

# 2011 Air Crew Briefing Manual





April 20, 2011

**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 website address is:  
<http://www.enr.gov.nt.ca>

**TO REPORT A FOREST 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)



## AIRCREW BRIEFING MANUAL

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## **A. ORGANIZATION AND ADMINISTRATION**

The Mandate of the Minister and Department of Environment and Natural Resources 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 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 forest fire management services, including forest 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, present's 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 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 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 that is 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.

## **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 this office. As there are very few roads in the NWT, almost all 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' 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 forest fire management. Each Region is also expected to request (and justify) additional aircraft as required though the Forest Management Division in order to maintain resources for initial attack and ongoing 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.

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 the Department of Environment and Natural Resources 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 a Department of Environment and Natural Resources' Flight/Note Plan will continuously monitor designated radio frequencies and report their position every thirty (30) minutes while in flight. Reports should take place at five (5) minutes to and twenty-five (25) minutes after the hour.

**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 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 (NWT/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 FIRES

The area over and surrounding a 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 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 absence of a Birddog, this responsibility will be assumed by the Incident Commander or his/her designate.

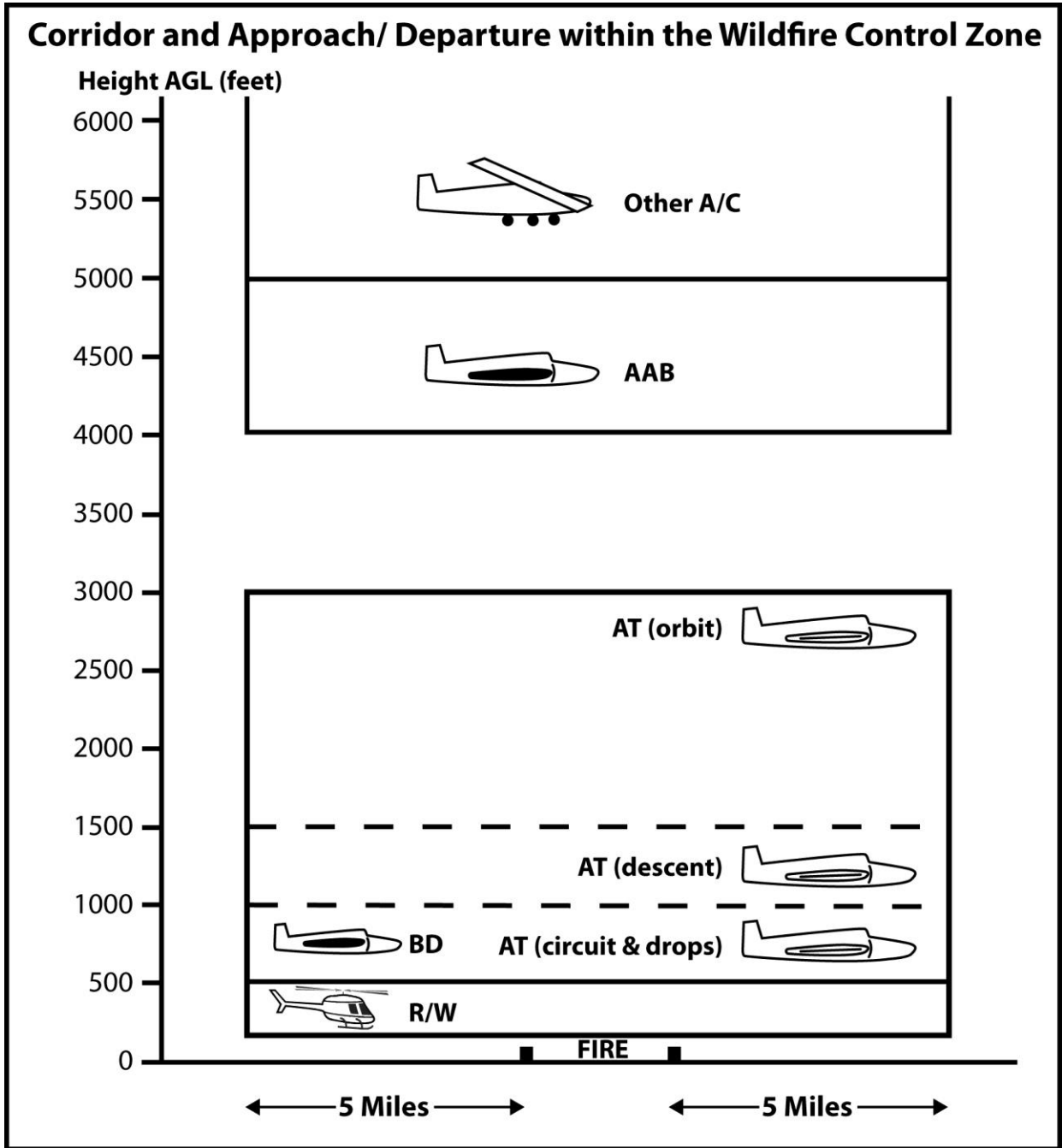
On dispatch, the Air Attack Officer will make contact with the Regional Office on the assigned FM frequency, and will remain so for the duration of the mission. ALL aircraft enroute to a fire will monitor **126.7 MHZ** after clearing the airport control zone. Once an aircraft is five miles back of the 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 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 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 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.

<b>Helicopter:</b>	100-500 ft (30-150 m) AGL
<b>Birddog Aircraft:</b>	100-1000 ft (30-305 m) AGL
<b>Orbiting Air Tankers:</b>	1500-3000 ft (457-914 m)
<b>Air Attack Boss:</b>	4000-5000 ft (1220 – 1524 m) AGL
<b>Others:</b>	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 behaviour 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 channelled 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 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 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 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.
- (b) **Yellow** Designates personnel, aircraft, and equipment ready for dispatch within thirty (30) minutes of call out.
- (c) **Blue** Designated personnel, aircraft, and equipment ready for dispatch within a predetermined time greater than sixty (60) minutes.
- (d) **Green** Designated personnel, aircraft, and equipment are stood down usually for a predetermined period of time.



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## 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 or a responsible aircraft company representative must be in attendance for loading of the aircraft for safety reasons.

### 4. Refuelling

- (a) Department personnel **WILL NOT** refuel aircraft.
- (b) During refuelling operations, Department personnel will vacate the aircraft until the refuelling has been completed.
- (c) Hot refuelling 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 refuelling operations away from an Environment and Natural Resources' facility.
- (d) Aircrews must ensure there is proper grounding and bonding of refuelling equipment.
- (e) Pilots may refuse refuelling aircraft from any storage facility. Including unsealed, improperly sealed, or aged drums (generally greater than two years old).

### 5. 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).

### 6. 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 flying a drip torch or A.I.D. machines.



8. 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.

- a. **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 refuelling 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 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 and will require their own sleeping bags and other accessories (cot/foam mattress, toiletries etc.). Accommodations will be suitable for the site and season.

- g. **Rotations From Remote Bases:** The positioning of air crews at remote Fire Attack Bases, Base Camps, Staging Areas or Work Projects will be managed on a "five days in and two days out" basis. 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.

9. 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.

10. 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.

## SHELL ANALYSIS

A Shell Analysis report is to be completed by the aircrew 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:

1.     **Software:**             Policy, regulations, manuals, procedures, pamphlets, posters, charts, maps, et al.
  
2.     **Hardware:**            Aircraft - type, condition, A/C systems, auxiliary equipment, fuelling and loading systems, instrumentation, communications equipment, et al.
  
3.     **Environment:**        Weather, work area conditions, time factors, terrain, visibility, daylight, type of flying - remote, production, et al.
  
4.     **Liveware:  
      (others)**                Policy, regulations, manuals, procedures, pamphlets, posters, charts, maps, et al.
  
5.     **Liveware:  
      (pilot/aircrew)**        Personality (human factors), pressures, training and experience, fatigue (flight hours/duty days, rest, meals), briefing and preparation, et al.

The following pages contains 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, 2011 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: 24/06/11  
(dd/mm/yy)

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 aircrew involved in the incident.

### SHELL ANALYSIS

Please fill-in all the fields below and submit to: **Aviation Services (867) 872-2148**

Aircraft Registration: **C-GOLF** Date of Incident: **June 24, 2011**

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: *(Others)*

All company policies and regulations were followed. The pilot felt he had the required landing area room to land the helicopter in a confined area. The helicopter was lightly loaded. 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:

30/06/11  
(dd/mm/yy)

**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.

**J. MANIFESTING**

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 Boss/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**



**PURCHASE ORDER - CH-097810-00**

(This report was generated on 07/Apr/2010 at 11:37)

TO: No Name Air Ltd. Box 1000, Hay River, Northwest Territories, Canada	INVOICE TO: Environment and Natural Resources
Vendor ID No.: 0001234567	S.O.A. No.: 400099      Order Date: 01/Jul/2010

Region/Division: South Slave      Engineer: Mike Wrench  
 Aircraft Registration: FACE      Point of Hire: HAY RIVER  
 Aircraft Type: Astar 350B-(Eurocopter)      Point of Release: FORT SMITH  
 Special Equipment:  Crew Expense at Point of Hire  
 Aircraft Assigned To Name: Duty Officer       Crew Expense at Other Locations  
 Aircraft Assigned To Phone: (867) 872-6400       Ferry To and From Point of Hire  
 Aircraft Assigned To Alt. Phone:  Hover Exit Approved  
 Pilot: Kirk, James T  
 Co-Pilot:  
 Purpose: Initial Attack Standby  
 Comments: Ferry Paid ONLY one way

PERIODS OF HIRE			
7/1/2010 - 7/3/2010 11:59:59 PM			
Departure:	HAY RIVER	Time: 11:00	Arrival:      Time:

Routing Information					
Start Location	End Location	Passengers	Cargo	Weight	Unit

COST	
Number of Days:	3      Total Guaranteed Hours: 12
Daily Minimum:	4.00 Hours

Costing Details					
Commodity	Unit	Rate	Quantity	Total	Comments
Flight Service	Hours	\$1,000.00	4	\$12,000.00	
Other	None	\$150.00	2	\$900.00	
<b>Calculated Total:</b>				<b>\$12,900.00</b>	

ESTIMATED COST									
Org	Account	Fund	Area	Sett	Program	PC Bus	Project	Activity	Amount
53026	53020	01	11	001	53070				\$13,000.00
<b>Estimated Total:</b>									<b>\$13,000.00</b>

\*NAV CANADA CHARGES EXEMPT\*

We certify that the goods being purchased by the GNWT are being purchased with Crown funds and therefore not subject to the Goods and Services Tax.	CERTIFIED PURSUANT TO SUBSECTION 44(1)(A) OR 49(2)(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 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 **HOURIF** 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 FUEL ONLY** by location and number of drums or litres. For drummed fuel, note the date of the fuel. This procedure is required to keep our fuel inventory records up-to-date.

**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 initialled 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.**



**AIRCRAFT LOADSHEET/TRIP LOG**

Flight Date <b>July 5, 2009</b>	Aircraft Company <b>Fixed Wing Aviation Ltd.</b>	
Aircraft Registration <b>C-GOLF</b>	Aircraft Type <b>Cessna 185</b>	Flight Ticket No. <b>12345</b>
Contract No. <b>CH# 000 000</b>	Pilot <b>Jane Doe</b>	Engineer

Time Reported for Duty:				Time Released from Duty:				Remarks	
Departure		Arrival		Passengers (number)	Cargo - or- # of Drops	Fire #/ Project	Flight Code		Flight Time Hours / Miles
Location	Time	Location	Time						
1. YFS	14:31	YSM	17:06	1			WRO	336mi	Ferry Flight -- p/u J. Deer
2. YSM	17:23	YSM	18:26	1			WRO	1.1 hr	Caribou productivity survey
3. YSM	18:19	YSM	19:31	1			WRO	1.2 hr	Caribou productivity survey
4. YSM	19:48	YFS	21:00	1			WRO	336 mi	Ferry Flight -- home
5.									
6.								2.3 hrs	
7.								672 mi	
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

**HOURS** **672 miles**

Total Hours Flown Today:	<b>2.3 hrs</b>
Previous Accumulated Hours:	<b>X.X</b>
Total Accumulated Hours to Date:	<b>X.X</b>

**FUEL OBTAINED**

Location	Drums		Bulk
	No.	Date of Fuel	Litres
<b>4-Mile</b>	<b>1</b>	<b>May/09</b>	

**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.

ENR Representative \_\_\_\_\_ July 5, 2009  
Signature of Duty Officer Date

NWT4353/0508



**AIRCRAFT LOADSHEET/TRIP LOG**

Flight Date <b>July 5, 2009</b>	Aircraft Company <b>No Name Helicopters Ltd.</b>	
Aircraft Registration <b>C-GDLL</b>	Aircraft Type <b>Astar 350 B2</b>	Flight Ticket No. <b>67890</b>
Contract No. <b>CH# 000 000</b>	Pilot <b>John Deere</b>	Engineer <b>Jane Goodwench</b>

