Rates (see Appendix #5) for each person on site. No receipts are necessary for meals.

Aircrews **MAY NOT** claim for meals, incidentals or private accommodations while staying at GNWT facilities, satellite bases or camps. Meals **CANNOT** be claimed if supplied by the GNWT.

Incidentals may only be claimed if the contractor overnights in a place other than his or her home base AND they may also be claimed on the last day of any contract longer than one day provided the crew has been away from their home base. Where the return trip is made in one day, the amount claimable shall be on the basis of meals only. **Incidentals CANNOT be claimed for a one-day trip.**

Depending on the time of day the aircraft is hired, some meals may not be claimed. For instance, on the first day of the contract, we expect not only the aircraft to be fuelled and ready to go but the pilot as well. Therefore, on **DAY 1** of the contract, **BREAKFAST WILL NOT BE CLAIMED.**

Claims cannot be made for meals when the aircrew is at their home base within a reasonable time frame (e.g. at home base by 16:30 hrs. -no claim for dinner can be made).

Reimbursement will NOT be provided when the DEPARTURE of the aircraft from home base or point of hire is:

- for breakfast, expenses are not eligible for reimbursement
- for lunch, later than 13:00 hours
- for dinner, later than 18:30 hours

Reimbursement will NOT be provided when the ARRIVAL of the aircraft at home base or point of release is:

- for breakfast, earlier than 07:30 hours
- for lunch, earlier than 12:30 hours
- for dinner, earlier than 18:30 hours

The Department will approve accommodation and/or meals for the following number of people (ppl) actually on the working site for the period the meals or accommodations are being charged for:

Helicopter Classification:

Light Helicopters – seats 1 to 4 passengers, Internal Gross Weight ranges from 1 to 3,599 lbs., Maximum external load capacity up to 1,500 lbs. Examples are: Robinson R22, Bell 47, and Bell 206B, Hiller 12E/T, Hughes 500, etc.

Intermediate Helicopters – seats 5 to 8 passengers, Internal Gross Weight ranges from 4,000 to 4,999 lbs., Maximum external load capacity up to 2,500 lbs. Examples are: Bell 206LR, L3, L4, Bell 407, AS350B models, Bell 222, AS355, EC135B4, H135, etc.

Medium Helicopters – seats 9 to 14 passengers, Internal gross weight ranges from 5,000 to 12,500 lbs., Maximum external load capacity up to 12,500 lbs. Examples are: Bell 204, 205, 212, 214, 412, K-max, Sikorsky S55T and 58T, etc.

Heavy Helicopters – seats 15 plus passengers, internal gross weight ranges from 12,501 plus lbs., Maximum external load capacity up to 25,000 lbs. Examples are: Sikorsky 61 & 64, Vertol 107 and 234, Kamov 32, etc.

Fixed Wing Aircraft:

Single & Multi Engine, Light (C185, Beaver, Baron, C310, C337) – 1 ppl (1 pilot)

Single Engine, Medium (Single Otter) – 2 ppl (1 pilot & 1 crewman/engineer)

Multi Engine, Medium (Twin Otter) – 2 ppl (1 pilot & 1 crewman/engineer)

Air Tankers:

4 AT802 FireBoss and 1 Birddog aircraft – 7 ppl (5 pilots & 2 engineers)

2 CL-215s and 1 Birddog Aircraft – 7 ppl (3 pilots, 2 co-pilots & 2 engineers)

2 CL-215Ts and 1 Birddog Aircraft – 7 ppl (3 pilots, 2 co-pilots & 2 engineers)

2 CL-415s and 1 Birddog Aircraft – 7 ppl (3 pilots, 2 co-pilots & 2 engineers)

1 Electra and 1 Birddog Aircraft – 5 ppl (2 pilots, 1 co-pilot & 2 engineers)

1 C580T and 1 Birddog Aircraft – 5 ppl (2 pilots, 1 co-pilot & 2 engineers)

Accommodations / Transportation

All aircrews are to use their proper names along with their **respective company name** when reserving and/or paying for accommodations and rental vehicles. **DO NOT** use the GNWT or the **Department's Name** as you are **NOT** employed by the Government of Northwest Territories.

Aircrews will be responsible for paying their own accommodations/transportation and must submit receipts to their company so the aircraft company can submit the receipts (excluding the GST), along with respective flight tickets and invoice to the Department of Environment and Natural Resources.

In the event of a sudden Base change where the aircrew pays accommodations at two locations, an explanation must accompany the invoice and flight ticket.

Accommodations **CANNOT** be claimed for the **day the aircraft is released**. If unforeseen circumstances arise where accommodations are necessary for the date of release, an explanation must accompany the invoice and flight ticket.

Invoices for vehicle rentals, accommodations, and taxis **MUST BE** supported by a receipt with the applicable dates listed.

Aircrews must ensure that all accommodation/transportation charges are recorded on the appropriate flight ticket/aircraft loadsheet. Failure to comply with this guideline will result in NO reimbursement to the air carrier.

Fuel

All fuel is supplied by the Department, either by the GNWT owned fuel system or by the air carrier purchasing fuel and then invoicing the Department.

Rotary Wing Aircraft:

When a Rotary Wing Aircraft is hired, it is assumed that the aircraft is fuelled and ready to go. We **DO NOT** pay for fuel **AT** the Point-of-Hire. We do pay/or provide fuel for the ferry flight enroute to its base of operation **FROM** the Point-of-Hire. The Department will also pay/or provide fuel for the ferry flight from the base of operations to the Point-of-Release, and will top it up upon return to the Point-of-Release.

Fixed Wing Aircraft:

When a Fixed Wing Aircraft is hired, the fuel rate will be fixed on either a Mileage or Hourly Rate, along with any applicable surcharges supported by receipts.

Air Tanker Aircraft:

For Air Tankers, the aircraft will arrive on base at the beginning of the season with fuel to perform the first of the season's missions. This is defined as four (4) hours of fuel that the company would be responsible for. At the end of the season, the aircraft would be fuelled by the Department to the four (4) hour level prior to leaving the base.

Invoices for fuel purchased or supplied by the aircraft company must be supported by a receipt.

Any fuel purchased or supplied by the air carrier has to be shown on the appropriate flight ticket/aircraft loadsheet. Failure to comply with this guideline will result in no reimbursement being made to the air carrier.

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON THE DEPARTMENT'S LOADSHEET/TRIP LOG.

Crew Change

Air carrier initiated crew changes will be paid by the air carrier. Crew expenses related to such crew changes will be also be paid by the air carrier. Air crew changes requested by the GNWT will be paid by the GNWT with the exception of unsatisfactory aircrew performance.

The carrier must advise the Forest Management Division, Aviation Services section of any crew changes **48 hours** in advance (see Appendix #14).

NO SUBSTITUTIONS FOR AIRCRAFT AND PILOTS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION FROM THE FOREST MANAGEMENT DIVISION, AVIATION SERVICES SECTION.

Daily Minimums

Aircraft hired on a casual basis, less than one day, **ARE NOT** compensated for daily minimums unless the aircraft is booked as such or the accumulated waiting period charge exceeds the daily minimum.

Aircraft hired on a short-term basis, more than one day, the daily minimums are averaged.

If prior to termination an aircraft is extended, the daily minimums for the aircraft will be recalculated. This is based on the minimums that would have applied had the original air charter purchase order (PO) included the period of the extension. The daily minimums are cumulative over the life of the air charter purchase order, which includes all subsequent extensions.

For example: If the daily minimums for the charter are **4.0 hours a day** for the period of May 01 to May 05, the guaranteed hours would be 20 hours.
(5 days x 4 hrs/day = 20 hours).

If the Air Charter Purchase Order were extended for another two days, then the guaranteed hours would now be 28.

(5 days + 2 day extension x 4 hrs/day = 28 hours). The daily minimums are averaged.

In the event of an unserviceable or unavailable aircraft, the daily minimum hours **WILL NOT** be paid and no others charges or recoverable expenses including crew expenses will be considered.

An aircraft will be considered to be unavailable or unserviceable during any 24 hour period commencing at 07:00 hours, local time, when the aircraft cannot due to mechanical failure of the said aircraft, inability of the crew to perform duties including but not limited to where the crew has exceeded statutory flight and duty time limitations, or failure of specialized equipment to complete contracted assignments. Unserviceable ELT, radio equipment and accessories are to be considered as rendering the aircraft unserviceable for operational use.

Other

Aircraft are normally released at a time of day that will allow depositioning to the Point-of-

Release (as noted on the Air Charter Purchase Order) on the same day. Additional expenses will not be accepted or reimbursed should the aircrew or air carrier delay their departure and/or stay overnight unless circumstances dictate or prior approval is given.

Air carriers are responsible for the transportation and costs of transportation for spare parts and special equipment that is required to service the aircraft unless prior written approval has been given. The air carrier must ship all freight directly to the air crew whenever possible.

Fire Suppression activities are EXEMPT FROM NAV CANADA CHARGES. Note the instructions on the Purchase Order.

It is expected that all air carriers should deal with Northern Registered Companies for services such as vehicles or hotels as opposed to fellow company employees or private citizens.

Invoicing

Each company invoice should reference ONLY ONE Air Charter Purchase Order number (extensions included) and should state the correct Purchase Order number and aircraft registration.

The rates shown on the Air Charter Purchase Order reflect the rates provided through the Standing Offer Agreement (SOA) or Air Charter Request for Tender. These are the only rates considered for reimbursement.

Unused minimums should be shown as a separate item on the invoice.

The Goods and/or Services purchased by the Government of the Northwest Territories are being purchased with Crown Funds and are therefore not subject to the Goods and Services Tax (GST). **GST must be deducted from hotel bills, vehicle rentals, etc. that are submitted to the GNWT for reimbursement.**

Even though the Contractor will not charge G.S.T., the contractor may be eligible to receive input tax credits with respect to any G.S.T. liability incurred by the Contractor in providing the property and services if such a refund would be available in other circumstances.

It is the Government of the Northwest Territories' (GNWT) policy NOT TO PAY any invoice until it becomes due. Therefore, we cannot receive any invoice in our office before services have been rendered.

It is **RECOMMENDED** that crew expenses be invoiced separately from the flight time charges to ensure there are no delays in your company receiving payment.

Invoices for crew expenses **must** be supported by receipts (except meals) and should be separated into individual days and by individual air charter purchase order numbers (extensions included).

When invoicing for ***Fixed Wing Aircraft*** (excluding Air Tankers), we will **ONLY** pay the **rate per mile** for all Point-to-Point flights where the distances are measurable and we will pay the **rate per hour** for flights or parts thereof where the flight distances are **NOT** measurable, such as detection patrols or reconnaissance flights.