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. SM	15:46	SM-014	17:00	3		SM14	H	1.2 hr	IA SM14 w/ Crew C
2. SM-014	17:27	SM-014	17:46	3		SM14	H	0.3 hr	P/U Crew @ base-> SM14
3. SM-014	18:00	SM-014	18:20	-	7	SM14	E	0.3 hr	Bucketing
4. SM-014	18:30	SM	19:43	1		SM14	H	1.2 hr	Rtn w/drum, disc, SM-15 rtn SM
5.									
6.								3.0 hrs	
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

**HOURS**

Total Hours Flown Today:	<b>3.0 hrs</b>
Previous Accumulated Hours:	<b>10.0 hrs</b>
Total Accumulated Hours to Date:	<b>13.0 hrs</b>

**FUEL OBTAINED**

Location	Drums		Bulk
	No.	Date of Fuel	Litres
SM			120
Rat River	1	May/09	

**CREW EXPENSES**

MEALS:	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	X	X	X	X	\$ 150.00	\$ 100.00
Engineer:	X	X	X	X	\$ 150.00	

NWT4353/0508

**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 **ENR Representative** \_\_\_\_\_ **July 5, 2009**  
 Signature of Duty Officer Date

**P. AIRCREW 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 Loadsheet/Trip Log. Each Aircraft Loadsheet/Trip Log must be approved and signed by a Department representative. Failure to indicate the total daily aircrew expenses on the Aircraft Loadsheet/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 Classes

**Light Helicopters (Bell 206B, Hughes 500)** – 2 ppl (1 pilot & 1 engineer)

**Intermediate Helicopters (Bell 206L, Bell206L-1, Astar)** – 2 ppl (1 pilot & 1 engineer)

**Medium Helicopters (Bell 204, Bell 212)** – 2 ppl (1 pilot & 1 engineer)

**Heavy Helicopters (S-55, S-58)** – 3 ppl(1 pilot, 1 crewman & 1 engineer)

### 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:

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

**1 DC-4 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.

### **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, Aviations Services section of any crew changes **48 hours** in advance (see Appendix #15).

<p><b>NO SUBSTITUTIONS FOR AIRCRAFT AND PILOTS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION FROM THE FOREST MANAGEMENT DIVISION, AVIATION SERVICES SECTION.</b></p>
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## 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 0700 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 statutoryflight 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**, but not required, 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:

Environment and Natural Resources (ENR)  
Forest Management Division  
PO Box 7, 149 McDougal Road  
Fort Smith, NT X0E 0P0**ATTENTION: AVIATION SERVICES**

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.



## 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\*\*  
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

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

#### HEADQUARTERS OPERATIONS

HQE/EHQ Enforcement  
-----  
HQO/OHQ Other  
HQP/PHQ Environmental Protection  
HQR/RHQ Resource Development  
HQW/WHQ Wildlife

**AIR TANKER OPERATIONS FLIGHT CODING**

<b>CODE</b>	<b>PROJECT</b>	<b>PURPOSE</b>
ATA	FIRE BOMBING	Flight time charged against AIR TANKER fire bombing mission/targets <b>FIRE # REQUIRED</b>
ATB	BIRDDOG FOR FIRE BOMBING	Flight time charged against birddogging fire bombing mission/targets <b>FIRE # REQUIRED</b>
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.
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. <b>Flight details required.</b>
ATI	FALSE ALARM	Flight times for fires that were not found. <b>Flight details required.</b>
XP_	EXPORT	Flight times charged while in the service of other cooperative agencies. Use the last letter to indicate type of activity. (eg. XPC = aircraft base changed while in another agencies jurisdiction.

Revised: May 2009

## 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.  <b>REQUIRES FIRE #</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
C	COMMUNICATIONS	Flights to service radio equipment or installations, construct new installations, survey of new locations, install and service remote weather stations, etc. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
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.  <b>SHOULD NEVER HAVE A FIRE #</b>  <b>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.</b>
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>  <b>REQUIRES FIRE #</b>

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><b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b></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><b>INITIAL ATTACK FORCES MUST ALREADY BE IN PLACE.</b></p> <p><b>REQUIRES FIRE #.</b></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.: 205 drops off crew, returns to base for more equip. &amp; men, delivers to fire and returns to base. All Codes = H).</p> <p><b>REQUIRES FIRE #.</b></p>
I	INFRA-RED SCANNING	<p>All flights required for the use of any infrared scanning devices such as AGA 110, Agatronics 750 or Hughes Probeye.</p> <p><b>REQUIRES FIRE #</b></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><b>REQUIRES FIRE OR PRESCRIBED BURN #.</b></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><b>Requires flight details and Prescribed Burn # or project # in remarks section of Daily Aircraft Costing Screen.</b></p>

CODE	PROJECT	PURPOSE
M	MERCY	Search and rescue, evacuation, medivacs, etc. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
N	FERRY	Positioning and depositing of aircraft from operating base to a predetermined point. Includes flights from and to point of hire. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
O	OTHER	Forest Management flying not covered in listed codes. <b>Requires flight detailson the Flight Ticket or Loadsheets and in remarks section of Daily Aircraft Costing Screen</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
Q	FIRE MANAGEMENT	All flights or portions of flights for the purpose of community consultation and value-at-risk inspections. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
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.) <b>Requires flight details in remarks section of Daily Aircraft Costing Screen</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b> <b>SHOULD NEVER HAVE A FIRE #</b>

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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen</b>
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. <b>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.</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
W	ENFORCEMENT	All flights or portions of flights for the purpose of conducting fire investigations, enforcement activities and/or actions. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>
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. <b>Requires flight details in remarks section of Daily Aircraft Costing Screen.</b>

## OTHER DIVISIONS REGIONAL OPERATIONS

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

**Presuppression and Suppression budget includes the Department's long-term rotary wing aircraft.**

**OTHER DIVISIONS**  
**HEADQUARTERS OPERATIONS**  
 (Headquarters in Yellowknife)

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

**Presuppression and Suppression budget includes the Department's long-term rotary wing aircraft.**





**AIRCRAFT LOADSHEET/TRIP LOG**



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.									

**HOURS**

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

**FUEL OBTAINED**

Location	Drums		Bulk
	No.	Date of Fuel	Litres

**CREW EXPENSES**

MEALS:	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 Duty Officer

\_\_\_\_\_  
Date

NWT4353/0508

Air Operations (STAPLE TO FLIGHT TICKET)

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**

<b>TO CONVERT</b>	<b>INTO</b>	<b>Multiply by</b>
Centimetres	Inches	.394
Feet	Metres	.305
U.S. Gallons	Litres	3.785
Imp. Gallons	U.S. Gals.	1.201
Imp. Gallons	Litres	4.546
Inches	Centimetres	2.540
Inches Hg.	Lbs. sq. in.	.490
Kgs./Litre	Lbs./Imp. Gal	10.023
Kgs./Litre	Lbs./U.S. Gal.	8.333
Kilograms	Pounds	2.205
Kilometres	St. Miles	.621
Kilometres	N. Miles	.540

<b>TO CONVERT</b>	<b>INTO</b>	<b>Multiply by</b>
Lbs./Imp. Gal	Kgs./Litre	.0998
Lbs./U.S. Gal.	Kgs./Litre	.120
Lbs. sq. in.	Inches Hg.	2.040
Litres	U.S. Gals.	.264
Litres	Imp. Gallons	.220
Metres	Feet	3.281
N. Miles	Kilometres	1.852
N. Miles	St. Miles	1.152
Pounds	Kilograms	.454
St. Miles	Kilometres	1.609
St. Miles	N. Miles	.868
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, 2011**

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

Breakfast	\$21.35
Lunch	\$20.65
Dinner	\$53.20
Incidentals	\$17.30
	-----
	\$112.50

**FOREST MANAGEMENT DIVISION**

Department of Environment and Natural Resources  
Box 7149 McDougal Road Fort Smith, NTX0E 0P0

Office Phone: (867) 872-7700  
Main Fax: (867) 872-2077  
Weather Fax: (867) 872-3827

FOREST MANAGEMENT DIVISION					Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME	
<b>William Mawdsley</b>	<b>Director</b>	<b>872-7700</b>			
Shauna Walsh	Administrative Assistant	872-7700	872-0360	872-5399	

AVIATION SERVICES					Fax: 872-2148
NAME	POSITION	OFFICE	CELL	HOME	
<b>Duane Sinclair</b>	<b>Manager</b>	<b>872-7719</b>	<b>872-0258</b>	<b>872-2188</b>	
Wendy Pennycook	Aviation Services Admin Supervisor	872-7720	872-0264	872-2372	
Moriah Hoyles	Aviation Services Admin Clerk	872-7721	872-0653		
Brandy Wilson	Aviation Services Admin Officer	872-7723	872-0392	872-4800	
Vern Hoepfner	Manager, Air Tanker Base		875-7563		

FIRE OPERATIONS					Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME	
<b>Frank Lepine</b>	<b>Manager</b>	<b>872-7713</b>	<b>872-0307</b>	<b>872-2117</b>	
Jason Currie	Training and Standards Officer	872-7717	872-0840	872-5388	
Shari McArthur	Forest Records Coordinator	872-7716	872-0387		

FOREST MANAGEMENT SERVICES					Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME	
<b>Vacant</b>	<b>Manager</b>	<b>872-7725</b>			
David Purchase	Forest & Fire Management Forester	872-7743	872-0308	872-4844	
Ray Menard	Material Management Officer	872-7732	872-0391		
Tim Pankratz	Asst Material Management Officer	872-7731	872-0103		
Jay MacDonald	Equipment Maintenance Coordinator	872-7730	872-0312	872-3949	

FIRE SCIENCE					Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME	
<b>Kris Johnson</b>	<b>Manager</b>	<b>872-7706</b>	<b>872-0298</b>	<b>872-2847</b>	
Larry Nixon	Wildfire Risk Management Coordinator	872-7705	621-0286		
Vera Green	Geomatics Analyst	872-7708	872-0317	872-4969	
Wes Steed	FireSmart Coordinator	872-7704	872-0394	872-4414	
Franco Nogarin	Forest Planning Officer	872-7703	872-0393	872-3339	
Darren Linaker	Telecommunications Tech. (Supervisor)	872-7727	872-0310	872-3506	
Arthur Taylor	Telecommunications Technician	872-7726	872-0109	872-2872	

PROGRAM SUPPORT SERVICES					Fax: 872-3019
NAME	POSITION	OFFICE	CELL	HOME	
<b>Crystal Lantz</b>	<b>Manager</b>	<b>872-7702</b>			
Linda Ellsworth	Accounts Payable Clerk	872-7701			
Crystal Villebrun	Casual Accts. Payable Clerk (Travel/OT)	872-7707			

**SOUTH SLAVE REGIONAL OFFICE**

Department of Environment and Natural Resources  
Box 900 Fort Smith, NTX0E 0P0

Office Phone: (867) 872-6400  
Fax: (867) 872-4250

Duty Officer: (867) 872-6422/6409

Wildlife Emergency: 872-0400

**CELL PHONES:**

Regional Duty Officer: 872-0541

Warehouse: 872-0561

Fire Clerk: 872-0768

Call Sign: XLI - 57

**SOUTH SLAVE REGIONAL OFFICE**

Fax: 872-4250

NAME	POSITION	CALL SIGN	OFFICE	CELL/HOME
Jack Bird	Superintendent	DS1	872-6401	872-0546/5566

**FOREST MANAGEMENT**

Fax: 872-2035

NAME	POSITION	CALL SIGN	OFFICE	CELL/HOME
Richard Olsen	Manager, Forests	DS2	872-6425	872-0541/2438
Sid Hudson	Material Management Officer	DS5	872-6437	872-0561/4800
Gerald Doucette	Assistant Storeperson	DS6	872-6402	872-2156 (h)
Brent Starling	Forest Officer	DS3	872-6424	872-0486 (c)
Dallas Phillips	GIS and Data Management Tech	DS7	872-6405	872-2717(h)
Louie Beaulieu	Fire Technician	DS4	872-6420	872-3987(h)
Doraine Grenier	Forest Administration Clerk		872-6406	872-5645 (h)
Melanie McCallum	Fire Clerk - Seasonal		872-6419	872-2717 (h)
Vacant	Fire Clerk		872-6419	
<b>Fire Room</b>			<b>872-6422</b>	

**SHARED SERVICES**

Fax: 872-4250

NAME	POSITION	OFFICE	HOME
Jim Hood	Manager, Shared Services	872-6414	872-4680
Melissa Johns	Corporate Services Officer	872-6411	
Betty Tourangeau	Corporate Services Clerk	872-6400	
Mitch Guenette	Corporate Services Clerk	872-6430	

**WILDLIFE AND ENVIRONMENT**

Fax: 872-4250

NAME	POSITION	CALL SIGN	OFFICE	CELL/HOME
Troy Ellsworth	Manager	SM2	872-6403	872-0724/2505
Tony Vermillion	Renewable Resource Officer III	SM1	872-6404	621-0444/3658
Sholto Douglas	Renewable Resource Officer II	SM3	872-6417	872-0400/4407
Ken Mercredi	Renewable Resource Officer II	SM4	872-6418	872-0400/3514
Karl Cox	Wildlife Technician III		872-6423	872-2098 (h)
Allicia Kelly	Regional Biologist	SM7	872-6408	621-0183/4077
Terry Armstrong	Bison Biologist		872-6446	872-3125 (h)

**FORTRESOLUTION**

Fax: 394-5101

NAME	POSITION	CALL SIGN	OFFICE	HOME
Gord Beaulieu	Renewable Resource Officer III	FR1	394-4596	394-3863
James Larocque	Fire Clerk		394-4596	
Eric Beck	Crew Coordinator	FR2	394-4596	394-4001

**FORT SMITH AIR TANKER BASE**

Department of Environment and Natural Resources  
Box 7, Fort Smith, NTX0E 0P0

**CALL SIGN: XLM – 598**

Phone: (867) 872-2959

Fax: (867) 872-4601

Fire Line: (867) 872-2187

<b>NAME</b>	<b>POSITION</b>	<b>OFFICE</b>	<b>CELL</b>
Bart Hartop	Air Attack Officer	872-2959	872-0267
Erin Evans	Dispatcher	872-2959	872-0837

**HAYRIVER AREA OFFICE**

Department of Environment and Natural Resources  
156 Miron Drive Hay River, NTX0E 0R2

Office Phone: (867) 875-5550  
Fax: (867) 875-5559  
CALL SIGN: XLI - 55

**CELL PHONES:**

Jerry Hordal: 875-7473      Albert Bourque: 875-7033  
Ron Antoine: 875-7562      Warehouse: 875-8579  
Dean McMeekin: 874-1134      **Wildlife Emergencies: 875-7640**

HAYRIVER AREA OFFICE				Fax: 875-5559
NAME	POSITION	CALL SIGN	OFFICE	HOME
Jerry Hordal	Renewable Resource Officer III	HR1	875-5554	874-4881
Ron D. Antoine	Renewable Resource Officer II	HR2	875-5552	875-4999
Lyle Froehlich	Fire Technician	HR5	875-5550	874-2173
Albert Bourque	Regional Environmental Coordinator	EP1	875-5571	
Dean McMeekin	Material Management Officer	HR6	875-5564	874-3313
Joney Berting	Warehouse Person	HR7	875-5568	874-4050
David Johnson	Radio Operator / Fire Clerk		875-5555	874-3881
Heather Hirst	Fire Clerk		875-5557	
Maxine Gauthier	Area Corporate Services Clerk		875-5550	
<b>Duty Officer</b>			<b>875-5558</b>	
<b>Fire Centre Fax Number:</b>			<b>875-5556</b>	

FORT PROVIDENCE				Fax: 699-3700
				Call Sign: XMP – 204
NAME	POSITION	CALL SIGN	OFFICE	HOME
Danny Beaulieu	Renewable Resource Officer III	JP1	699-3002	
Edward Landry	Renewable Resource Officer II	JP3	699-3002	699-3074
Thommy Matto	Fire Technician	JP2	699-3014	699-3019
Carol Bonnetrouge	Fire Clerk		699-3014	699-3413
<b>Fire Centre</b>			<b>699-3014</b>	
			<b>699-3029</b>	
<b>Fire Centre Fax Number:</b>			<b>699-3031</b>	

**HAYRIVER AIR TANKER BASE**

Department of Environment and Natural Resources  
120 Whitlock Road, Airport, Hay River, NT X0E 0R9

**CALL SIGN: XLM-597**  
Phone: (867) 874-2280  
Fax: (867) 874-2995  
Fire Line: (867) 874-6442

NAME	POSITION	OFFICE	CELL
David (Yogi) Heron	Air Attack Officer	874-2280	872-0054
Vern Hoepfner	Tanker Base Manager	874-2280	875-7563
Shelby Hamilton	Dispatcher Clerk	874-2280	872-0112



**NORTH SLAVE REGIONAL OFFICE**

Department of Environment and Natural Resources  
Box 2668 Yellowknife, NTX1A 2P9

**Duty Officer: (867) 920-6115 / FIRE OPERATIONS ROOM: 920-6117**  
**Wildlife Emergencies (867) 873-7181**

Office Phone: (867) 873-7184  
Main Fax/Fire Ops Fax: (867) 873-6230/0403  
Call Sign: XLJ-214

NORTH SLAVE REGIONAL OFFICE					Fax: 873-6230
NAME	POSITION	CELL	OFFICE	HOME	
Vacant	Superintendent		920-6114		

FOREST MANAGEMENT					Fax: 873-0403
NAME	POSITION	CELL	OFFICE	HOME	
Roger Fraser	Manager, Forests	445-3200	920-6456	920-7005	
Janice Ziemann	Forest Officer	445-3206	920-6104		
Noel Doctor	Seasonal Regional Fire Technician	445-3204	920-6599		
Clayton Pielak	Material Management Officer	445-3202	920-6116		
Kelly Norris	Forest Fire Management Admin Clerk		920-6903		
Joanna LePrieur	Forest Fire Management Clerk		920-6117		
Caryn Munroe	Forest Fire Management Clerk		920-6117		
<b>HELIBASE</b>			873-7995		
Crew Lounge			920-6917		

SHARED SERVICES					Fax: 873-0639
NAME	POSITION	OFFICE	HOME		
Eleanor Jerome	Manager, Shared Services	920-6111			
Sherri Plante	Senior Corporate Services Officer	873-7384			
Jaynine McCrea	Senior Corporate Services Clerk	873-7476			
Laura Pittman	Corporate Services Clerk	920-3207			

WILDLIFE AND ENVIRONMENT					Fax: 873-6230
NAME	POSITION	CELL	OFFICE	HOME	
Fred Mandeville	Manager, Wildlife & Environment	445-2061	873-7019		
Shelly Acton	Wildlife Administration Clerk		873-7184		
Sarah True	Regional Environmental Coordinator		873-7443		
Dean Cluff	Biologist		873-7783		
Bruno Croft	Manager, Research and Monitoring	445-6334	873-6265		
Adrian Lizotte	Renewable Resource Officer	445-3208	873-7362		

TŁJCHQOFFICE - Behchokò					Fax: 392-6339
NAME	POSITION	CALL SIGN	OFFICE	HOME	
Lawrence Lewis	Renewable Resource Officer III		392-6511	371-5994	
Kelvin Kotchilea	Wildlife Officer II		392-6511	392-6095	
JP Rabesca	Renewable Resource Officer I		392-6511		
Bessie Apples	Fire Clerk		371-3133		
Howard Landry	Fire Crew Coordinator		371-3133		
Michael Huskey	Storeperson		371-3133		
<b>Frank Channel Forest Fire Centre - Seasonal Only</b>		<b>Fax: 371-5011</b>	<b>371-3133</b>		

LUTSELK'E OFFICE					Fax: 370-3008
NAME	POSITION	CALL SIGN	OFFICE	HOME	
Tom Lockhart	Renewable Resource Officer II	NG1	370-3141	370-3077	
<b>Fire Centre</b>			<b>370-3931</b>		

<b>DENESOLINE</b>				
<b>NAME</b>	<b>POSITION</b>	<b>CALL SIGN</b>	<b>OFFICE</b>	<b>HOME</b>
Roy Shields	Denesoline (Lutselk'e)		766-2370	

<b>DETON CHO</b>				
<b>NAME</b>	<b>POSITION</b>	<b>CALL SIGN</b>	<b>OFFICE</b>	<b>HOME</b>
Roy Erasmus Jr.	Deton Cho (Yellowknife)		873-6533	

<b>NISHI-KHON</b>				
<b>NAME</b>	<b>POSITION</b>	<b>CALL SIGN</b>	<b>OFFICE</b>	<b>HOME</b>
Fred Behrens	Nishi-Khon (Behchokò)		693-3462	
Frank Beaulieu	Nishi-Khon Supervisor (Frank Channel)		997-3040	997-3095

**YELLOWKNIFE AIR TANKER BASE**

Department of Environment and Natural Resources  
 Box 1619 Yellowknife, NTX1A 2P3  
 (108 McMillian Street)

**CALL SIGN: XLM-596**  
 Phone: (867) 873-3778  
 Fax: (867) 920-2096  
 Fire Line: (867) 873-8133

<b>NAME</b>	<b>POSITION</b>	<b>OFFICE</b>	<b>CELL</b>
Kali Brasseur	Dispatcher	873-3778	872-0271
NanceyHavenga	Air Attack Officer	873-3778	872-0390

**SAHTU REGIONAL OFFICE**

Department of Environment and Natural Resources  
 Box 130 NormanWells, NTX0E 0V0  
 Duty Officer / Forest Fire Line: (867) 587-3512

Office Phone: (867) 587-3500  
 Fax: (867) 587-3516  
 Direct Fire Line: (867) 587-4984

SAHTU REGIONAL OFFICE					Fax: 587-3516
NAME	POSITION	FACSIMILE	OFFICE	HOME	
Keith Hickling	Superintendent(NW1)	Cell 587-6600	587-3516	587-3508	587-2919

FOREST MANAGEMENT					Fax: 587-3535
NAME	POSITION	CALL SIGN/CELL	OFFICE	HOME	
Paul Rivard	Manager, Forests	NW2 / 444-1777	587-3507	587-2558	
Vacant	Regional Forest Officer	NW5/ 444-6001	587-3510		
Jules Fournel	Regional Fire Technician	NW 6	587-3509		
TimMelnyk	Regional Storesperson	NW7	587-3513	587-2765	
Sandra T'seleie	Forest Fire Management Admin Clerk	NW8/587-6595	587-3511	587-2241	
Vacant	Forest Fire Management Clerk	NW9	587-3514		

SHARED SERVICES					Fax: 587-3516
NAME	POSITION		OFFICE	HOME	
Sam Kivi	Manager, Shared Services	Cell: 444-2499	587-3504	587-2870	
Mary (Dee Dee) LeBlue	Corporate Services Officer		587-7168	587-2710	
Dolleen (Dolly) Whiteman	Corporate Services Clerk		587-3505	587-2147	
Sheena Bailey	Corporate Services Clerk		587-3500	587-4470	
Mary Knox	Licensing Clerk		587-3506	587-2228	

WILDLIFE					Fax: 587-3516
NAME	POSITION	CALL SIGN/CELL	OFFICE	HOME	
Jeff Walker	Renewable Resource Officer III	NW3/445-8481	587-3532	587-4373	
Vacant	Environmental Protection Officer	NW4	587-3515		
Vacant	Renewable Resource Officer II		587-3515		
24 Hour Bear Line			587-2422		
Wildlife on Call		587-6526			

SAHTU WILDLIFE MANAGEMENT					Fax: 587-3525
NAME	POSITION	CELL	OFFICE	HOME	
Alasdair Veitch	Sup., Wildlife/Regional Biologist		587-3517	587-2671	
Richard Popko	Wildlife Technician II		587-3518	587-2648	
Phillip (Phil) Spencer	GIS Specialist		587-3519	587-4417	
Heather Sayine-Crawford	Cumulative Effects Biologist		587-3521	587-4174	
Vacant	GIS Technician		587-3519		

COMMUNITY RENEWABLE RESOURCE OFFICERS				
NAME / Call Sign	POSITION	LOCATION	OFFICE/HOME	FACSIMILE
Leeroy Andre/ Deline 1	Renewable Resource Officer	Déline	589-3421	589-4906
Mabel Tatchinron/Good Hope 1	Renewable Resource Officer II / MOU	FortGood Hope	598-2271/2114	598-2708
Ron Doctor / Tulita 1	Renewable Resource Officer II	Tulita	588-3441/4077	588-3907

**NORMAN WELLS AIR TANKER BASE**

Department of Environment and Natural Resources  
 c/o Sahtu Regional Office  
 Box 130, Norman Wells, NT X0E 0V0

CALL SIGN: VOD-261  
 Phone: (867) 587-2923  
 Fax: (867) 587-2661  
 Fire Line: (867) 587-2015

**INUVIKFOREST MANAGEMENT OFFICE – SHELLLAKE**

Department of Environment and Natural Resources

PO Box 2749 Inuvik, NT X0E 0T0

Duty Officer: (867) 678-5054 or 678-6681

Fire Emergency Line: (867) 777-3333

INUVIK REGIONAL OFFICE				Fax: 678-6659
NAME	POSITION	OFFICE	HOME	
Stephen Charlie	Superintendent	678-6690		
Erin Sydney	Corporate Services Clerk	678-6650		

FOREST MANAGEMENT					Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME	
Martin Callaghan	Manager, Forests	678-0590	678-6691	777-3983	
Martin Callaghan	Forest Officer	678-0590	678-6691	777-3983	
Vacant	Seasonal Forest Technician				
Vacant	Forest Fire Management Admin Clerk		678-6697		
Vacant	Forest Fire Management Clerk		678-6696		
Warren Geno(on leave)	Materials Management Officer		678-6660	777-6205	
Owen Allen	Seasonal Warehouse Person		678-6661		