All invoices must be submitted to the Forest Management Division no more than thirty (30) calendar days after the final release date on any air charter purchase order or long-term contract. Send complete invoices to:

ENR, Forest Management Division
C/O Financial and Employee Shared Services
Government of the Northwest Territories
PO Box 1230, Fort Smith, NT X0E 0P0
Email: Financial_SharedServices@gov.nt.ca
Subject: FESS Fort Smith - Forest Management Division - PO # and Invoice #

Invoices with errors may be returned with a letter of explanation for correction and resubmission. Should you require further information or clarification regarding invoice procedures, please contact the Forest Management Division, Aviation Services section at (867) 872-7700 or fax (867) 872-2148 or email Aviation@gov.nt.ca

SUMMARY OF AIRCRAFT FLIGHT PURPOSE CODES**AIRTANKER OPERATIONS**

ATA Fire Bombing **
(Tankers)
ATB Birddogging for Fire Bombing**
(Birddog Aircraft)
ATC Base Change
ATD Training Practice
ATE Administration
ATF Positioning Flights
ATG Fire Standby
ATH Other
ATI False Alarm
XP_ Export

** Requires Fire Number

FIXED WING AND ROTARY WING

A = RECONNAISSANCE**
B = BIRD-DOGGING
C = COMMUNICATIONS
D = DETECTION
E = WATER-BOMBING**
F = FUEL TRANSPORT
G = FIRE TRANSPORT & SERVICE**
H = HELITACK**
I = INTRA-RED SCANNING**
IM = IMPORT MARS CREWS
K = AERIAL IGNITION**
L = PERSCRIBED BURNING**
M = MERCY
N = FERRY
O = OTHER
P = TOWERS
Q = FIRE MANAGEMENT
R = PREVENTION
S = GENERAL TRANSPORT
T = TRAINING
U = STANDBY
V = FALSE ALARM
W = ENFORCEMENT
X = EXPORT
Y = FOREST DEVELOPMENT
Z = FOREST SCIENCE

** Requires Fire Number

FIXED WING AND ROTARY WING – OTHER DIVISION FLYING**REGIONAL OPERATIONS**

ERO/ROE Enforcement
GRO/ROG South Slave Bison Ecologist
ORO/ROO Other
PRO/ROP Environmental Protection
RRO/ROR Resource Development
WRO/ROW Wildlife

HEADQUARTERS OPERATIONS

EHQ/HQE Enforcement

OHQ/HQO Other
PHQ/HQP Environmental Protection
RHQ/HQR Resource Development
WHQ/HQW Wildlife

AIR TANKER OPERATIONS FLIGHT CODING

CODE	PROJECT	PURPOSE
ATA	FIRE BOMBING	Flight time charged against AIR TANKER fire bombing mission/targets FIRE # REQUIRED
ATB	BIRDDOG FOR FIRE BOMBING	Flight time charged against birddogging fire bombing mission/targets FIRE # REQUIRED
ATC	BASE CHANGE	Flight time charged for base changing AIR TANKER groups.
ATD	TRAINING PRACTICE	Flight time charged for AAO training and aircrew proficiency practice.
ATE	ADMINISTRATION	Flight time charged for administration trips such as tanker base crew moves, contract administration etc. Passenger name(s) required.
ATF	POSITIONING FLIGHTS	Flight time charged for the ferry flights to and from their point of hire to a predetermined location.
ATG	FIRE STANDBY	For all AIR TANKER group standby
ATH	OTHER	Flying not covered in listed codes. Flight details required.
ATI	FALSE ALARM	Flight times for fires that were not found. Flight details required.
XP_	EXPORT	Flight times charged while in the service of other cooperative agencies. Use the last letter to indicate type of activity. (e.g. XPC_ = aircraft base changed while in another agencies jurisdiction.

Revised: May 2016

ENVIRONMENT AND NATURAL RESOURCES

AIRCRAFT FLIGHT PURPOSE CODES – Forest Management

The following codes and required remarks must be indicated on the appropriate flight tickets/loadsheets and the daily aircraft costing screens. **All new fires discovered and reported during any flight or portion of a flight regardless of flight purpose will be noted** along with the fire number of the fire discovered on the flight ticket or loadsheet and in the Remarks field of the daily aircraft costing screen.

CODE	PROJECT	PURPOSE
A	RECONNAISSANCE	Flights around fire or series of fires to plan suppression strategy, map, or monitor fire activities. REQUIRES FIRE #
B	BIRD-DOGGING	Aircraft used as an aerial platform to direct air attack operations (bucketing or bombing). A Department air attack supervisor would be on board. Requires flight details in remarks section of Daily Aircraft Costing Screen.
C	COMMUNICATIONS	Flights to service radio equipment or installations, construct new installations, survey of new locations, install and service remote weather stations, etc. Requires flight details in remarks section of Daily Aircraft Costing Screen.
D	DETECTION	Planned aerial patrols by fixed or rotary wing aircraft for the purpose of fire detection. Includes aerial patrols with fire crews on board. SHOULD NEVER HAVE A FIRE # REMARKS SECTION OF THE FLIGHT TICKET OR LOADSHEET AND DAILY AIRCRAFT COSTING SCREEN MUST INCLUDE ALL FIRES DISCOVERED DURING A PATROL. Also, requires flight details in remarks section of Daily Aircraft Costing Screen.
E	WATER-BOMBING	Time Spent while actually carrying out water bombing drops. <u>*Does not include refuelling times or travel to/from bombing zone.</u> REQUIRES FIRE #

CODE	PROJECT	PURPOSE
F	FUEL TRANSPORT	<p>Transport of fuel for the purpose of fuel cache restocking, fuel cache inventory, or support of fire operations. Includes flights required to remove or return empty fuel containers.</p> <p>Requires flight details in remarks section of Daily Aircraft Costing Screen.</p>
G	FIRE TRANSPORT & SERVICE	<p>Includes all fire suppression flying required to transport any personnel, equipment, and or supplies involved in fire suppression activities. This includes flying between main bases to or from fire camps or the fire line as well as on the fire.</p> <p>INITIAL ATTACK FORCES MUST ALREADY BE IN PLACE.</p> <p>REQUIRES FIRE #.</p>
H	HELITACK	<p>Delivery of initial attack crew and suppression gear to a new fire and return flight to designated base. Includes all successive flights by same aircraft to supply initial attack fire activities until end of first burning period or fire declared beyond I.A. (i.e.: R/W drops off crew, returns to base for more equip. & men, delivers to fire and returns to base. All Codes = H).</p> <p>REQUIRES FIRE #.</p>
I	INFRA-RED SCANNING	<p>All flights required for the use of any infrared scanning devices.</p> <p>REQUIRES FIRE #</p>
IM	IMPORT MARS	<p>All aircraft hired for importing crews from other provinces (and return) NWT FIRE # - if applicable</p>
K	AERIAL IGNITION	<p>Use of helicopters for the purpose of utilizing or supervising aerial ignition devices on wildfire to prescribed burning operations.</p> <p>REQUIRES FIRE OR PRESCRIBED BURN #.</p>
L	PRESCRIBED BURNING	<p>All flying associated with planning, preparing for, and executing a prescribed burn. A prescribed burn that exceeds prescription and requires suppression action flying will be coded to the appropriate code.</p> <p>Requires flight details and Prescribed Burn # or project # in remarks section of Daily Aircraft Costing Screen.</p>

CODE	PROJECT	PURPOSE
M	MERCY	Search and rescue, evacuation, medevac, RCMP etc. Requires flight details in remarks section of Daily Aircraft Costing Screen.
N	FERRY	Positioning and depositing of aircraft from operating base to a predetermined point. Includes flights from and to point of hire. Requires flight details in remarks section of Daily Aircraft Costing Screen.
O	OTHER	Forest Management flying not covered in listed codes. Requires flight details on the Flight Ticket or Loadsheet and in remarks section of Daily Aircraft Costing Screen
P	TOWERS	All flights or portions of flight required for the purpose of operating, maintaining, and servicing fire lookout towers. Includes flights to survey and/or construct new facilities. Requires flight details in remarks section of Daily Aircraft Costing Screen.
Q	FIRE MANAGEMENT	All flights or portions of flights for the purpose of community consultation and value-at-risk inspections. Requires flight details in remarks section of Daily Aircraft Costing Screen.
R	PREVENTION	Flight time attributed to the transportation of personnel, equipment and supplies, required to administer and/or conduct prevention programs (i.e.: school demonstration, road signs, cottage lot protection, open house, etc.) Requires flight details in remarks section of Daily Aircraft Costing Screen
S	GENERAL TRANSPORT	Transportation of men, equipment and supplies to or from Primary or Secondary bases, Fire Attack Bases, Base Camps, work projects etc. Not to be used for actual fire-line flying or in direct support of fire activity. Requires flight details in remarks section of Daily Aircraft Costing Screen. SHOULD NEVER HAVE A FIRE #

CODE	PROJECT	PURPOSE
T	TRAINING	Flight time of aircraft attributed to the training of, or transportation for the purpose of training fire crews and fire staff. Requires flight details in remarks section of Daily Aircraft Costing Screen
U	STANDBY OR UNUSED MINIMUMS	The unused or not flown hours of contract and casual hired aircraft AND/OR crew expenses when no flying is required. Aircraft and crew were on standby for dispatch. If an aircraft is NOT used due to weather or unserviceability or on standby it must be specified in Remarks section of Daily Aircraft Costing Screen and on the Flight Ticket or Loadsheet.
V	FALSE ALARMS	All flights or portions of flights attributed for flying to and from reported fires but which are not found or turn out to be no fire. Requires flight details in remarks section of Daily Aircraft Costing Screen.
W	ENFORCEMENT	All flights or portions of flights for the purpose of conducting fire investigations, enforcement activities and/or actions. Requires flight details in remarks section of Daily Aircraft Costing Screen.
X	EXPORT	All hours flown by Environment and Natural Resources' contract aircraft while in the service of other cooperative fire control agencies, RCMP or private industry. Requires flight details in remarks section of Daily Aircraft Costing Screen.
Y	FOREST DEVELOPMENT	All flights in support of forest development projects and/or activities. These projects/activities include: silviculture, forest inventory, reforestation, regeneration, pre-harvesting, post-harvesting and harvesting. Requires flight details in remarks section of Daily Aircraft Costing Screen.
Z	FOREST SCIENCE	All flight in support of Forest Science projects and/or activities. These projects and/or activities include: fire and forest ecology, fire history, FIDS (Forest Insect Disease Survey), vegetation classification and PSP (Permanent Sample Plots) etc. Requires flight details in remarks section of Daily Aircraft Costing Screen.

OTHER DIVISIONS REGIONAL OPERATIONS




CODE	PROJECT	PURPOSE
ERO ROE	ENFORCEMENT - Other Division's Budget - Presup/Suppression Budget	All Regional operations authorized flights in support of enforcement activities and/or actions. Includes enforcement actions for environmental protection, forest development and wildlife management programs. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
GRO ROG	SOUTH SLAVE BISON ECOLOGIST - Other Division's Budget - Presup/Suppression Budget	All Regional authorized flights by the South Slave Bison Ecologist or delegate in support regional wildlife management projects and/or activities. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
ORO ROO	OTHER - Other Division's Budget - Presup/Suppression Budget	All regional operations authorized flights in support of flying activities not covered in codes. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
PRO ROP	ENVIRONMENTAL PROTECTION - Other Division's Budget - Presup/Suppression Budget	All regional operations authorized flights for the purpose of inspections, monitoring or cleanup of agents, substances or material deemed harmful to the environment. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
RRO ROR	RESOURCE DEVELOPMENT - Other Division's Budget - Presup/Suppression Budget	All regional operations authorized flights in support of conservation education and resource development designated projects. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
WRO ROW	WILDLIFE MANAGEMENT - Other Division's Budget - Presup/Suppression Budget	All regional operations authorized flights in support of regional wildlife management projects and/or activities. Includes all bear deterrent and removal activities. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.