SHARED SERVICES				Fax: 777-7321
NAME	POSITION	OFFICE	HOME	
Verna Firth	Manager, Shared Services	777-7234	777-3568	
Leanna Steen	Corporate Services Officer	777-7116		

WILDLIFE					Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME	
Ian Ellsworth	Senior Wildlife Officer	678-0289	678-6680	777-5310	
Tobias (Toby) Halle	Renewable Resource Officer III		678-6681		
Kevin V. Allen	Renewable Resource Officer II		678-6682		
Lloyd Gruben	Renewable Resource Officer II	678-5314	777-3381		
Paul Voudrach	Environmental Protection Officer	678-0101	678-6652		
Daryl English	Conservation Education Officer	678-0196	678-6653	777-4335	
Anhua Wei	GIS Specialist		678-6675		

WILDLIFE MANAGEMENT					Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME	
Marsha Branigan	Manager, Wildlife Management	678-0477	678-6670	777-4010	
Jody Pongratz	Regional Biologist		678-6671		
Tracy Davison	Regional Biologist		678-6672	777-2559	
Norm Snowshoe	Environmental Assessment Coordinator	678-0587	678-6676		
Christine Menno	Regional Wildlife Technician		678-6673		

COMMUNITY RENEWABLE RESOURCE OFFICERS				
NAME	POSITION	LOCATION	OFFICE	FACSIMILE
Ian McLeod	Renewable Resource Officer II	Aklavik	978-2248	978-2061
Glen Alexie	Renewable Resource Officer II	FortMcPherson	952-2200	952-2269
Colin Okheena	Renewable Resource Officer I	Ulukhaktok	396-4505	396-3033
Lila Voudrach	Renewable Resource Officer II	Tuktoyaktuk	977-2350	977-2335
Samuel Lennie Jr.	Renewable Resource Officer I	Tsiigehtchic	953-3605	953-3611

**INUVIK AIR TANKER BASE (contact ShellLake Office)**

Department of Environment and Natural Resources

c/o Forest Management Division, Box 7, 149 McDougal Road Fort Smith NT X0E 0P0

**CALL SIGN:**

Phone: (867) 777-2938

Fax: (867) 777-2604

**DEHCHO REGIONAL OFFICE**

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

Office Phone: (867) 695-7450  
Main Fax: (867) 695-2381

Duty Officer: (867) 695-7485

Fire Emergency Line: (867) 695-7484

Bear Line: (867) 695-7433

DEHCHO REGIONAL OFFICE				Fax: 695-2381
NAME	POSITION	OFFICE	HOME	
Carl Lafferty	Superintendent	695-7451	695-2016	

FOREST MANAGEMENT				Fire Suppression Fax: 695-2442 Warehouse Fax: 695-3606	
NAME	POSITION	CELL	OFFICE	HOME	
Loyal Letcher	Manager, Forests	695-6589	695-7480	695-2116	
Steve Gooderham	Regional Forester		695-7482	695-3441	
Daniel Allaire	Forest Officer	695-6587	695-7481	695-2743	
Michael Tsetso	Regional Fire Technician	695-6645	695-7465	695-2542	
Naomi Antoine – on leave	Fire Administration Clerk		695-7488	695-2268	
Vacant	Fire Clerk		695-7487		
Courtney Tsetso	Fire Clerk		695-7486		
Michael Canney	Material Management Officer	695-6686	695-7490	695-2069	
Brenda Norwegian (on leave)	Stores Assistant		695-7491	695-2023	
Vacant	Stores Assistant		695-7491		

SHARED SERVICES				Fax: 695-7501 / 695-2381	
NAME	POSITION	OFFICE	HOME		
Tanya Hurst	Manager, Shared Services	695-7452			
Leslie Kjeldsli	Corporate Services Officer	695-7453			
Vacant	Corporate Services Clerk	695-7456			
Vacant	Corporate Services Clerk	695-7505			

WILDLIFE & BIOLOGY				Wildlife Office: 695-7473 Fax: 695-2381	
NAME	POSITION	CELL	OFFICE	HOME	
Doug Villeneuve	Manager, Wildlife	695-6634	695-7471	695-3039	
Kelly Pennycook	Renewable Resource Officer II	695-6620	695-7470	695-3520	
J. George Tsetso	Renewable Resource Officer I		695-7472	695-3274	
Nic Larter	Regional Biologist		695-7475		
Danny Allaire	Wildlife Technician II		695-7476	695-2605	
Brendan Tsetso	RROII Trainee		695-7450		

ENVIRONMENTAL PROTECTION				Fax: 695-2381	
NAME	POSITION	OFFICE	HOME		
Ken Lambert	Regional Environmental Protection Officer	695-7477	695-3419		

FORTLIARD				Office: 770-3451 Fax: 770-4600	
NAME	POSITION	OFFICE	HOME		
Floyd Bertrand	Renewable Resource Officer III	770-4300	770-2211		
Vacant	Renewable Resource Officer II	770-4300			
Patricia Bertrand	Corporate Services Clerk	770-4300	770-2211		
George Jooris	Warehouse Person	770-3209	770-4815		

**FORT SIMPSON AIR TANKER BASE**

Department of Environment and Natural Resources  
c/o Dehcho Regional Office  
Box 240 Fort Simpson NTX0E 0N0

CALL SIGN: VXN-89  
Phone: (867) 695-2717  
Fax: (867) 695-2727

**FOREST RESOURCES OFFICE**

Department of Environment and Natural Resources  
 Box 4354 Hay River NT X0E 1G3

Office Phone: (867) 874-2009  
 Fax: (867) 874-6236

<b>FOREST RESOURCES</b>				
<b>NAME</b>	<b>POSITION</b>	<b>CELL</b>	<b>OFFICE</b>	<b>HOME</b>
<b>Tom Lakusta</b>	<b>Manager, Forest Resources</b>	875-7495	<b>874-2009</b>	<b>874-4615</b>
Lisa Smith	Inventory & Analysis Forester		874-2009	
Mike Gravel	Forest Ecologist	875-7417	874-2009	874-3383
Vacant	Resource Analysis Forester		874-2009	
Rafe Smith	Coordinator Silviculture Operations		874-2009	
Kathleen Groenewegen	GIS Specialist		874-2009	

**WILDLIFE DIVISION – YELLOWKNIFE OFFICE (Scotia Centre-5)**

Department of Environment and Natural Resources  
600, 5102-50<sup>th</sup> Avenue Yellowknife, NTX1A 3S8

Office Phone: (867) 920-8064  
Fax: (867) 873-0293

WILDLIFE DIVISION			
NAME	POSITION	OFFICE	CELL/HOME
<b>Susan Fleck</b>	Director	<b>920-8043</b>	
Ruth Delorme-Roy	Administrative Assistant	920-8064	
Lynda Yonge	Manager, Biodiversity Conservation	920-8675	
Rob Gau	Species at Risk Specialist	873-7588	
Joanna Wilson	Species at Risk Implementation Supervisor	920-6362	
Lena Lafond	System Administrator	920-6361	
Michelle Henderson	Species at Risk Coordinator	920-6316	
Patricia Handley	Information Coordinator	873-7760	
Adam Vivian	Wildlife Legislation Specialist	920-8675	
Suzanne Carriere	Wildlife Biologist (Biodiversity)	920-6327	
Bonnie Fournier	Data Analyst	920-3146	
Nicole McCutcheon	Manager, Wildlife Research & Mgmt	920-8067	
Terry Armstrong	Wildlife Biologist, Bison (Fort Smith Office)	872-6446	
Adrian D'Hont	Wildlife Biologist, Traditional Knowledge/Harvest Data	873-7771	
Bob Decker	Wildlife Biologist, Habitat Conservation – Hay River	874-2009	875-7568
Brett Elkin	Disease/Contaminants Specialist	873-7761	
Jan Adamczewski	Wildlife Biologist, Ungulates	873-7763	
Judy Williams	Wildlife Technician	873-7782	
Robert Mulders	Wildlife Biologist, Carnivores/Furbearers	920-6315	
	Wildlife Laboratory	873-7427	
	Wildlife Warehouse (KamLake)	920-8952	

**MOT SYMBOLS FOR SETTLEMENTS**

<b>EB3</b>	ColvilleLake
<b>WJ</b>	Deline (FortFranklin)
<b>PY</b>	Fort Chipewyan, Alberta
<b>GH</b>	FortGood Hope
<b>JF</b>	FortLiard
<b>FM</b>	FortMcPherson
<b>JP</b>	FortProvidence
<b>FL</b>	FortReliance
<b>FR</b>	FortResolution
<b>FS</b>	FortSimpson
<b>SM</b>	Fort Smith
<b>FB2</b>	Frank Channel ( <i>FC</i> )
<b>RA</b>	Gameti (RaeLakes)
<b>HY</b>	Hay River
<b>EV</b>	Inuvik
<b>LK</b>	Lutselk'e( <i>Snowdrift- NG</i> )
<b>VQ</b>	Norman Wells
<b>RE2</b>	Behchokò(Rae/Edzo)
<b>FN</b>	Tulita ( <i>FortNorman</i> )
<b>FJ2</b>	Wekweètì( <i>SnareLake</i> )
<b>EM3</b>	Whatì( <i>Lac La Marte- LLM</i> )
<b>XY</b>	Whitehorse, Yukon
<b>WY</b>	Wrigley
<b>ZF</b>	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 fires
- (f) Rotations schedule policy
- (g) I.A.O. 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 BRIEFING FORMAT

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

- a) When to approach the aircraft;
- b) How to approach the aircraft;
- c) How to open and close doors;
- d) How to stow gear;
- e) Seat belts, emergency gear locations, ELT operations, communications systems operations;
- f) Pilot distractions during take-off or landing;
- g) Emergency briefing procedures in the event of a crash;
- h) How to deplane with gear;
- i) How to depart aircraft area;
- j) Personal equipment requirements (earplugs, etc.) and
- k) Emergency procedures for disconnecting the battery and emergency fuel shut-off;
- l) Smoking restrictions.

## STANDARD DISPATCH FORMAT

After the engine has been started and the radio master turned on, the Initial Attack Officer 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 Attack Officer is given some critical pieces of information.

To be certain that this information has been received correctly, the Initial Attack Officer 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 Attack Officer 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 Flight Services of the outbound track and distance.

**FORTSMITH SERVICE DIRECTORY**

**ACCOMMODATIONS**

PELICAN RAPIDS INN - Cable TV, kitchenettes, air conditioning, Whirlpool bathtubs and fridges in suites	872-2789
R HOUSE B&B- <a href="http://www.rhousefortsmith.com/cms/">www.rhousefortsmith.com/cms/</a>	872-5354
WHISPERING PINES COTTAGE (B&B)	872-2906
LOG HOME RENTALS	872-2484
FORT SMITH CONSTRUCTION CAMP (meals included)	872-2229
WWW.WHOOPINGCRANEGUESTHOUSE.CA	872-3426
EARL JACOBSON SUITE	872-2284

**VEHICLES**

TARGET NORTH (VISA)	872-2511
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**RESTAURANTS**

THE PELICAN BOARDROOM	872-2729
BERRO'S PIZZERIA	872-3332
PELICAN RAPIDS GOLF & COUNTRY	872-4653

**FORTSIMPSON SERVICE DIRECTORY**

**ACCOMMODATIONS**

BANNOCKLAND BED AND BREAKFAST	695-3337
THE GARDENS – (above liquor store) a two bedroom and three bedroom - fully furnished apartments, Cable TV, internet, Jacuzzi & sauna facilities for guests	695-2456
JANORS (Ask for Orville) 3 bedroom self contained suite /w Continental breakfast (no answer - call Health Centre at 7000)	695-2077
DEH CHO SUITES A three bedroom suite w/2 bathrooms. Four self-contained suites sharing one kitchen. Suites with internet & satellite TV	695-2309
THE MANOR (Albert Faille Apartments – Mitch) One bedroom suites with kitchen facilities	695-2427
MARODA MOTEL Cable TV, kitchenettes and air conditioned rooms available	695-2602
NAHANNI INN Cable TV, restaurant, bar	695-2201
EXECUTIVE SUITE (Simpson Air) Two bedroom suites with full kitchen, satellite TV, internet, exercise machines and laundry facilities.	695-2007
MACKENZIE REST INN	695-2357

**VEHICLES**

K & K TRUCK RENTALS	695-2276
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**RESTAURANTS**

NAHANNI INN	695-2201
SUB ARCTIC	695-3080
NORTHERN TAKE OUT	695-2391
FORT AT THE FORKS ( store, restaurant)	695-2700

**HAYRIVER SERVICE DIRECTORY**

**ACCOMMODATIONS**

CAMBRIDGE EXECUTIVE SUITES Apartments with full kitchen, Cable TV	874-2233
CARIBOU INN Cable TV, restaurant, lounge, whirlpools, kitchenettes	874-6706
CEDAR REST INN Satellite TV, waterbeds, kitchenettes, convenience store	874-3732
HARBOUR HOUSE B&B Old town location	874-2233
HAY RIVER HOTEL Cable TV, convenience store, bar, old town location	874-3249
MACKENZIE PLACE Apartment building which may rent by day, depending on vacancy	874-2535
MIGRATOR MOTEL Cable TV, kitchenettes available	874-6792
PTARMIGAN INN Cable TV, lounge, restaurant, air conditioned rooms and non-smoking rooms available	874-6781

**VEHICLES**

BUDGET RENTALS	874-7777
NORTHERN METALLIC (VISA)	874-6623

**RESTAURANTS**

BACK EDDY, THE	874-6680
BOARD ROOM, THE	874-2111
COUNTRY CHICKEN & RIBS (THE ROOSTER)	874-2800
HAY RIVER BAKERY	874-2322
KEYS, THE (The Ptarmigan)	874-6781
SUB ON THE HUB, THE	874-6898

**NORMAN WELLS SERVICE DIRECTORY****ACCOMMODATIONS**

HERITAGE HOTEL - Dining room, lounge, air conditioning, some suites with kitchenettes	587-5000
MACKENZIE VALLEY HOTEL - Dining room, coffee shop, apartment units with kitchens available, close to tanker base	587-2511
PYRAMID CAMP	587-2706
RAYUKA INN – Bar, restaurant, air conditioning	587-2354
WHIPONIC WELLPUTER CAMP	587-2389
YAMOURI INN Coffee shop, lounge, bar, apartment units with kitchens available	587-2744 1-800-661-0841
RED DOOR EXECUTIVE HOUSE mail@jgcil.ca	587-2630

**VEHICLES**

NORMAN WELLS TRANSPORTATION	587-2416
NORTHRIDGE CONTRACTING	587-2050
SRP	587-2542
RAYUKA INN	587-2354
TRIPLE M TAXI	587-6789
WHIPONIC WELLPUTER	587-2389

**RESTAURANTS**

HERITAGE HOTEL	587-5000
MACKENZIE VALLEY HOTEL	587-2511
RAYUKA INN	587-2354
YAMOURI INN	587-2744

**INUVIK SERVICE DIRECTORY****ACCOMMODATIONS**

MACKENZIE HOTEL First-Class Dining Room and Lounge, Business Center, Exercise Room, Banquet and Meeting Facilities, Cable TV, Air Conditioning	777-2861
CAPITAL SUITES Cable TV, business/fitness center, some kitchenettes, air conditioning	678-6300
NOVA INN High Speed Internet access, Fridges in all guests rooms, Microwaves in all suites, Air-conditioning, 27" TV satellite, Laundry facilities	777-6682 1-866-374-6682 novahotels.ca
POLAR B&B	777-2554
ARCTIC CHALET	777-3535
MGK CAMP	678-2500
ROBERTSON B&B	777-3111

**VEHICLES**

ARCTIC CHALET	777-3535
NORCAN	777-2346 877-298-1338

**RESTAURANTS**

SHIVERS	777-4919	TONY MO'S	777-4900
CAFÉ GALLERY	777-2888	THE ROOST	777-2727
FAST FOOD CAFE	777-2020		

**YELLOWKNIFE SERVICE DIRECTORY****ACCOMMODATIONS** *(for other accommodations, refer to the Yellow Pages)*

ANDERSONTHOMPSONTOWER	873-5701
CAPITAL SUITES 2-3 bedrooms, apartments have 2 full baths, satellite TV, close to downtown, furnished suites also available	669-6400
CAPTAIN RON'S B&B	873-3746
DISCOVERY INN Cable TV, air conditioned rooms and kitchenettes available, restaurant	873-4151
EXPLORER HOTEL 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	888-962-2522 873-8700 maclabhotels.com
ISLAND B&B	873-4803
MIDWEST PROPERTY MGMT	873-5033
NORTHERN LITES Cable TV, refrigerators and microwaves available	873-6023
NOVA COURT. Suites, fully equipped kitchens, satellite TV, internet	873-6686
RED COACH INN	873-8511
SUPER 8	669-8888
THE CHATEAU NOVA and CHATEAU NOVA SUITES Satellite TV, dining room, lounge, air conditioning, restaurant, parking, downtown, room service, fitness centre, business centre, and internet. Chateau Nova Suites has kitchenettes and located across street.	877-839-1236 873-9700 765-0800 (Suites) novahotels.ca
YELLOWKNIFE INN Cable TV, dining room, lounge, mini bars, air conditioning, downtown location, connected to Centre Square Mall	873-2600 873-2601

**VEHICLES**

BUDGET RENTALS	920-9209
NATIONAL CAR RENTAL	920-2970
RENT A RELIC	873-3400
VISA RENTALS	669-7779
HERTZ	766-3838

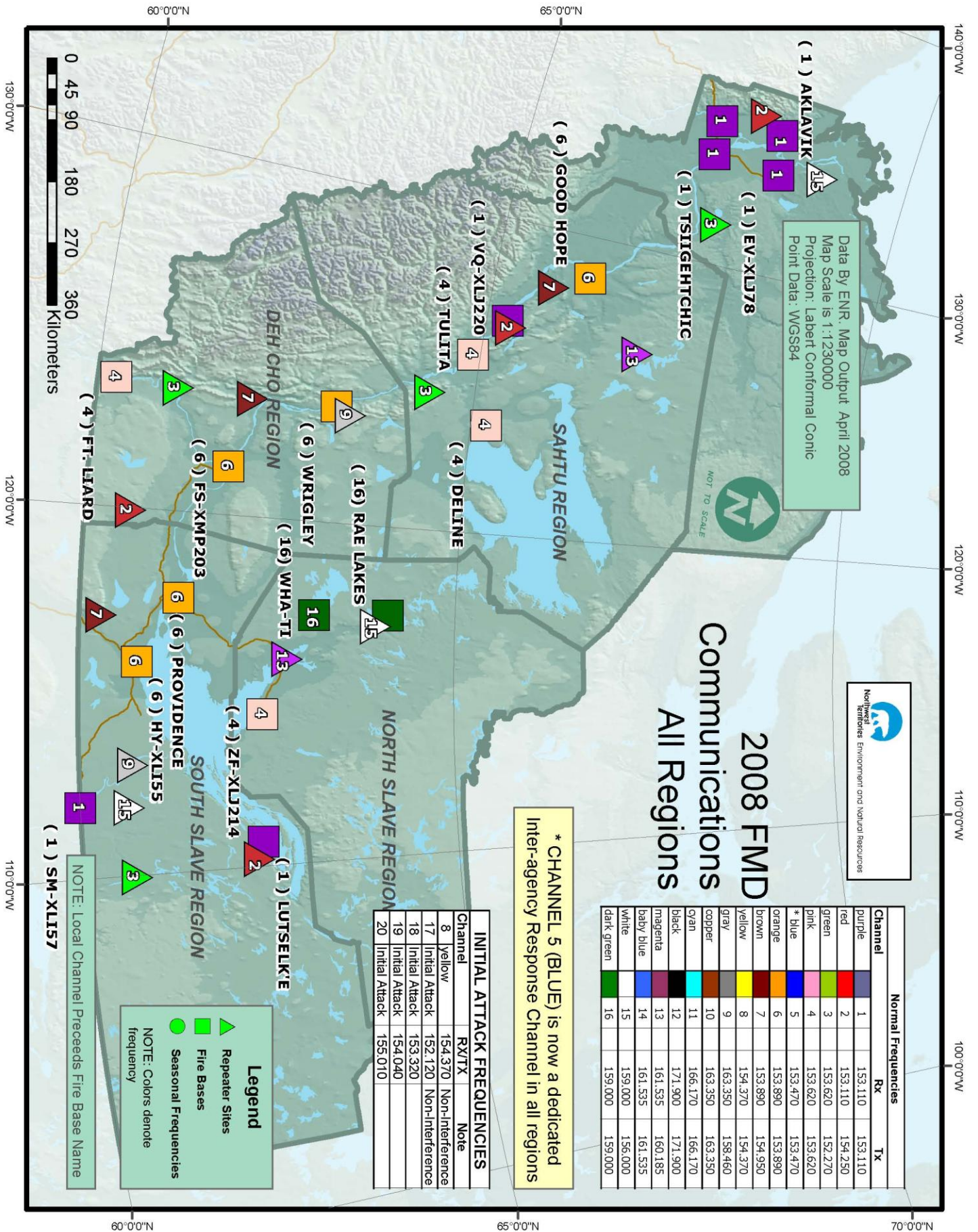
**RESTAURANTS** *(for other Yellowknife restaurants, refer to the Yellow Pages)*