**IF Regional Operations or HQ use the Department's rotary or fixed wing aircraft
– use the appropriate Presup/Suppression Budget Purpose Code.**

OTHER DIVISIONS
HEADQUARTERS OPERATIONS
 (Headquarters in Yellowknife)

CODE	PROJECT	PURPOSE
EHQ HQE	ENFORCEMENT - Other Division's Budget - Presup/Suppression Budget	All headquarters authorized flights in support of enforcement activities and/or actions. Includes enforcement actions for environmental protection, forest development, and wildlife management programs. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
OHQ HQO	OTHER - Other Division's Budget - Presup/Suppression Budget	All headquarters authorized flights in support of flying activities not covered in codes. Requires flight details and authorizing officer name on flight ticket or loadsheet and in remarks section of daily aircraft costing screen.
PHQ HQP	ENVIRONMENTAL PROTECTION - Other Division's Budget - Presup/Suppression Budget	All headquarters authorized flights for the purpose of inspections, monitoring or cleanup of agents, substances or material deemed harmful to the environment. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
RHQ HQR	RESOURCE DEVELOPMENT - Other Division's Budget - Presup/Suppression Budget	All headquarters authorized flights in support of conservation education and resource development designated projects. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.
WHQ HQW	WILDLIFE MANAGEMENT - Other Division's Budget - Presup/Suppression Budget	All headquarters authorized flights in support of regional wildlife management projects and/or activities. Includes all bear deterrent and removal activities. Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.

**IF Regional Operations or HQ use the Department's rotary or fixed wing aircraft
 – use the appropriate Presup/Suppression Budget Purpose Code.**

 <div style="display: inline-block; text-align: center;">  AIRCRAFT LOADSHEET/TRIP LOG  </div> 		Page _____ of _____	
Flight Date		Aircraft Company	
Aircraft Registration		Aircraft Type	Flight Ticket No.
Contract No.		Pilot	Engineer

Time Reported for Duty:					Time Released from Duty:				
Departure		Arrival		Passengers (number)	Cargo - or # of Drops	Fire #/ Project	Flight Code	Flight Time Hours / Miles	Remarks
Location	Time	Location	Time						
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

HOOURS

Total Hours Flown Today:	
Previous Accumulated Hours:	
Total Accumulated Hours to Date:	

FUEL OBTAINED

Location	DRUMS			Bulk - Litres
	No.	Date of Fuel	Batch Number	

CREW EXPENSES

	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$	\$
Engineer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X

Signature of ENR Representative _____ Date d/m/y _____

Transport Canada's A.I.P. Canada (section: AIR 4-1)

FLIGHT TIME CONVERSION TABLE

00 – 02 minutes= 0.0 hour
 03 – 08 minutes= 0.1 hour
 09 – 14 minutes= 0.2 hour
 15 – 20 minutes= 0.3 hour
 21 – 26 minutes= 0.4 hour
 27 – 32 minutes= 0.5 hour
 33 – 38 minutes= 0.6 hour
 39 – 44 minutes= 0.7 hour
 45 – 50 minutes= 0.8 hour
 51 – 56 minutes= 0.9 hour
 57 – 60 minutes= 1.0 hour

**NO FLIGHT SHALL BE CONSIDERED TO
HAVE A DURATION OF LESS THAN 0.1 HOUR.**

METRIC CONVERSION TABLES

TO CONVERT	INTO	Multiply by	TO CONVERT	INTO	Multiply by
Centimetres	Inches	.394	Lbs./Imp. Gal	Kgs./Litre	.0998
Feet	Metres	.305	Lbs./U.S. Gal.	Kgs./Litre	.120
U.S. Gallons	Litres	3.785	Lbs. sq. in.	Inches Hg.	2.040
Imp. Gallons	U.S. Gals.	1.201	Litres	U.S. Gals.	.264
Imp. Gallons	Litres	4.546	Litres	Imp. Gallons	.220
Inches	Centimetres	2.540	Metres	Feet	3.281
Inches Hg.	Lbs. sq. in.	.490	N. Miles	Kilometres	1.852
Kgs./Litre	Lbs./Imp. Gal	10.023	N. Miles	St. Miles	1.152
Kgs./Litre	Lbs./U.S. Gal.	8.333	Pounds	Kilograms	.454
Kilograms	Pounds	2.205	St. Miles	Kilometres	1.609
Kilometres	St. Miles	.621	St. Miles	N. Miles	.868
Kilometres	N. Miles	.540	U.S. Gals.	Imp. Gallons	.833

**AIR TANKER
LOAD JETTISON AREAS**

Inuvik (EV)	Location: one mile south east of Campbell Lake Coordinates: 68° 15' 30" N x 133° 13' 30" W
Norman Wells (VQ)	Location: on north slope of Franklin Mountain Range Coordinates: 65° 22' 00" N x 126° 40' 00" W
Fort Simpson (FS)	Location: Fort Simpson Town Dump Coordinates: 61° 50' 00" N x 121° 18' 30" W
Yellowknife (ZF)	Location: fifteen miles east/northeast of Yellowknife Coordinates: 62° 26' 00" N x 113° 59' 00" W
Hay River (HY)	Location: north east of Cameron Hills Coordinates: 60° 35' 30" N x 116° 55' 00" W
Fort Smith (SM)	Location: northwest of airport out of control zone Coordinates: 60° 00' 00" N x 112° 00' 00" W

Meals and Incidental Expenses – April 01, 2017

The allowance for meals and incidental expenses when traveling in Canada are now:

Breakfast	\$23.85
Lunch	\$26.60
Dinner	\$57.10
Incidentals	\$17.30

	\$124.85

FOREST MANAGEMENT DIVISION

Department of Environment and Natural Resources
Box 7, #149 McDougal Road
Fort Smith, NT X0E 0P0

Office Phone: (867) 872-7700
Fax: (867) 872-2077

- AVIATION SERVICES**

Office Phone: (867) 872-7719
Office Phone: (867) 872-7723
Fax: (867) 872-2148

SOUTH SLAVE REGIONAL OFFICE

Department of Environment and Natural Resources
Box 900 Fort Smith, NT X0E 0P0

Office Phone: (867) 872-6400
Fax: (867) 872-2035
Fire Clerk: (867) 872-6422

- FORT RESOLUTION**

Office Phone: (867) 394-4596
Fax: (867) 394-5101

HAY RIVER AREA OFFICE

Department of Environment and Natural Resources
156 Miron Drive, Hay River, NT X0E 0R2

Office Phone: (867) 875-5550
Fax: (867) 875-5559
Fire Clerk: (867) 875-5555

- FORT PROVIDENCE**

Office Phone: (867) 699-3014
Fax: (867) 699-3031

HAY RIVER FOREST RESOURCES OFFICE

Department of Environment and Natural Resources
Box 4354, #173 Hay River Dene Reserve
Hay River NT X0E 1G3

Switchboard: (867) 874-2009
Fax: (867) 874-6236

NORTH SLAVE REGIONAL OFFICE

Department of Environment and Natural Resources
Box 2668 Yellowknife, NT X1A 2P9

SWITCHBOARD: (867) 767-9238
Fire Ops Fax: (867) 873-0403
Fire Clerk: Ext. #53245

- FRANK CHANNEL FOREST FIRE CENTRE – Seasonal Only**

Office Phone: (867) 371-3133
Fax: (867) 371-5011

- LUTSEL K'E**

Office Phone: (867) 766-2370
Fax: none

- TLICHO OFFICE - Behchokò**

Office Phone: (867) 392-6511
Fax: (867) 392-6339

SAHTU REGIONAL OFFICE

Department of Environment and Natural Resources
Box 130 Norman Wells, NTX0E 0V0

SWITCHBOARD: (867) 587-3500
Fax: (867) 587-3516
Fire Clerk: (867) 587-3511

- **DELINE**

Office Phone: (867) 589-3421
Fax: (867) 589-4906

- **FORT GOOD HOPE**

Office Phone: (867) 598-2271
Fax: (867) 598-2708

- **TULITA**

Office Phone: (867) 588-3441
Fax: (867) 588-3907

DEHCHO REGIONAL OFFICE

Department of Environment and Natural Resources
Box 240, Fort Simpson NTX0E 0N0

Office Phone: (867) 695-7450
Fax: (867) 695-2381
Fire Clerk: (867) 695-7488

- **FORT LIARD**

Office Phone: (867) 770-4300
Fax: (867) 770-4600

INUVIK FOREST MANAGEMENT OFFICE – SHELL LAKE

Department of Environment and Natural Resources
PO Box 2749, Inuvik, NT X0E 0T0

Office Phone: (867) 678-6698
Fax: (867) 678-6699
Fire Clerk: (867) 678-6696

- **AKLAVIK**

Office Phone: (867) 978-2248
Fax: (867) 978-2061

- **FORT MCPHERSON**

Office Phone: (867) 952-2200
Fax: (867) 952-2269

- **PAULATUK**

Office Phone: (867) 580-3021
Fax: (867) 580-3022

- **SACHS HARBOUR**

Office Phone: (867) 690-3060

- **TSIIGEHTCHIC**

Office Phone: (867) 953-3055
Fax: (867) 953-3611

- TUKTOYAKTUK

Office Phone: (867) 977-2350
Fax: (867) 977-2335

- ULUKHAKTOK

Office Phone: (867) 396-4505
Fax: (867) 396-3033

NOTES

AERODROME LOCATION INDICATORS FOR NWT SETTLEMENTS

VL	Colville Lake
WJ	Deline (<i>Fort Franklin</i>)
PY	Fort Chipewyan, Alberta
GH	Fort Good Hope
JF	Fort Liard
FM	Fort McPherson
JP	Fort Providence
FL	Fort Reliance
FR	Fort Resolution
FS	Fort Simpson
SM	Fort Smith
FB2	Frank Channel
RA	Gamètì (<i>Rae Lakes</i>)
HY	Hay River
EV	Inuvik
LK	Lutselk'e(<i>Snowdrift</i>)
VQ	Norman Wells
RE2	Behchokò (<i>Rae/Edzo</i>)
FN	Tulita (<i>Fort Norman</i>)
FJ2	Wekweètì (<i>Snare Lake</i>)
EM3	Whatì (<i>Lac La Martre</i>)
XY	Whitehorse, Yukon
WY	Wrigley
ZF	Yellowknife

AIR CREW BRIEFING FORMAT

When an aircraft arrives on a Fire or a Project (i.e. Caribou Survey, Fuel Caching etc.) or at a Region, a full briefing **MUST** be done with the air crew. Aircrews should also be briefed every morning on the jobs or activities anticipated for that day. This will assist them in their planning of meals, rest periods or maintenance. Remember to update the briefing when circumstances change. The following is a checklist that may be used when briefing aircrews (Note: some items are not applicable depending on the job).