BOSTON PIZZA	920-2000
BRUNO'S PIZZA	920-2130
KFC	873-2777
MONKEY TREE	669-9623

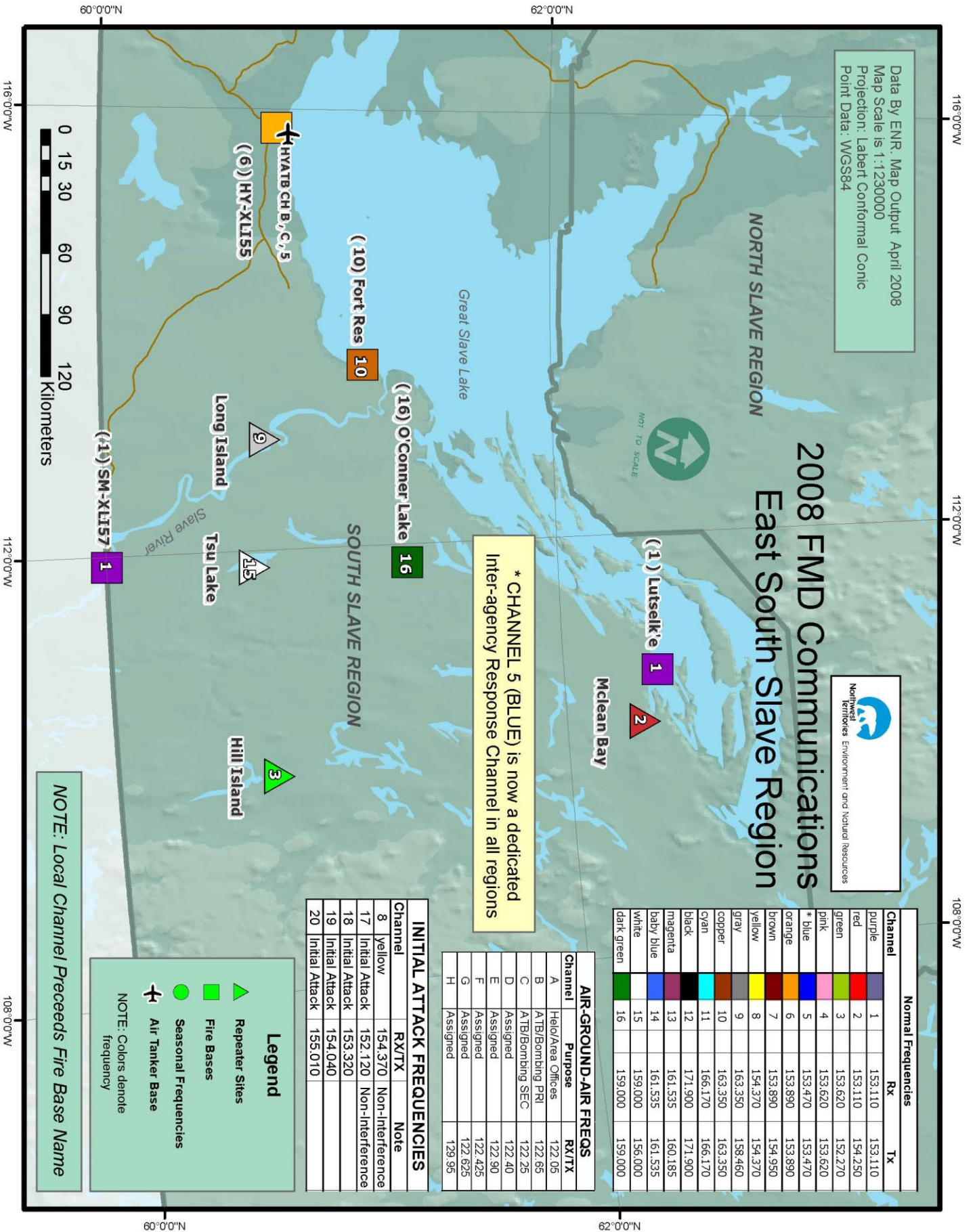
**ENR - COMMUNICATION DIRECTORY**

<b>Yellowknife.....XLJ-214</b>			<b>Behchokò(Rae/Edzo)</b>			<b>Frank Channel....XLJ-70</b>		
FREQ.	FM	F4	FREQ.	FM	F14	FREQ.	FM	F14
	AIR	122.05	RPTRS	Edzo	F13	RPTRS	Edzo	F13
RPTRS	Edzo	F13	<b>Whati</b>					
	Faber	F15	FREQ.	FM	F16			
	McCrea	F7	RPTRS	Faber	F15			
	YK City	F3						
<b>Fort Smith....XLI-57</b>			<b>FortProvidence....XMP-204</b>			<b>Lutselk'e....XMP-208</b>		
FREQ.	FM	F1	FREQ.	FM	F6	FREQ.	FM	F1
RPTRS	TsuLake	F15	RPTRS	Horn	F3	RPTRS	McLeanBay	F2
	Long Island	F9		Cameron	F7			
	HillIsland	F3						
<b>Hay River....XLI-55</b>			<b>FortResolution...XLJ-83</b>					
FREQ.	FM	F6	FREQ.	FM	F10			
RPTRS	Cameron	F7	RPTRS	Long Island	F9			
				TsuLake	F3			
<b>Inuvik....XLJ-78</b>			<b>Aklavik</b>			<b>FortMcPherson...CBF-213</b>		
FREQ.	FM	F1	FREQ.	FM	F1	FREQ.	FM	F1
RPTRS	Travaillant	F3	RPTRS	Goodenough	F2	RPTRS	Goodenough	F2
	Goodenough	F2						
<b>Norman Wells....XLJ-220</b>			<b>FortGood Hope....XMB-317</b>			<b>Tulita.....XMB-890</b>		
FREQ.	FM	F1	FREQ.	FM	F6	FREQ.	FM	F4
RPTRS	Hammer	F2	RPTRS	Gibson	F7	RPTRS	Clark	F3
	Gibson	F7	<b>Deline....XLI-822</b>					
	Clark	F3	FREQ.	FM	F4			
	Colville	F13	RPTRS	Clark	F3			
FREQ.	FM	F1						
<b>FortSimpson....XMP-203</b>			<b>FortLiard....XLJ-215</b>			<b>Wrigley</b>		
FREQ.	FM	F6	FREQ.	FM	F4	FREQ.	FM	F6/F10
RPTRS	Camsell	F7	RPTRS	Nahanni	F3	RPTRS	CapMountain	F9
	CapMountain	F9						
	Nahanni	F3						
	Redknife	F2						
<b>FIRE ATTACK BASES</b>								
<b>Inuvik Region – Sunny Lake</b>			<b>Dehcho Region – TroutLake</b>					
FREQ.	FM	F1/F4	FREQ.	FM	F1			
RPTRS	Travaillant	F3	RPTRS	Redknife	F2			
	Goodenough	F2						
<b>AIR ATTACK RADIO FREQUENCIES</b>								
122.05	Air to Air/Region	<b>122.65</b>	<b>ATB/Bombing PRI</b>	122.25	ATB/Bombing SEC			
122.40	Assigned	122.425	Assigned	122.625	Assigned			
122.90	Assigned	129.95	Assigned	131.85	Assigned			









Data By ENR, Map Output April 2008  
 Map Scale is 1:1230000  
 Projection: Lambert Conformal Conic  
 Point Data: WGS84



# 2008 FMD Communications East South Slave Region

\* CHANNEL 5 (BLUE) is now a dedicated Inter-agency Response Channel in all regions

Normal Frequencies		
Channel	Rx	Tx
purple	1 153.110	153.110
red	2 153.110	154.250
green	3 153.620	152.270
pink	4 153.620	153.620
* blue	5 153.470	153.470
orange	6 153.890	153.890
brown	7 153.890	154.950
yellow	8 154.370	154.370
grey	9 163.350	158.460
copper	10 163.350	163.350
cyan	11 166.170	166.170
black	12 171.900	171.900
magenta	13 161.535	160.185
baby blue	14 161.535	161.535
white	15 159.000	156.000
dark green	16 159.000	159.000

AIR-GROUND-AIR FREQS		
Channel	Purpose	RX/TX
A	Helio/Area Offices	122.05
B	ATB/Bombing PRI	122.65
C	ATB/Bombing SEC	122.25
D	Assigned	122.40
E	Assigned	122.90
F	Assigned	122.425
G	Assigned	122.625
H	Assigned	129.95

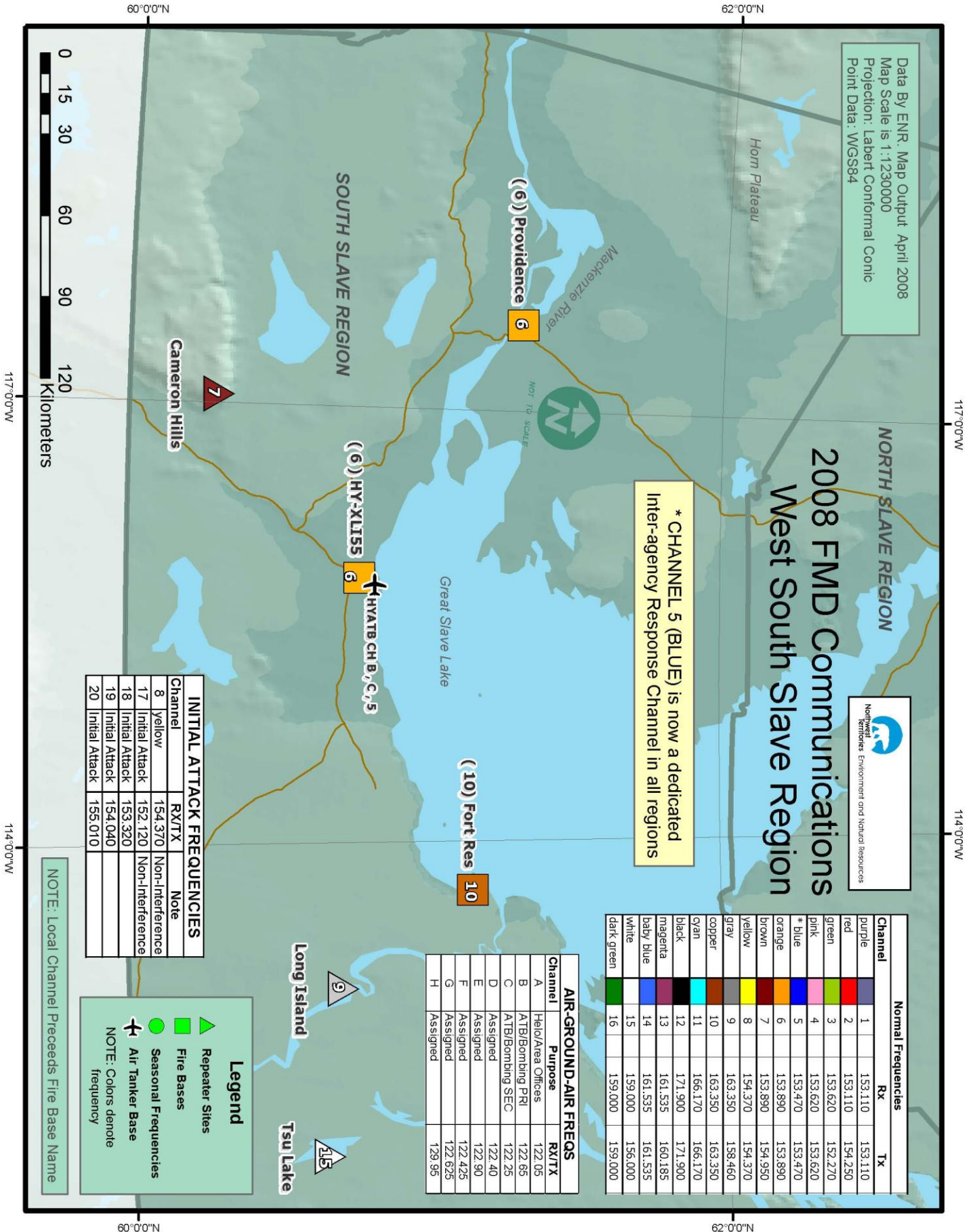
INITIAL ATTACK FREQUENCIES		
Channel	RX/TX	Note
8	Yellow	154.370 Non-Interference
17	Initial Attack	152.120 Non-Interference
18	Initial Attack	153.320
19	Initial Attack	154.040
20	Initial Attack	155.010

**Legend**

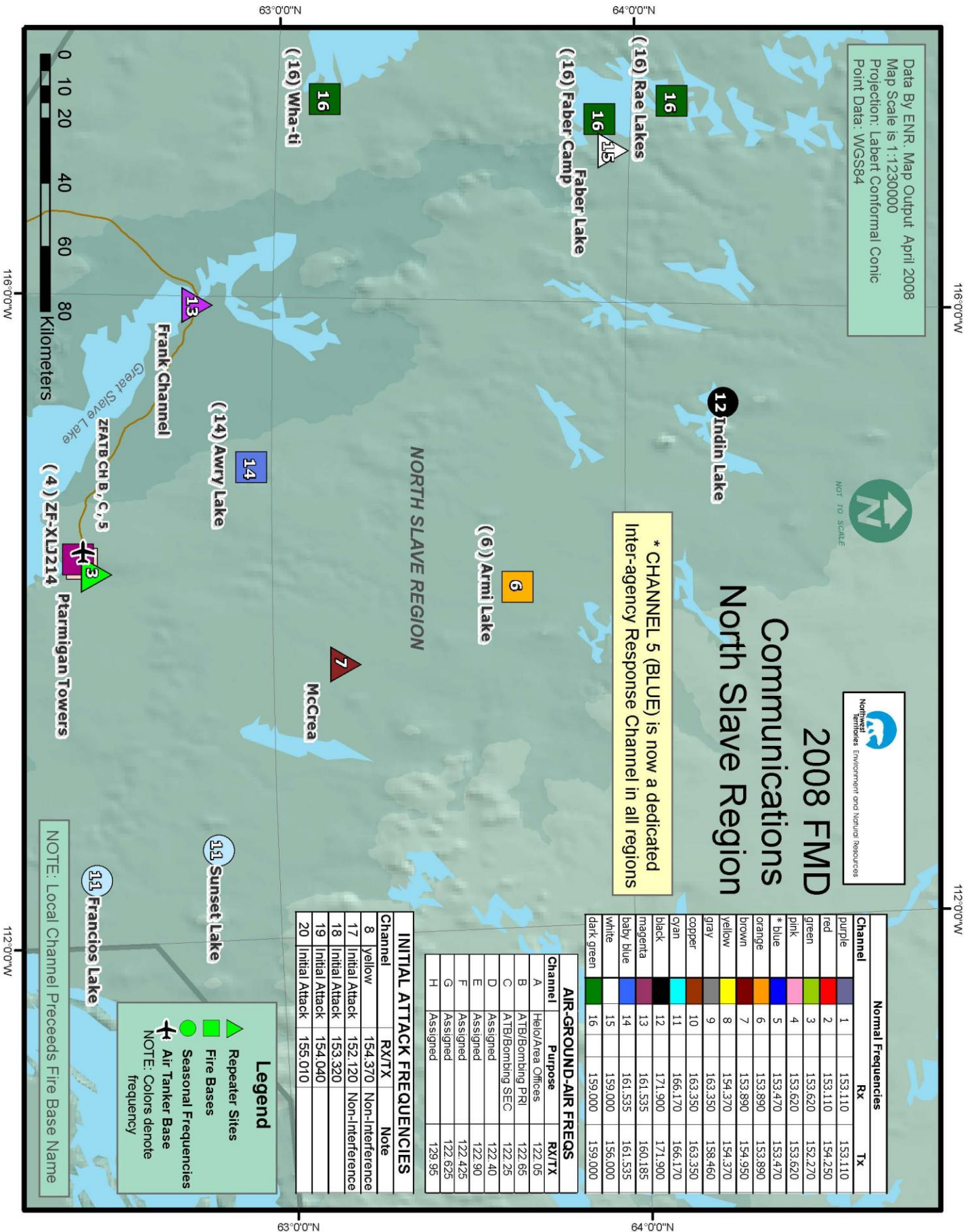
- ▲ Repeater Sites
- Fire Bases
- Seasonal Frequencies
- ✈ Air Tanker Base

NOTE: Colors denote frequency

NOTE: Local Channel Preceeds Fire Base Name









# 2008 FMD Communications Deh Cho Region

\* CHANNEL 5 (BLUE) is now a dedicated Inter-agency Response Channel in all regions

Channel	Normal Frequencies	
	Rx	Tx
purple	1 153.110	153.110
red	2 153.110	154.250
green	3 153.620	152.270
pink	4 153.620	153.620
* blue	5 153.470	153.470
orange	6 153.890	153.890
brown	7 153.890	154.950
yellow	8 154.370	154.370
gray	9 153.350	158.460
copper	10 163.350	163.350
cyan	11 166.170	166.170
black	12 171.900	171.900
magenta	13 161.535	160.185
baby blue	14 161.535	161.535
white	15 159.000	156.000
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Channel	Purpose	RX/TX
A	Helio/Area Offices	122.05
B	ATB/Bombing PRI	122.65
C	ATB/Bombing SEC	122.25
D	Assigned	122.40
E	Assigned	122.90
F	Assigned	122.425
G	Assigned	122.625
H	Assigned	129.95

INITIAL ATTACK FREQUENCIES		
Channel	RX/TX	Note
8	Yellow	154.370 Non-Interference
17	Initial Attack	152.120 Non-Interference
18	Initial Attack	153.320
19	Initial Attack	154.040
20	Initial Attack	155.010