1. Agency Policy and Procedures

- (a) Flight and duty time limitations
- (b) Fuelling procedures
- (c) Persons authorized to order flights
- (d) Mandatory flight following
- (e) Air Traffic control over wildland fires
- (f) Rotations schedule policy
- (g) Initial Response Officer standard operating procedures

2. Administration and Operations

- (a) Flight tickets and codes
- (b) Meals, lodging, and vehicles
- (c) Maintenance requirements, equipment & parts storage, washing facilities
- (d) Emergency response procedures (down or overdue/missing aircraft)
- (e) Communications directory (repeaters, call signs)
- (f) Dispatch procedures (grid, bearing, distance, etc.)
- (g) Mandatory radio procedure
- (h) Current fire history and background
- (i) Resources deployment (camps, bases, other aircraft locations)
- (j) Fuel cache locations
- (k) Wildlife survey routes (maps of survey area etc.)
- (l) Type of flying required such as low level, straight line transects, radio tracking etc.
- (m) Air attack procedures
- (n) Load configurations and load calculations
- (o) Passenger briefings
- (p) Assignment for the day (i.e. retrieving wildlife collars, fuel caching, fire servicing etc.)
- (q) Crew they are working with (call sign, names if no call sign)
- (r) Aircrew history (type and amount of hours flown, time spent in remote bases, maintenance schedule etc.)

PASSENGER SAFETY BRIEFING FORMAT

No one will be allowed to board an aircraft until they have been briefed by experienced Department personnel or the Pilot-in-Command of the aircraft of the following:

1) How to approach and move away

- Danger from prop and/or rotor wash (loose objects, hats, debris, etc.)
- Wait for signal from pilot – hand gestures
- Move calmly (no running)
- Crouched position and in pilots view (as applicable for RW)
- Slope of the ground (as applicable for RW)
- Never approach the rear of the helicopter - danger from tail rotors (as applicable)
- When aircraft propellers are running, never walk beyond the red painted line on float or on fuselage when walking from back to front of aircraft.

2) Boarding and Exiting Procedures

- Functioning of doors (inside and out)
- Use of seatbelts and shoulder harness
- Use of electronic devices (headsets, cell phones etc.)
- No smoking inside or around the aircraft

3) Equipment and Cargo

- Cargo must be carried in or out, not thrown
- No objects above shoulder height
- Carry long equipment horizontally
- Functioning of cargo doors and cargo compartment load limits
- Cargo must be secured (cabin and cargo compartment)
- Storage of bear spray, guns, ammunition, sharp objects
- Storage of car batteries, gasoline, dangerous goods

4) Emergency Procedures

- Position for emergency landing
- Wait for pilot instructions before exiting (if conscious)
- Emergency calls
- Exiting when helicopter is on its side (as applicable)
- Helping each other
- Location and use of fire extinguisher
- Location and use of emergency location transmitter (ELT)
- Location and use of first aid kit
- Location and use of survival kit
- Location and use of satellite phone
- Battery switch/disconnection, fuel switch shut-off

5) Additional Briefing

- No pilot distractions during take-off, maneuvering or landing
- Landing area, helipad housekeeping, and debris to be picked up (as applicable for RW)
- Sling loads (as applicable for RW)
- Winter hazards (as applicable)
- Life vests and raft (as applicable)
- Clothing dependent on season (for job/weather)
- Personal equipment requirements (earplugs, etc.)

STANDARD DISPATCH FORMAT

After the engine has been started and the radio master turned on, the Initial Response Officer or Crew Leader contacts base for the dispatch information. The information is given in this order:

1. **Fire #:**
2. **Co-ordinates:** Latitude and longitude
3. **Bearing:** Magnetic bearing from your location
4. **Distance:** To be given in statues miles measured in a straight line from your location
5. **Other Aircraft:** Other aircraft dispatched, their frequencies and call signs.
6. **Remarks:** Geographic references, Incident Commander, other crews and their calls signs or other relevant information.

On the dispatch the Initial Response Officer or Crew Leader is given some critical pieces of information.

To be certain that this information has been received correctly, the Initial Response Officer or Crew Leader will read back this information to the dispatcher.

The dispatcher responds, “Read back correct”, if no errors have been made. Once the dispatch has been received the Initial Response Officer or Crew Leader plots the fire on his/her map, shows the pilot the location marked on the map and passes on the bearing and distance to the pilot.

This is done as soon as possible so the pilot can inform the Flight Services Station of the outbound track and distance.

FORT SMITH SERVICE DIRECTORY**ACCOMMODATIONS**

PELICAN RAPIDS INN - kitchenettes, AC, fridges in suites	872-2789
WOOD BUFFALO INN – Suites with separate bedroom, living room, kitchenette, free wireless, www.woodbuffaloinn.com	872-3222
INN TRIALLAIRE B&B	872-0931
WWW.WHOOPINGCRANEGUESTHOUSE.CA	872-3426
KING GEORGE'S B&B (unavailable in 2017?)	872-2366
AURORA GUEST HOUSE	872-0931
WHISPERING PINES COTTAGE (B&B) 621-0254cell	872-2906
FORT SMITH CONSTRUCTION CAMP SERVICES	872-2229

VEHICLES

FORT SMITH CONSTRUCTION	872-2229
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RESTAURANTS

THE PELICAN BOARDROOM	872-2729
BERRO'S PIZZERIA	872-3332
PELICAN RAPIDS GOLF & COUNTRY	872-4653
ANNA'S HOME COOKING	872-2582
GiGi's	872-4444

FORT SIMPSON SERVICE DIRECTORY**ACCOMMODATIONS**

THE GARDENS—(above liquor store) a 2 & 3 bedroom, furnished apartments, Cable TV, internet, Jacuzzi & sauna	695-2456
JANORS -. http://www.janor.ca/	695-2077
WILLOWS INN- http://www.janor.ca/	695-2077
DEH CHO SUITES http://www.dehcho.net/ A three bedroom suite w/2 bathrooms. Four self-contained suites sharing one kitchen. Suites with internet & satellite TV	695-2309
MARODA MOTEL- Cable TV, kitchenettes & air conditioned	695-2602
NAHANNI INN Cable TV, restaurant, bar	695-2201
EXECUTIVE SUITES (Simpson Air) Two bedroom suites with full kitchen, satellite TV, internet, exercise machines & laundry	695-2007
MACKENZIE REST INN http://www.mackenzierest.ca/ Bed and Breakfast, 5 rooms, satellite TV, air conditioning	695-2357
LIIDLI KUE COTTAGE RENTALS (AVAILABLE JULY)	695-2116
MONA'S PLACE HTTPS://WWW.FACEBOOK.COM/FSMONASPLACE	695-3253

VEHICLES

K & K TRUCK RENTALS	695-2276
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RESTAURANTS

NAHANNI INN	695-2201
NORTHERN TAKE OUT	695-2391
PANDAVILLE	695-3080

HAY RIVER SERVICE DIRECTORY**ACCOMMODATIONS**

CAMBRIDGE EXECUTIVE SUITES www.greenwayaccommodations.ca/default.html Apartments with full kitchen, Cable TV	874-2233
HAY RIVER SUITES http://hayriversuites.com/ Satellite TV, kitchenettes, air conditioning	874-2332
HARBOUR HOUSE B&B www.greenwayaccommodations.ca/default.html Old town location	874-2233
ANCHORAGE B&B www.greenwayaccommodations.ca/default.html Old town location	874-2233
MACKENZIE PLACE – High Rise Apartment building which may rent by day, depending on vacancy	874-2114
NORTH COUNTRY INN (www.ncinn.net) satellite in South building, cable in North building, Kitchenette, internet in south building, air conditioning	874-6792
PTARMIGAN INN Cable TV, lounge, restaurant, air conditioned rooms and non-smoking rooms available	874-6781
HAY RIVER 2 SEASON ADVENTURE CAMPSITE	875-7112
HAY RIVER SUITES (email: stay@hayriversuites.com) Kitchenette with a stove top, dishwasher, sink, microwave and dishes. TV, couch, dining table in the downstairs portion and the bedroom is upstairs. Wi-Fi and air conditioning. Laundry room and 3 BBQs/picnic tables.	874-2332

VEHICLES

BUDGET RENTALS	874-7777
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RESTAURANTS

THE BACK EDDY	874-6680
THE BOARD ROOM	874-2111
THE RED ROOSTER	874-6349
DRIFTWOOD DINER	874-2468
THE KEYS at the Ptarmigan Hotel	874-6781
SHE TAKES THE CAKE	874-3330
SUB ON THE HUB, THE	874-6898

<http://spectacularnwt.com/directory#tabindex=2>

NORMAN WELLS SERVICE DIRECTORY**ACCOMMODATIONS**

HERITAGE HOTEL	587-5000
www.heritagehotelnwt.com	
Dining room, lounge, air conditioning, some suites with kitchenettes	

WHIPONIC WELLPUTER CAMP	587-2389
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SAHTU DENE INN	587-2511
Private bathrooms, shared kitchen, internet	

YAMOURI INN	587-2744
Coffee shop, lounge, bar, apartment units with kitchens available	1-800-661-0841

VEHICLES

NORMAN WELLS TRANSPORTATION	587-2416
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NORTHRIDGE CONTRACTING	587-2050
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WHIPONIC WELLPUTER	587-2389
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RESTAURANTS

HERITAGE HOTEL	587-5000
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YAMOURI INN	587-2744
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INUVIK SERVICE DIRECTORY**ACCOMMODATIONS**

MACKENZIE HOTEL	777-2861
www.mackenziehotel.com	

First-Class Dining Room and Lounge, Business Center, Exercise Room, Banquet and Meeting Facilities, Cable TV, Air Conditioning

CAPITAL SUITES	678-6300
www.capitalsuites.ca	

Cable TV, business/fitness center, some kitchenettes, air conditioning

NOVA INN	777-6682
www.novainn.inuvik.ca	

High Speed Internet access, Fridges in all guests rooms, Microwaves in all suites, Air-conditioning, 27" TV satellite, Laundry facilities

ARCTIC CHALET	777-3535
www.arcticchalet.com/	

VEHICLES

ARCTIC CHALET	777-3535
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DRIVING FORCE	777-2346
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RESTAURANTS

SHIVERS	777-4919	MACKENZIE GRILL	777-4900
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CAFÉ GALLERY	777-4985	THE ROOST	777-2727
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YELLOWKNIFE SERVICE DIRECTORY

ACCOMMODATIONS *-for other accommodations, refer to <http://spectacularnwt.com/>*

ANDERSON THOMPSON TOWER www.polardevelopments.com	873-5701
CAPITAL SUITES www.capitalsuites.ca 2-3 bedrooms, apartments have 2 full baths, satellite TV, close to downtown, furnished suites also available	669-6400
CHATEAU NOVA Satellite TV, close to downtown, air conditioning, microwave/mini fridge, restaurant on site	766-6682
DISCOVERY INN www.discoveryinn.ca Cable TV, air conditioned, kitchenettes available, restaurant	873-4151
EXPLORER HOTEL www.explorerhotel.ca Cable TV, dining lounge, coffee shop, night club, air conditioning, parking, gift shop	800-661-0892 873-3531
FRASER TOWER SUITE HOTEL fully equipped kitchens, fitness room, steam room, internet, pet-friendly, in-room movies. www.maclabhotels.com	888-962-2522 873-8700
NORTHERN LITES Cable TV, refrigerators and microwaves available	873-6023
NOVA COURT Suites, fully equipped kitchens, satellite TV, internet	873-6686 866-570-6682
DAYS INN & SUITES www.daysinnyellowknife.com Satellite TV, dining room, lounge, air conditioning, restaurant, parking, downtown, fitness centre, business centre, and internet.	873-9700 1-877-839-1236
ARNICA INN http://arnica-inn.com/ Kitchenettes, air conditioned, internet, continental breakfast	873-8511
SUPER 8 http://www.super8.com/hotels/northwest-territory/yellowknife/super-8-yellowknife/hotel-overview	669-8888
QUALITY INN (formerly Yellowknife Inn) www.choicehotel.com – search Yellowknife Cable TV, dining room, lounge, mini bars, air conditioning, downtown location, connected to Centre Square Mall	873-2601 873-2602 fax

VEHICLES

BUDGET RENTALS	920-9209 445-6167 (cell)
NATIONAL CAR RENTAL	920-2970
RENT A RELIC	873-3400
HERTZ	766-3838

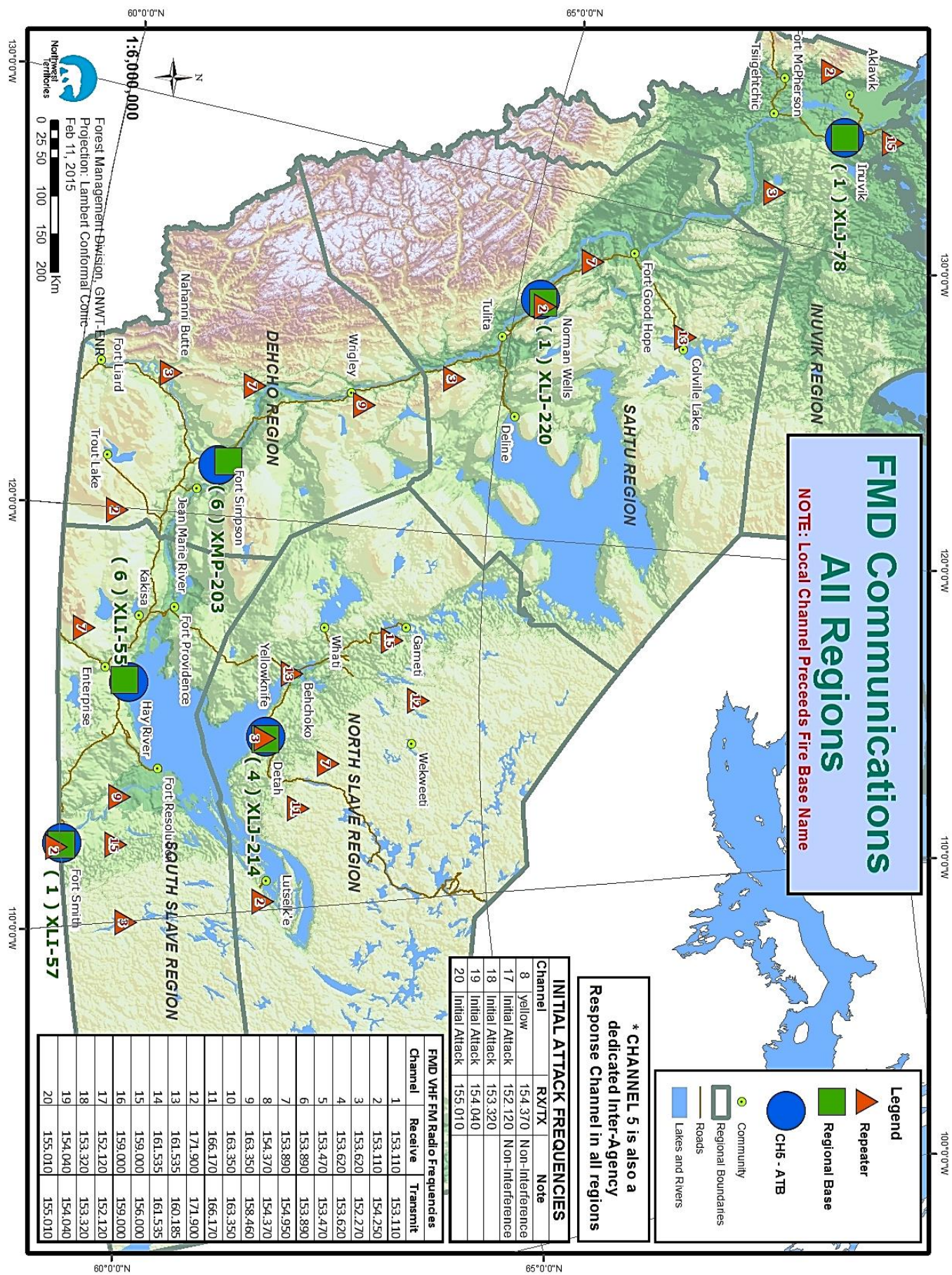
RESTAURANTS

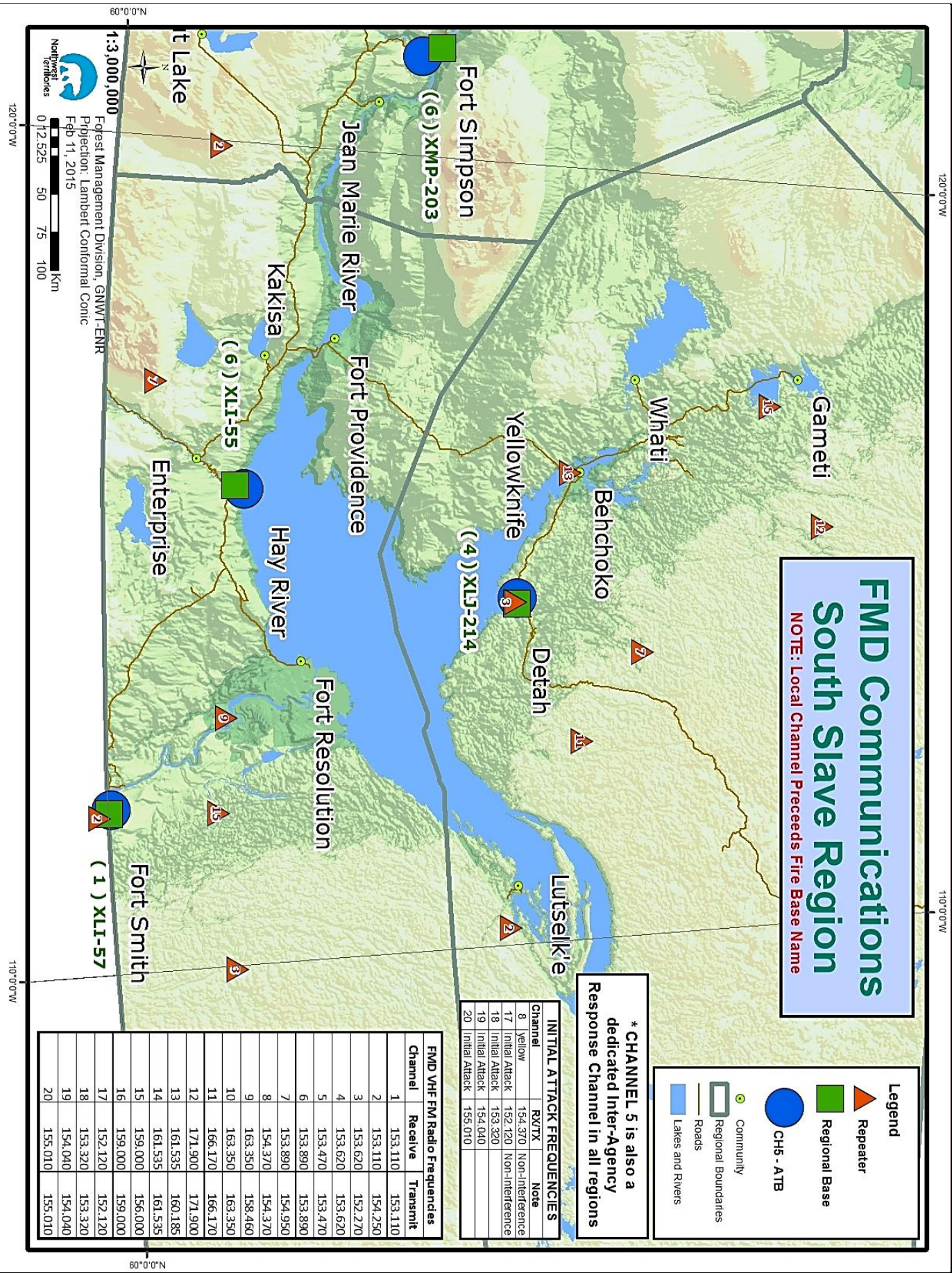
BOSTON PIZZA	920-2000
BRUNO'S PIZZA	920-2130
MONKEY TREE	920-4914
RED APPLE	766-3388
MARK'S FAMILY RESTAURANT	920-7878
GOLD RANGE BISTRO	873-4567/873-2827
A TASTE OF SAIGON	873-9777
DIAMANTE RESTAURANT	920-2971
THE CELLAR	920-7819
THORTON'S	669-9463
VIETNAMESE NOODLE HOUSE	873-3399
SUBWAY	920-2727
SUSHI NORTH	669-0001
ZEHABESHA TRADITIONAL ETHIOPIAN RESTAURANT	873-6400