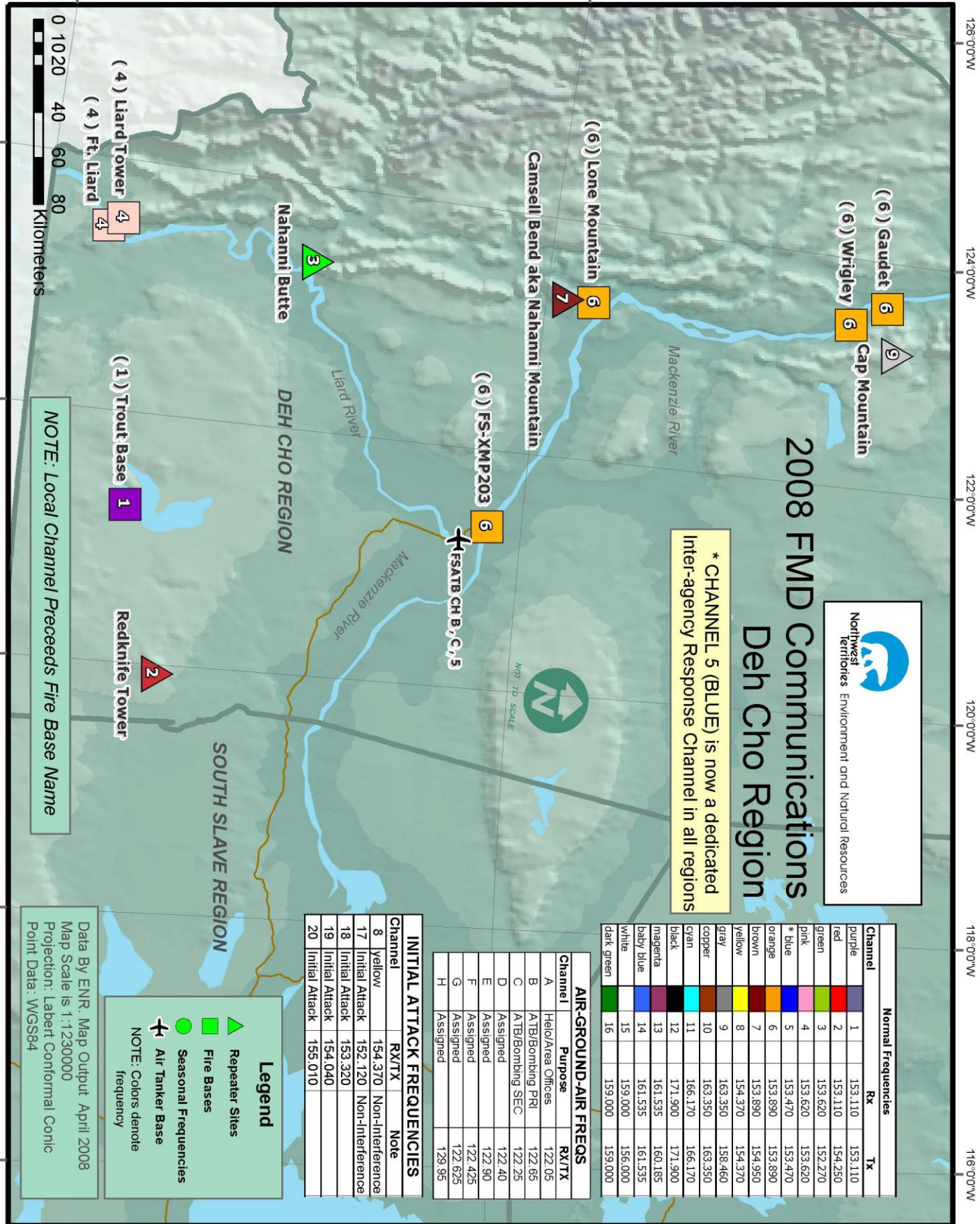
### Legend

- Repeater Sites
- Fire Bases
- Seasonal Frequencies
- Air Tanker Base

NOTE: Colors denote frequency

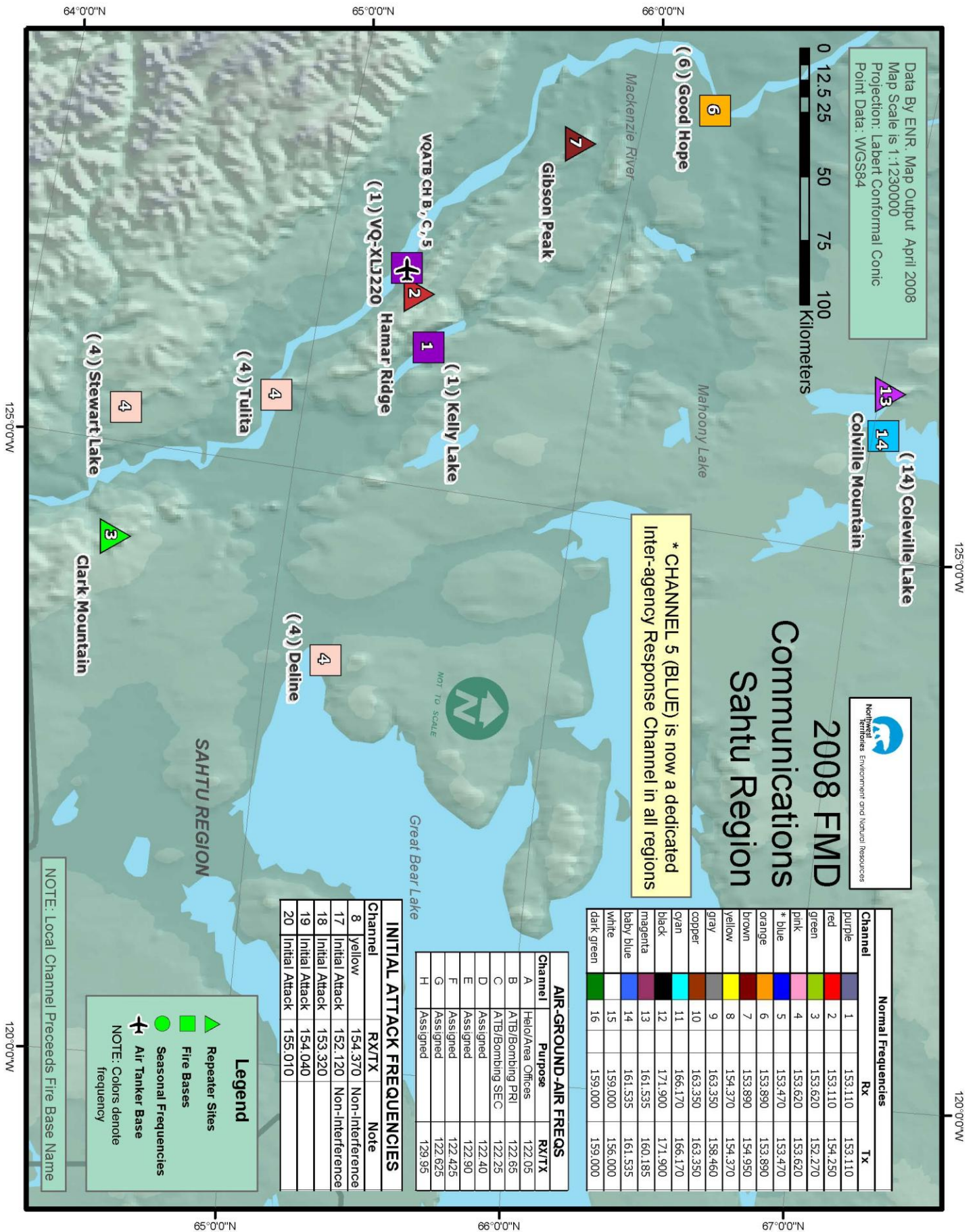
Data By ENR. Map Output April 2008  
Map Scale is 1:1230000  
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Point Data: WGS84

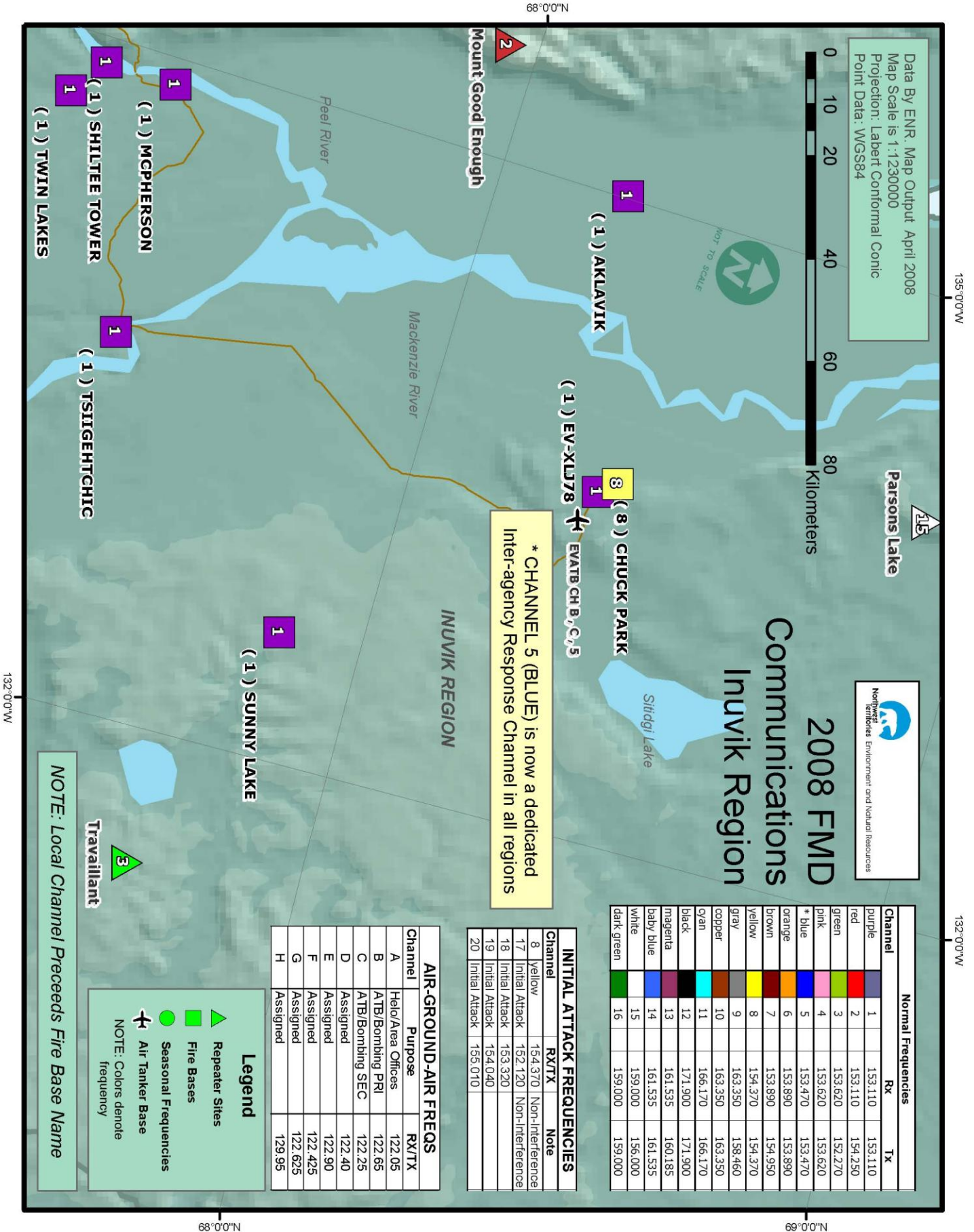
NOTE: Local Channel Precededs Fire Base Name



60°0'0"N  
62°0'0"N  
126°0'0"W  
124°0'0"W  
122°0'0"W  
120°0'0"W  
118°0'0"W  
116°0'0"W  
114°0'0"W  
112°0'0"W  
110°0'0"W  
108°0'0"W  
106°0'0"W  
104°0'0"W  
102°0'0"W  
100°0'0"W  
98°0'0"W  
96°0'0"W  
94°0'0"W  
92°0'0"W  
90°0'0"W







**FLIGHT SERVICES CONTACT NUMBERS**

Area Code: 867

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

<p><b>NOTICE OF CREW CHANGE</b></p> <p><b>To: Aviation Services, Forest Management Division FAX: (867) 872-2148</b></p>	
Company Name:	Name of Authorized Representative (please print)
Contract Number:	Signature of Authorized Representative
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:	to replace Pilot:
Pilot Name:	to replace Engineer:
License No.	
Engineer Name:	
License No:	
Remarks:	
<p>Forest Management Division – Phone (867) 872-7700</p>	



<b>NOTICE OF AIRCRAFT CHANGE</b>	
<b>To: Aviation Services, Forest Management Division FAX: (867) 872-2148</b>	
Company Name:	Name of Authorized Representative (please print)
Contract Number:	Signature of Authorized Representative
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	