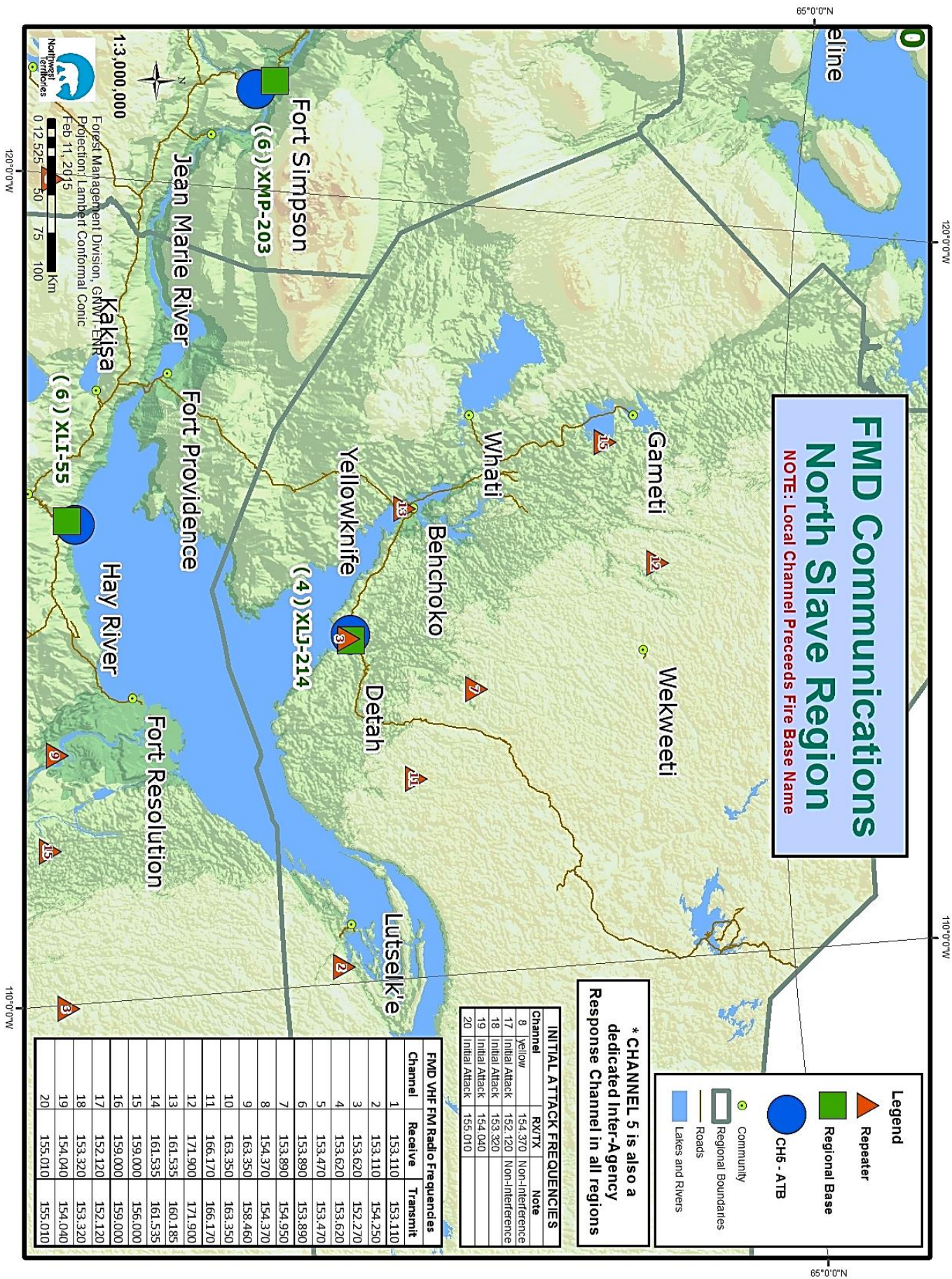
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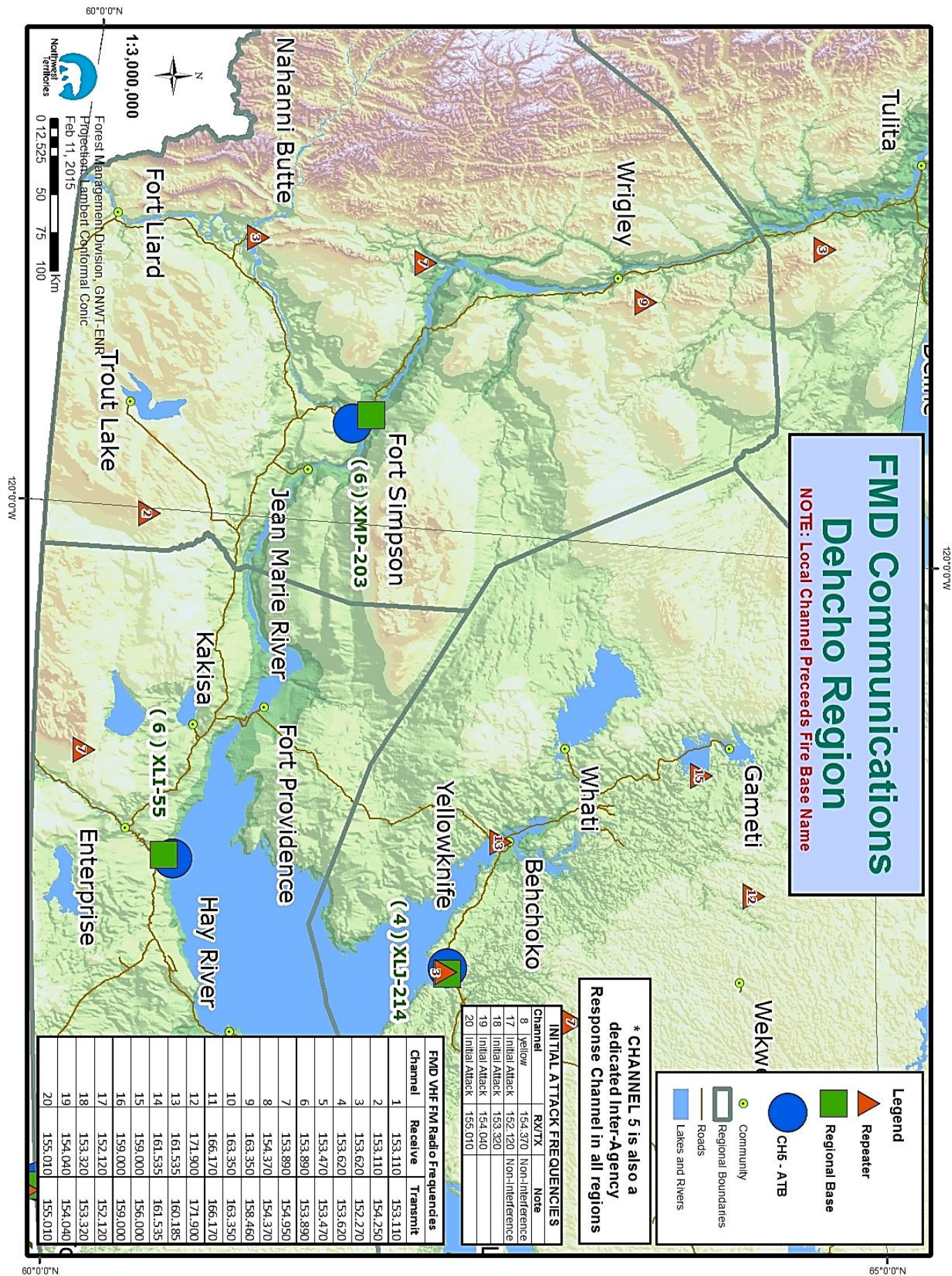
ENR - COMMUNICATION DIRECTORY

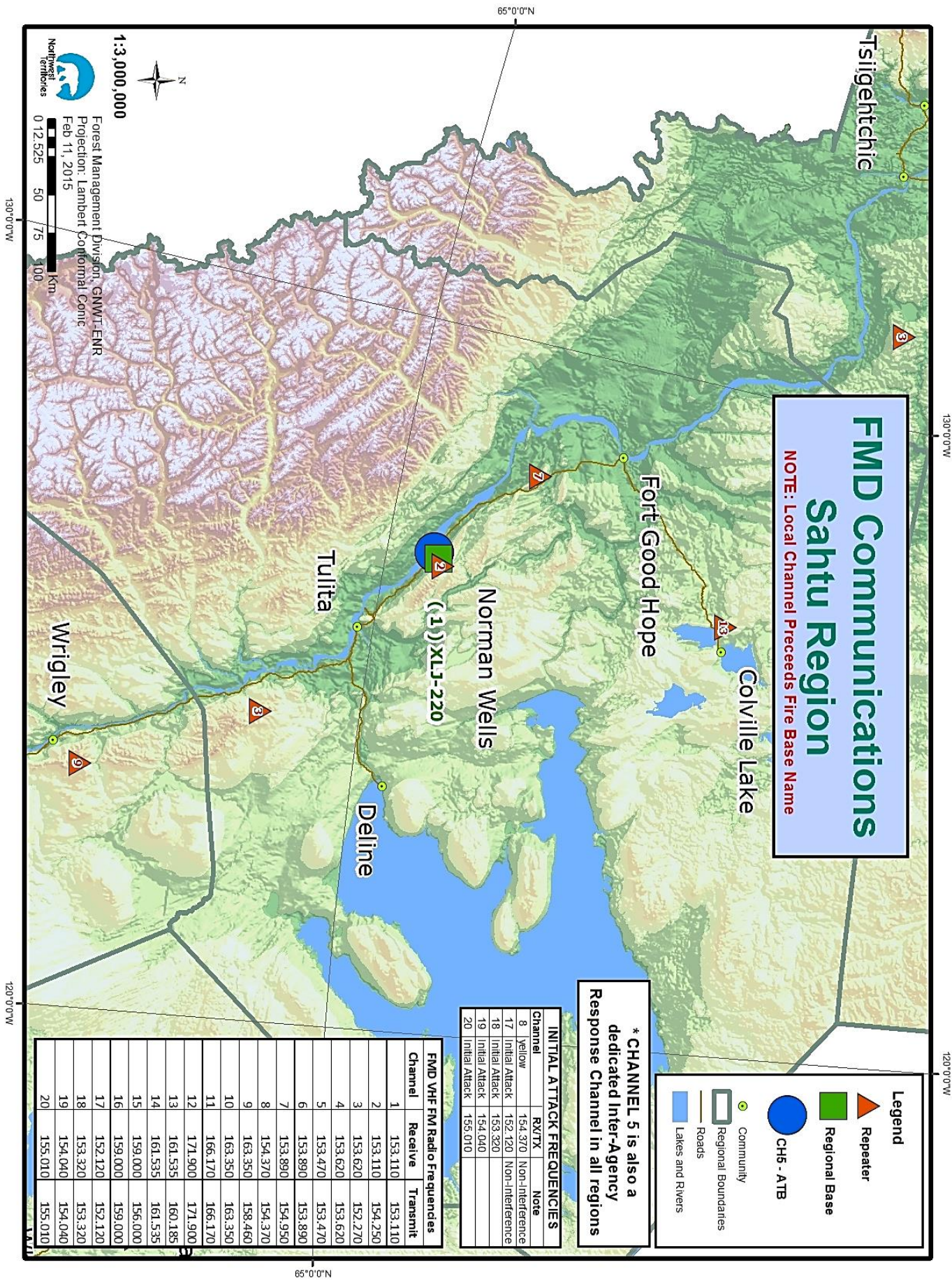
Yellowknife.....XLJ-214			Behchokò (Rae/Edzo)			Frank Channel....XLJ-70		
FREQ.	FM	F4	FREQ.	FM	F14	FREQ.	FM	F14
	AIR	122.05	RPTRS	Edzo	F13	RPTRS	Edzo	F13
RPTRS	Edzo	F13	Whati			Lutselk'e....XMP-208		
	Faber	F15	FREQ.	FM	F16	FREQ.	FM	F1
	McCrea	F7	RPTRS	Faber	F15	RPTRS	McLean Bay	F2
	YK City	F3						
Fort Smith....XLI-57			Fort Providence....XMP-204			Hay River....XLI-55		
FREQ.	FM	F1	FREQ.	FM	F6	FREQ.	FM	F6
	AIR	122.05	RPTRS	Horn	F3	RPTRS	Cameron	F7
RPTRS	Tsu Lake	F15		Cameron	F7			
	Long Island	F9						
	Hill Island	F3						
Fort Resolution....XLJ-83								
FREQ.	FM	F10						
RPTRS	Long Island	F9						
	Tsu Lake	F3						
Inuvik....XLJ-78			Aklavik			Fort McPherson....CBF-213		
FREQ.	FM	F1	FREQ.	FM	F1	FREQ.	FM	F1
RPTRS	Travaillant	F3	RPTRS	Goodenough	F2	RPTRS	Goodenough	F2
	Goodenough	F2						
	Parsons	F15						
Norman Wells....XLJ-220			Fort Good Hope....XMB-317			Tulita....XMB-890		
FREQ.	FM	F1	FREQ.	FM	F6	FREQ.	FM	F4
RPTRS	Hammer	F2	RPTRS	Gibson	F7	RPTRS	Clark	F3
	Gibson	F7	Deline....XLI-822					
	Clark	F3	FREQ.	FM	F4			
	Colville	F13	RPTRS	Clark	F3			
FREQ.	FM	F1						
Fort Simpson....XMP-203			Fort Liard....XLJ-215			Wrigley		
FREQ.	FM	F6	FREQ.	FM	F4	FREQ.	FM	F6/F10
RPTRS	Camsell	F7	RPTRS	Nahanni	F3	RPTRS	Cap Mountain	F9
	Cap Mountain	F9						
	Nahanni	F3						
	Redknife	F2						
FIRE ATTACK BASES								
Inuvik Region – Sunny Lake			Dehcho Region – Trout Lake					
FREQ.	FM	F1/F4	FREQ.	FM	F14			
RPTRS	Travaillant	F3	RPTRS	Redknife	F2			
	Goodenough	F2						
AIR ATTACK RADIO FREQUENCIES								
122.05	Air to Air/Region		122.65	ATB/Bombing PRI		122.25	ATB/Bombing SEC	
122.40	Assigned		122.425	Assigned		122.625	Assigned	
122.90	Assigned		129.95	Assigned		131.85	Assigned	

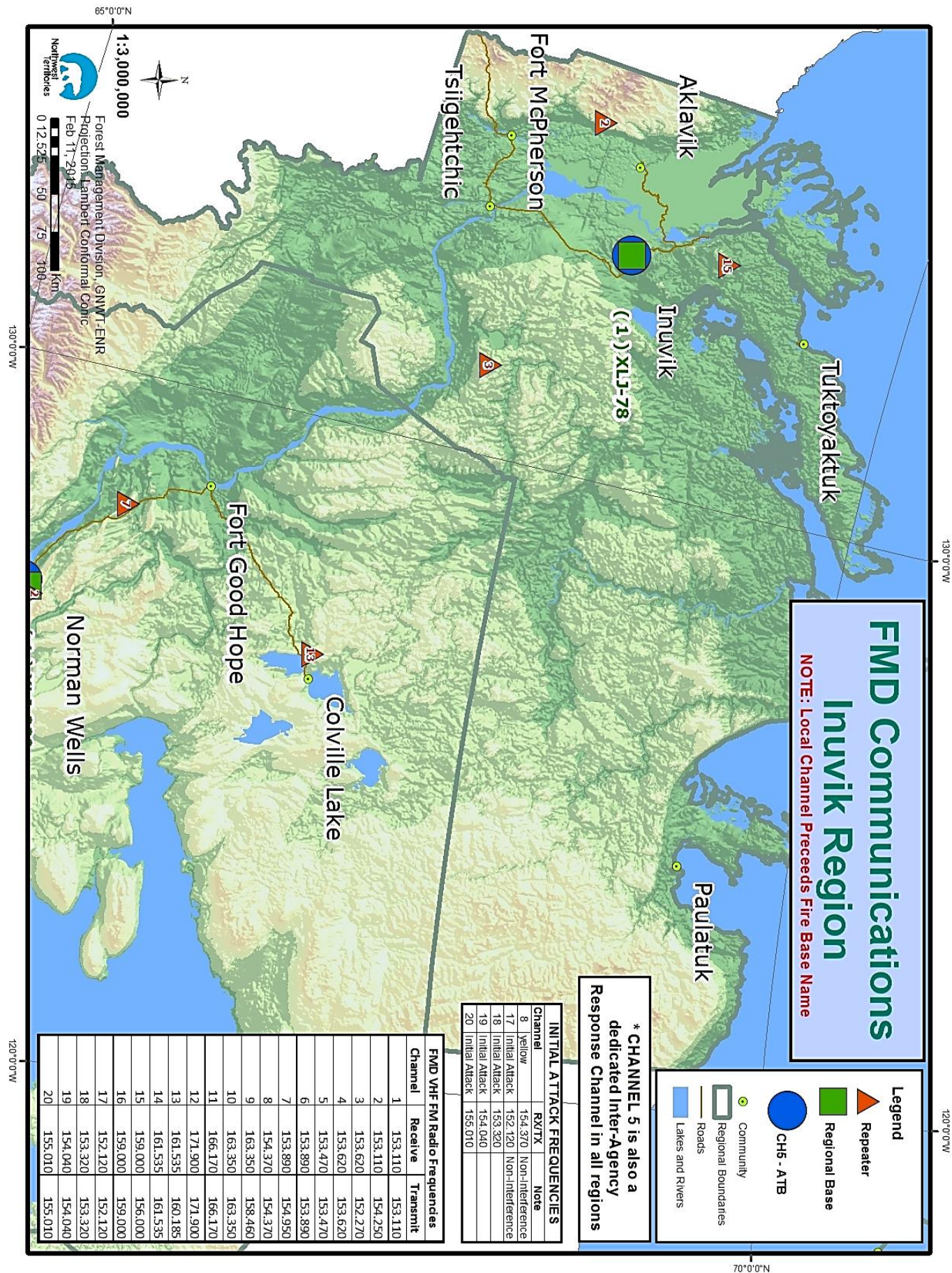












NOTES

FLIGHT SERVICES/C.A.R.S. CONTACT NUMBERS

Area Code: 867

Fort Smith	872-2376	Norman Wells	587-2555
Hay River	874-2441	Inuvik	777-2522
Yellowknife	873-4049	Fort Simpson	695-2491

NOTICE OF CREW CHANGE To: AVIATION SERVICES – Email: Aviation@gov.nt.ca OR FAX: (867) 872-2148	
Company Name:	Name of Authorized Representative (please print)
Contract # and A/C Registration:	Signature of Authorized Representative (not required if emailed)
We hereby give notice of not less than forty-eight (48) hours in advance that a crew change will take place as follows:	The following crew meet the specifications for flight and maintenance crews as required by the contract and standing offer agreement:
Effective Date:	
Pilot Name:	to replace Pilot:
License No.	
Engineer Name:	to replace Engineer:
License No:	
Remarks:	
Forest Management Division – Phone (867) 872-7700	

NOTICE OF AIRCRAFT CHANGE**To: AVIATION SERVICES – Email: Aviation@gov.nt.ca OR FAX: (867) 872-2148**

Company Name: _____

Name of Authorized Representative (please print)

Contract Number: _____

Signature of Authorized Representative (not required if emailed)

We hereby give notice of not less than forty-eight (48) hours
in advance that an aircraft change will take place as follows:

Effective Date: _____

Aircraft Reg#: _____

to replace Aircraft Reg#:: _____

Aircraft Type: _____

to replace Aircraft Type: _____

Remarks: _____

Forest Management Division – Phone (867) 872-7700

Stock Number	Description	Pounds	Kilograms
100LLDR	AVIATION FUEL 100LL 205 LITRE DRUM	365.00	165.56
JETA1DR	AVIATION FUEL JETA1 205 LITRE DRUM	400.00	181.44
FA105	AXE BOYS 2.5 LB HEAD 28" HANDLE	4.50	2.04
FA105L	AXE MANS 3.5 LB HEAD 36" HANDLE	5.50	2.49
RG0100BX	BAG HOSE NYLON ORANGE (10/BX)	23.00	10.43
RG0100BX	BAG HOSE NYLON ORANGE (20/BX)	52.00	23.59
RG1396	BAR SOLDIER FUEL ENERGY (90/BX)	15.00	6.80
RG0879BX	BATTERIES "AA"CELL (144/BX)	5.00	2.27
RG0882BX	BATTERIES "D"CELL (90/BX)	30.00	13.61
282	BATTERY NI-CAD NIFE SUNICA	61.50	27.90
RG01014	BATTERY NON-SPILLABLE SUNLYTE AUTO WX ST	69.10	31.34
RG1360	BLADDER WATER SLIP-ON NEOPRENE (110 GAL)	23.00	10.43
RG0445	BOARD SPINE W/RESTRAINTS	21.00	9.53
TYPE3R	BOX BATTERY METAL WX STN QD	55.20	25.04
TYPE3RFULL	BOX BATTERY METAL WX STN QD W/2 BATTERY	193.00	87.54
RG0419BN	BOX PACKING CHAINSAW (10/BN)	50.00	22.68
RG0419BN	BOX PACKING CHAINSAW (5/BN)	26.50	12.02
RG0105BN	BOX PACKING HOSE WAXED (15/BN)	28.50	12.93
RG0105BN	BOX PACKING HOSE WAXED (25/BN)	52.00	23.59
RG0420BN	BOX PACKING POWER PUMP (10/BN)	57.00	25.86
RG0420BN	BOX PACKING POWER PUMP (5/BN)	26.00	11.79
RG0731BX	BUCKET WATER COLLAPSABLE FMD (25/BX)	15.00	6.80
RG0683	CABINET FIRST AID STATION UTILITY	50.00	22.68
W520	CAN JERRY FUEL PLASTIC WEDCO 5 GL	3.25	1.47
W520BX	CAN JERRY FUEL PLASTIC WEDCO 5 GL (6/BX)	19.00	8.62
W150BX	CAN JERRY FUEL/OIL PLASTIC WEDCO (6/BX)	16.25	7.37
W150	CAN JERRY FUEL/OIL PLASTIC WEDCO 2.5 GL	2.20	1.00
A9901-2-5-7B	CAP SAFETY ALL COLORS (18/BX)	24.00	10.89
A9901-2-5-7B	CAP SAFETY ALL COLORS (20/BX)	26.00	11.79
026	CHAINSAW STIHL 16" BAR W/GUARD	14.00	6.35
026BX	CHAINSAW STIHL 16" BAR W/GUARD (2/BX)	33.00	14.97
066	CHAINSAW STIHL 36" BAR W/GUARD	25.50	11.57
066BX	CHAINSAW STIHL 36" BAR W/GUARD	31.00	14.06
RG0733BX	CONTAINER FIRST AID NWT #1 M/T (6/BX)	32.00	14.52
RG0734BX	CONTAINER FIRST AID NWT #2 M/T (3/BX)	22.30	10.12
RG0735BX	CONTAINER FIRST AID NWT #3 M/T (2/BX)	30.00	13.61
891002BX	CONTAINER WATER 20 LITRE (6/BX)	12.00	5.44
5286	COOLER FOOD 64.3 LITRE	14.50	6.58
RG0923MT	DRUM WASTE STORAGE/TRANS 45 GAL METAL	46.00	20.87
RG0923PL	DRUM WASTE STORAGE/TRANS 45 GAL PLASTIC	25.00	11.34
20-96-6	FENCING GAME (330' X 8' ROLL)	400.00	181.44
RG0134	FLY/TARP CANVAS W/ROPE > OR = 12 X 14'	24.50	11.11
FT104DR	FOAM FIRE (205 LITRE DRUM)	490.00	222.26
3-8	GATE GAME FENCE 3' X 8' SINGLE	49.00	22.23
RG0325	GENERATOR HONDA EM3000C	71.00	32.21
RG0072	HOSE FIRE COTTON Q/C 1.5" X 100'	12.50	5.67
RG0072BX	HOSE FIRE COTTON Q/C 1.5" X 100' (5/BX)	65.00	29.48
RG0072FD	HOSE FIRE COTTON Q/C FOLDED (4/BX)	56.00	25.40