<b>STOCK #</b>	<b>DESCRIPTION</b>	<b>LB</b>	<b>KG</b>
100LLDR	AVIATION FUEL 100LL 205 LITRE DRUM	365	165.6
JET1DR	AVIATION FUEL JET A 205 LITRE DRUM	400	181.6
FA105	AXE BOYS 2.5 LB HEAD 28" HANDLE	4.5	2.0
FA105L	AXE MANS 3.5 LB HEAD 36" HANDLE	5.5	2.5
RG100BX	BAG HOSE NYLON ORANGE (BOX OF 10)	23	10.4
RG0089BX	BATTERIES "AA" CELL BOX OF 144	5	2.3
RG0085BX	BATTERIES "D" CELL BOX OF 90	30	13.6
28-2	BATTERY NI-CAD NIFE SUNICA	61.5	27.9
016868	BATTERY NON-SPILLABLE SUNLYTE QD WEA KIT	69.1	31.3
RG0445	BOARD SPINE W/RESTRAINTS	21	9.5
TYPE3R	BOX BATTERY METAL QD WEA KIT	55.2	25
TYPE3RFULL	BOX BATTERY METAL QD WEA KIT W/2 BATTERY	193	87.5
RG0419	BOX PACKING CHAINSAW BUNDLE OF 5	26.5	12.0
RG0105	BOX PACKING HOSE WAXED BUNDLE OF 15	28.5	12.9
RG0420	BOX PACKING POWER PUMP BUNDLE OF 5	26	11.8
RG0683	CABINET FIRST AID STATION UTILITY	50	22.7
W500	CAN JERRY FUEL PLASTIC WEDCO 5 GL M/T	4	1.8
W500BX	CAN JERRY FUEL PLASTIC WEDCO (BX OF 6)	19	8.6
W150	CAN JERRY FUEL/OIL 2 PT WEDXO 2.5 GL M/T	2.2	1.0
W150BX	CAN JERRY FUEL/OIL PLASTIC WEDCO (BX OF 12)	14.5	6.6
026	CHAINSAW STHIL 16" BAR W/GUARD	14	6.4
026BX	CHAINSAW STHIL 16" BAR W/GUARD (2) BOXED	33	15
066	CHAINSAW STHIL 36" BAR	25.5	11.6
066BX	CHAINSAW STIHL 36" BAR W/GUARD	31	14.1
RG0625	CHAPS CHAINSAW KEVLAR (BOX OF 10)	26	11.8
NWT#1BX	CONTAINER FIRST AID NWT#1 M/T BOX OF 6	32	14.5
NWT#2BX	CONTAINER FIRST AID NWT#2 M/T BOX OF 3	22.3	10.1
NWT#3BX	CONTAINER FIRST AID NWT#3 M/T BOX OF 2	25.5	11.6
891002	CONTAINER WATER (PG OF 6)	12	5.4
5286	COOLER FOOD 64.3 LITER	14.5	6.6
COT	COT W/MATRESS FIRST AID STATION	25	11.3
20/96/6	FENCING GAME 330' X 8' ROLL	400	181.4
RG0134	FLY/TARP CANVAS W/ROPE > OR = 12 x 14'	15.5	7.0
FT104DR	FOAM FIRE 205 LITRE DRUM	490	222.3
3 X 8	GATE GAME FENCE 3' X 8' SINGLE	49	22.2
RG0072	HOSE FIRE COTTON Q/C 100'X 1.5" 1 ROLL	13	5.9
RG0072BX	HOSE FIRE COTTON Q/C 100'X 1.5" (BOX OF 5)	65	29.5

STOCK #	DESCRIPTION	LB	KG
RG0072FD	HOSE FIRE COTTON Q/C FOLDED BOX OF 4	52	23.6
FH7	HOSE FIRE STAFLO Q/C 100' x 1.5" 1 ROLL	12	5.4
FH7BX	HOSE FIRE STAFLO Q/C 100' X 1.5" BOX OF 5	62	28.1
FH7FD	HOSE FIRE STAFLO Q/C FOLDED BOX OF 4	50	22.7
RG0777	HOSE SUCTION DRAFTEX 2' X 10'8'	5	2.3
RG0892	HOSE SUCTION DRAFTEX 2' X 5' COUPLED	2	0.9
MK10110	HOSE SUCTION RIB RUBBER 2' X 10'8'	14.5	6.6
MK284	HOSE SUCTION RIB RUBBER W/FV 4" x 10'	37	16.8
RG0291	KIT FIRST AID NWT #1 COMPLETE	7.5	3.4
RG0415	KIT FOAM SUCTION/INDUCTION INJECTION	31	14.1
RG0004	KIT MESS 25 MAN COMPLETE W/WOODEN BOX	190	86.2
RG0011	KIT TOOL FIRE CHAINSAW COMPLETE	13.5	6.1
RG0007	KIT TOOL FIRE PUMP COMPLETE	34.5	15.6
RG0918	KIT TOOL SPRINKLER COMPLETE RAINBIRD	57.5	26.1
RG0924	KIT TOOL UTILITY PUMP COMPLETE	11	5
RG0152	MATTRESS AIR COTTON/VINYL BOX OF 10	57	25.9
ATCO8BX	OIL MIXING 2 CYCLE 8 OZ (BOX OF 12)	7	3.2
RG0414	OUTHOUSE PORTABLE NATURES OWN	69	31.3
RG0156	PACK PERSONAL EFF (BX OF 40)	124	56.2
RG0609	PACK PERSONAL SEASONAL/PERM (BOX OF 7)	20	9.1
RG0069	POLYTHENE	31	14.1
POST10	POST GAME FENCE GALVAN SCH 40 HD 10'	21	9.5
POST11	POST GAME FENCE GALVAN SCH 40 HD 11'	24	10.9
POST8	POST GAME FENCE GALVAN SCH 40 HD 8'	17	7.7
FA107	PULASKI MATTOCK & AXE 5 LB 36" HANDLE	5.5	2.5
HP02BX	PUMP BACK PACK "PISS"(BX OF 10)	72	32.7
1216	PUMP END MK3	16	7.3
MK75	PUMP FIREFIGHTING PRESSURE WAJAX	220	99.8
MK3	PUMP FIREFIGHTING PRESSURE WAJAX	58	26.3
MK3BX	PUMP FIREFIGHTING PRESSURE WAJAX BOXED	64	29.0
YP20G	PUMP FIREFIGHTING VOLUME YAMAHA	58	26.3
YP20GABX	PUMP FIREFIGHTING VOLUME YAMAHA BOXED	64	29.0
QCP121	PUMP TANAKA 1" (AREINS WP200)	13.5	6.1
TCP210	PUMP TANAKA 1" (AREINS WP210)	11.5	5.2
WICKMAN100	PUMP UTILITY MERCEDES	18	8.2
WICKMAN100BX	PUMP UTILITY MERCEDES BOXED	19.5	8.8
RG0170	ROBE SLEEPING SUMMER BOX OF 24	74	33.6

<b>STOCK #</b>	<b>DESCRIPTION</b>	<b>LB</b>	<b>KG</b>
RG0173	ROPE ROLL 1/2"	17.5	7.9
RG0171	ROPE ROLL 1/4" 1200 FT	16	7.3
RG0174	ROPE ROLL 3/4"	19	8.6
RG0172	ROPE ROL 5/16" (OR 3/8") 600 FT	20.5	9.3
RG0583	SHELTER WEATHER INSTRUMENTS LARGE	45	20.4
FA109	SHOVEL FIRE FIGHTING 36" HANDLE	4	1.8
10A	SHOWER PORTABLE PROPANE NO PUMP	98.5	44.7
SCG	SHOWER SUITCASE TYPE NO PUMP	51	23.1
RG0611	SIGN OUTDOOR PLYWOOD "FOREST FIRE DANGER"	85	38.6
RG0642	SIGN OUTDOOR PLYWOOD 4' X 8' "HOLD IT..."	77	34.9
4S	SINK WASH HAND/FACE FOLDING FRAME W/BOX	86	39.0
RG0093 (300)	SOCKS WORK WOOL (300 PAIR/BOX)	84	38.1
RG0093 (96)	SOCKS WORK WOOL (96 PAIR/BOX)	26.5	12
A7	SPARKPLUG NGK (MK3) CASE OF 100	19	8.6
RG0442	SPLINT KIT SET OF 15 WOOD ASSORTED	39	17.7
RG0190	STOVE WOOD AIRTIGHT 18"	10.5	4.8
RG0191	STOVE WOOD CAMP 4 HOLE W/OVEN & LEGS	33	15.0
RG0023	STRETCHER BASKET TYPE W/STRAPS	25	11.3
RG0196	STRETCHER CANVAS FOLDING DF99	18.5	8.4
RG0022	STRETCHER SCOOP BREAK-APART W/STRAPS	26	11.8
FA552Q	TANK FUEL POLY 5 GAL Q/C INSERT	6.2	2.8
5A552QBX	TANK FUEL POLY Q/C INSERT (4) BOXED	28.5	12.9
RG0317	TANK RELAY FREE STANDING 0500 GL RUBBER	36	16.3
RG0596	TANK RELAY FREE STANDING 1500 GL RUBBER	64	29.0
RG0319	TANK RELAY FREE STANDING 2500 GL RUBBER	81	36.7
FA16615	TANK RELAY POLY 1500 GL	34.5	15.6
RG0203	TENT CANVAS 14' x 12' x 3.5'	40	18.1
RG0730	TENT FIRST AID STATION	40	18.1
RG0204	TENT POLY 14' x 12' x 3.5' W/ROPE	25	11.3
RG0063	TENT POLYESTER/VINYL CASCADE SHOWER	158	71.7
RG0062	TENT POLYESTER/VINYL HABITAT OFFICE	328	148.8
RG0061	TENT POLYESTER/VINYL RANGER KITCHEN	291.5	132.2
QESC1014	TENT/SHELTER DECON (3 BAGS)	190	86.2
RG0207	TORCH DRIP SEALTITE	5	2.3
DMX68L	TOWER COMMUNICATIONS 8 SECTIONS LARGE	373	169.2

**NWT BASE CAMPCOORDINATES**

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Dehcho	Dehcho Headquarters	61	.8000	121	.3000	61	49	121	19
Dehcho	FortLiard	60	.2333	123	.4500	60	14	123	27
Dehcho	TroutLake Base Camp	60	.4333	121	.4000	60	26	121	24
Dehcho	Wrigley	63	.2166	123	.4333	63	13	123	26
Inuvik	FortMcPherson	67	.4166	134	.8833	67	25	134	53
Inuvik	NinelinLake Base Camp	67	.8500	131	.3500	67	51	131	21
Inuvik	ShellLake Headquarters	68	.3333	133	.6333	68	20	133	38
Inuvik	ShilteeTower	67	.2500	135	.0333	67	15	135	02
Inuvik	Sunny LakeBase 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	TwinLake Base Camp	67	.2333	134	.7166	67	14	134	43
North Slave	ArmiLake Base Camp	63	.7000	114	.2000	63	42	114	12
North Slave	Awry LakeBase Camp	62	.9333	114	.9333	62	56	114	56
North Slave	FaberLake Base Camp	63	.9333	117	.1833	63	56	117	11
North Slave	FrancoisLake Base Camp	62	.4833	112	.4000	62	29	112	24
North Slave	Frank Channel	62	.8000	115	.9333	62	48	115	56
North Slave	MertLake 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>RaeLakes</i> )	64	.1000	117	.3666	64	06	117	22
North Slave	Wekweeti ( <i>SnareLake</i> )	64	.1833	114	.1833	64	11	114	11
North Slave	Whati( <i>Lac La Marte</i> )	63	.2666	117	.2666	63	08	117	16

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Sahtu	ColvilleLake Base Camp	67	.0333	126	.0833	67	02	126	05
Sahtu	Deline( <i>FortFranklin</i> )	65	.1833	123	.4166	65	11	123	25
Sahtu	FortGood Hope	66	.2500	128	.6166	66	15	128	37
Sahtu	KellyLake Base Camp	65	.4166	126	.3833	65	25	126	23
Sahtu	Sahtu Headquarters	65	.2833	126	.8333	65	17	126	50
Sahtu	StewartLake Base Camp	65	.3833	125	.2833	64	23	125	17
Sahtu	Tulita ( <i>FortNorman</i> )	64	.9000	125	.5833	64	54	125	35
Sahtu	YelteaLake Base Camp	66	.8833	129	.3666	66	53	129	22
South Slave	FortProvidence	61	.3500	117	.6500	61	21	117	39
South Slave	FortResolution	61	.1666	113	.6833	61	10	113	41
South Slave	Hay River Headquarters	60	.8166	115	.7833	60	49	115	47
South Slave	KakisaLakeI.A. Base	60	.9833	117	.2666	60	59	117	16
South Slave	Lutselk'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	SwatLakeI.A. Base	60	.1666	117	.9166	60	10	117	55
South Slave	TsuLakeI.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.*

*Dehcho Region formerly known as the Fort Simpson Region.*

*Sahtu Region formerly known as the Norman Wells Region.*