Stock Number	Description	Pounds	Kilograms
RG0072	HOSE FIRE SYNTHETIC Q/C 1.5" X 100'	11.00	4.99
RG0072BX	HOSE FIRE SYNTHETIC 1.5" X 100' (6/BX)	68.00	30.84
RG0072FD	HOSE FIRE SYNTHETIC FOLDED (4/BX)	50.00	22.68
RG1227	HOSE FIRE SYNTHETIC Q/C 2.5" X 100'	20.00	9.07
RG0777	HOSE SUCTION DRAFTEX 2" X 10/8'	5.00	2.27
RG0892	HOSE SUCTION DRAFTEX 2" X 5'	2.00	0.91
MK10110	HOSE SUCTION RUBBER 2" X 10/8'	14.50	6.58
RG0291	KIT FIRST AID NWT #1 COMPLETE	7.50	3.40
RG0415	KIT FOAM SUCTION/INDUCTION INJECTION	31.00	14.06
RG0004	KIT MESS 25 MAN COMPLETE W/WOODEN BOX	190.00	86.18
RG1318	KIT SPILL RESPONSE UNIVERSAL	110.00	49.90
RG0011MB	KIT TOOL FIRE CHAINSAW COMPLETE METAL BX	13.50	6.12
RG0011PK	KIT TOOL FIRE CHAINSAW COMPLETE PACK	9.50	4.31
RG0011PH	KIT TOOL FIRE CHAINSAW COMPLETE POUCH	8.00	3.63
RG0007	KIT TOOL FIRE PUMP COMPLETE	34.50	15.65
RG1288	KIT TOOL HD FIRE PUMP COMPLETE (BB4)	43.00	19.50
RG0918	KIT TOOL SPRINKLER COMPLETE RAINBIRD	57.50	26.08
RG0924	KIT TOOL UTILITY PUMP COMPLETE (WICK100)	11.00	4.99
RG0152BX	MATTRESS AIR COTTON/VINYL (10/BX)	57.00	25.86
RG1395BX	MEALS READY TO EAT - MRE'S (12/BX)	21.00	9.53
ATP08BX	OIL MIXING SYNTHETIC 2 CYCLE 8OZ (12/BX)	7.00	3.18
RG0414	OUTHOUSE PORTABLE NATURES OWN	69.00	31.30
RG0156BX	PACK PERSONAL EFF (40/BX)	124.00	56.25
RG0607BX	PACK PERSONAL FI SEASONAL/PERM (12/BX)	48.00	21.77
RG0069	POLYTHENE	31.00	14.06
	POST GAME FENCE GALVANIZED HD 10'	21.00	9.53
	POST GAME FENCE GALVANIZED HD 11'	24.00	10.89
	POST GAME FENCE GALVANIZED HD 8'	17.00	7.71
	POST ROAD SIGN "I PUT IT OUT" STEEL 10'	20.00	9.07
	POST ROAD SIGN "I PUT IT OUT" STEEL 42"	6.50	2.95
FA107	PULASKI MATTOCK & AXE 5 LB 36" HANDLE	5.50	2.49
HPO2BX	PUMP BACK PACK - PISS COMPLETE (10/BX))	72.00	32.66
1216	PUMP END MK3	16.00	7.26
RG1162	PUMP FIRE FIGHTING PRESSURE HD BB4	172.00	78.02
RG1159BX	PUMP FIRE FIGHTING PRESSURE MK3	64.00	29.03
RG1159	PUMP FIRE FIGHTING PRESSURE MK3	58.00	26.31
RG1159BX	PUMP FIRE VOLUME YAMAHA	64.00	29.03
RG1159	PUMP FIRE VOLUME YAMAHA	58.00	26.31
RG1160BX	PUMP UTILITY PRESSURE WICKMAN 100	19.50	8.85
RG1160	PUMP UTILITY PRESSURE WICKMAN 100	18.00	8.16
RG0170BX	ROBE SLEEPING SUMMER (24/BX)	74.00	33.57
RG0173	ROPE ROLL 1/2" X 335' ROLL	17.50	7.94
RG0171	ROPE ROLL 1/4" X 1200' ROLL	16.00	7.26
RG0174	ROPE ROLL 3/4"	19.00	8.62
RG0172	ROPE ROLL 5/16" (OR 3/8") X 600' ROLL	16.00	7.26
RG0583	SHELTER WEATHER INSTRUMENTS LARGE (FG)	45.00	20.41
FA109	SHOVEL FIRE FIGHTING 36" HANDLE	4.00	1.81
10A	SHOWER PORTABLE PROPANE NO PUMP	98.50	44.68

Stock Number	Description	Pounds	Kilograms
SCG	SHOWER SUITCASE TYPE NO PUMP	51.00	23.13
RG0611	SIGN OUTDOOR PLYWOOD "FOREST FIRE DANGER	85.00	38.56
RG0642	SIGN OUTDOOR PLYWOOD 4' X 8' "HOLD IT...	77.00	34.93
RG1397	SIGN ROAD "I PUT IT OUT" 4 X 4' ALUM 2ML	18.50	8.39
	SIGN ROAD "RAP" 4 X 4' ALUM 2ML	18.50	8.39
4S	SINK WASH HAND/FACE FOLDING FRAME W/BOX	86.00	39.01
RG0093BX	SOCKS WORK WOOL (96/BX)	26.50	12.02
AB7BX	SPARKPLUG NGK - MK3 (100/BX)	19.00	8.62
RG0442	SPLINT KIT SET OF 15 WOOD ASSORTED	39.00	17.69
RG0190	STOVE WOOD AIRTIGHT 18"	11.00	4.99
RG0191	STOVE WOOD CAMP 4 HOLE W/OVEN & LEGS	33.00	14.97
RG0023	STRETCHER BASKET TYPE W/STRAPS	25.00	11.34
RG0196	STRETCHER CANVAS FOLDING DF99	18.50	8.39
RG0022	STRETCHER SCOOP BREAK-APART W/STRAPS	26.00	11.79
FA452	TANK FUEL POLY (MARINE) BB4 PUMP	7.00	3.18
FA552QBX	TANK FUEL POLY OR/GR 5 GAL (4/BX)	28.00	12.70
FA552Q	TANK FUEL POLY OR/GR 5 GAL W/INSERT	7.00	3.18
RG0317	TANK RELAY FREE STANDING 0500 GL RUBBER	36.00	16.33
RG0596	TANK RELAY FREE STANDING 1500 GL RUBBER	64.00	29.03
RG0319	TANK RELAY FREE STANDING 2500 GL RUBBER	81.00	36.74
RG0203	TENT CANVAS 12' X 14' X 3.5'	45.00	20.41
RG0730	TENT FIRST AID STATION	40.00	18.14
RG204	TENT POLY 12' X 14' X 3.5' W/ROPE	25.00	11.34
RG0063	TENT POLYESTER/VINYL CASCADE SHOWER	158.00	71.67
RG0062	TENT POLYESTER/VINYL HABITAT OFFICE	328.00	148.78
RG0061	TENT POLYESTER/VINYL RANGER KITCHEN	291.50	132.22
QESC1014A-B	TENT PORTABLE RIGID FRAME 10x14x11 FT	190.00	86.18
RG0207	TORCH DRIP SEALTITE	5.00	2.27

NWT BASE CAMPCOORDINATES

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Deh Cho	Deh Cho Headquarters	61	.8000	121	.3000	61	49	121	19
Deh Cho	Fort Liard	60	.2333	123	.4500	60	14	123	27
Deh Cho	Trout Lake Base Camp	60	.4333	121	.4000	60	26	121	24
Deh Cho	Wrigley	63	.2166	123	.4333	63	13	123	26
Inuvik	Fort McPherson	67	.4166	134	.8833	67	25	134	53
Inuvik	Ninelin Lake Base Camp	67	.8500	131	.3500	67	51	131	21
Inuvik	Shell Lake Headquarters	68	.3333	133	.6333	68	20	133	38
Inuvik	Shiltee Tower	67	.2500	135	.0333	67	15	135	02
Inuvik	Sunny Lake Base Camp	67	.8500	132	.6000	67	51	132	36
Inuvik	Tsiigehtchic (<i>Arctic Red River</i>)	67	.4400	133	.7333	67	26	133	44
Inuvik	Twin Lake Base Camp	67	.2333	134	.7166	67	14	134	43
North Slave	Armi Lake Base Camp	63	.7000	114	.2000	63	42	114	12
North Slave	Awry Lake Base Camp	62	.9333	114	.9333	62	56	114	56
North Slave	Faber Lake Base Camp	63	.9333	117	.1833	63	56	117	11
North Slave	Francois Lake Base Camp	62	.4833	112	.4000	62	29	112	24
North Slave	Frank Channel	62	.8000	115	.9333	62	48	115	56
North Slave	Mert Lake Base Camp	63	.3166	116	.8666	63	19	116	52
North Slave	North Slave Headquarters	62	.4500	114	.3666	62	27	114	22
North Slave	Gameti (<i>Rae Lakes</i>)	64	.1000	117	.3666	64	06	117	22
North Slave	Wekweeti (<i>Snare Lake</i>)	64	.1833	114	.1833	64	11	114	11
North Slave	Whati (<i>Lac La Martre</i>)	63	.2666	117	.2666	63	08	117	16

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Sahtu	Colville Lake Base Camp	67	.0333	126	.0833	67	02	126	05
Sahtu	Deline (<i>Fort Franklin</i>)	65	.1833	123	.4166	65	11	123	25
Sahtu	Fort Good Hope	66	.2500	128	.6166	66	15	128	37
Sahtu	Kelly Lake Base Camp	65	.4166	126	.3833	65	25	126	23
Sahtu	Sahtu Headquarters	65	.2833	126	.8333	65	17	126	50
Sahtu	Stewart Lake Base Camp	65	.3833	125	.2833	64	23	125	17
Sahtu	Tulita (<i>Fort Norman</i>)	64	.9000	125	.5833	64	54	125	35
Sahtu	Yeltea Lake Base Camp	66	.8833	129	.3666	66	53	129	22
South Slave	Fort Providence	61	.3500	117	.6500	61	21	117	39
South Slave	Fort Resolution	61	.1666	113	.6833	61	10	113	41
South Slave	Hay River Headquarters	60	.8166	115	.7833	60	49	115	47
South Slave	Kakisa Lake I.A. Base	60	.9833	117	.2666	60	59	117	16
South Slave	Lutsel K'e(<i>Snowdrift</i>)	62	.4000	110	.7166	62	24	110	43
South Slave	O'Connor Lake I.A. Base	61	.3333	111	.8333	61	20	111	50
South Slave	South Slave Headquarters	60	.0166	111	.9500	60	01	111	57
South Slave	Swat Lake I.A. Base	60	.1666	117	.9166	60	10	117	55
South Slave	Tsu Lake I.A. Base	60	.6500	111	.8500	60	39	111	51

North Slave Region formerly known as the Yellowknife Region.

South Slave Region formerly known as the Fort Smith Region.

Deh Cho Region formerly known as the Fort Simpson Region.

Sahtu Region formerly known as the Norman Wells Region.

PILOTS GPS LIST

PILOTS' LIST OF ACTUAL, CORRECTED AND OTHER GPS COORDINATES WITHIN THE NWT MANAGEMENT REGIONS.

THIS CHART HAS BEEN ADDED FOR PILOTS TO ENTER COORDINATES OF FIRE BASES, FUEL CACHES, WILDLIFE CAMPS AND **CORRECTIONS** TO GPS COORDINATES ALREADY LISTED. (Note: Please advise your local ENR authority of all corrections.)

PLACE	GPS COORDINATES <i>DECIMAL</i>	PLACE	GPS COORDINATES <i>STANDARD</i>