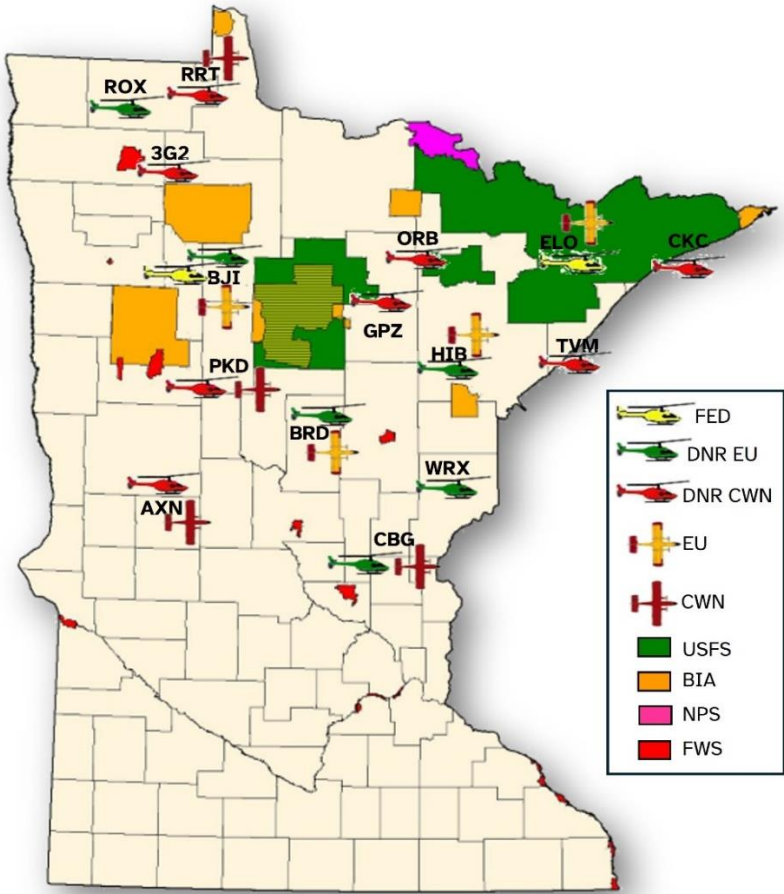


MN DNR HELITACK FLIGHT CREW ORIENTATION GUIDE

2026



This guide has been developed to provide you with basic information regarding our aviation program & fire operations in MN.

The MN Dept. of Natural Resources is a member of the MN Incident Command System (MNICS) and the MN Coordination Center (MNCC). We partner with the USFS, BIA, NPS, USFWS, MN Dept. of Public Safety, Division of Homeland Security & Emergency Management, and State Fire Dept. Associations to provide management of wildfire and all risk incidents. The MN Interagency Fire Center (MIFC) is home to MNICS staff and the Northeast Interagency Fire Cache (NEK). MIFC serves as a hub for mobilization of wildfire & emergency resources among many other interagency services. Co-located at MIFC is the Minnesota Interagency Coordination center (MNCC) which houses initial attack dispatch, aviation dispatch, logistics, and intel. The MNCC Aviation Desk dispatches & flight follows all Air Attack platforms, fixed wing aircraft, & all nationally contracted Federal aviation resources. Helicopters are flight followed at Tanker Bases. All DNR ground resources except for the Two Harbors Area are dispatched through their local Area dispatch. USFS ground resources are dispatched from MIFC by Forest Service Dispatch. DOI resources are dispatched through local dispatch as well. Both Federal and State aviation and ground resources will respond to incidents on each other's protection areas as requested.

Policy & Procedure

DNR Forestry has incorporated most language in the *National Standards for Helicopter Operations* (NSHO) & *Fixed Wing Air Operations Guide* into their policies & procedures. The MN DNR Forestry *Aircraft Operations Policy & Standard Operating Procedures Manual*, in conjunction with Operational Order #42 is the policy manual for all helicopter operations within the DNR system. If Interagency partners are providing assistance, their specific Agency policies are to be followed. In these cases, the NSHO, USFS 5700 manual & OAS 9400 should be followed.

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AVIATION CONTACTS

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Cell: 218-403-0823

Email: Matthew.Woodwick@state.mn.us

Rob Johnson – Helicopter Operations Specialist

Office: 218-322-2723

Cell: 218-244-4026

Email: Robert.A.Johnson@state.mn.us

Kirk Johnson – Fixed Wing Operations Specialist

Office: 218-322-2728

Cell: 218-966-9969

Email: Kirk.M.Johnson@state.mn.us

Mike McLaughlin – Aviation Support

Office: 218-322-2725

Cell: 218-398-2726

Email: Mike.Mclaughlin@state.mn.us

MNCC Air Desk - Aviation Dispatch

Office: 218-327-4582

mnmncc_aviation@firenet.gov

MN Interagency Fire Center (MIFC) / MN Coordination Center (MNCC)

General: 218-327-4436

Dispatch: 218-327-4558

402 SE 11th Street Grand Rapids

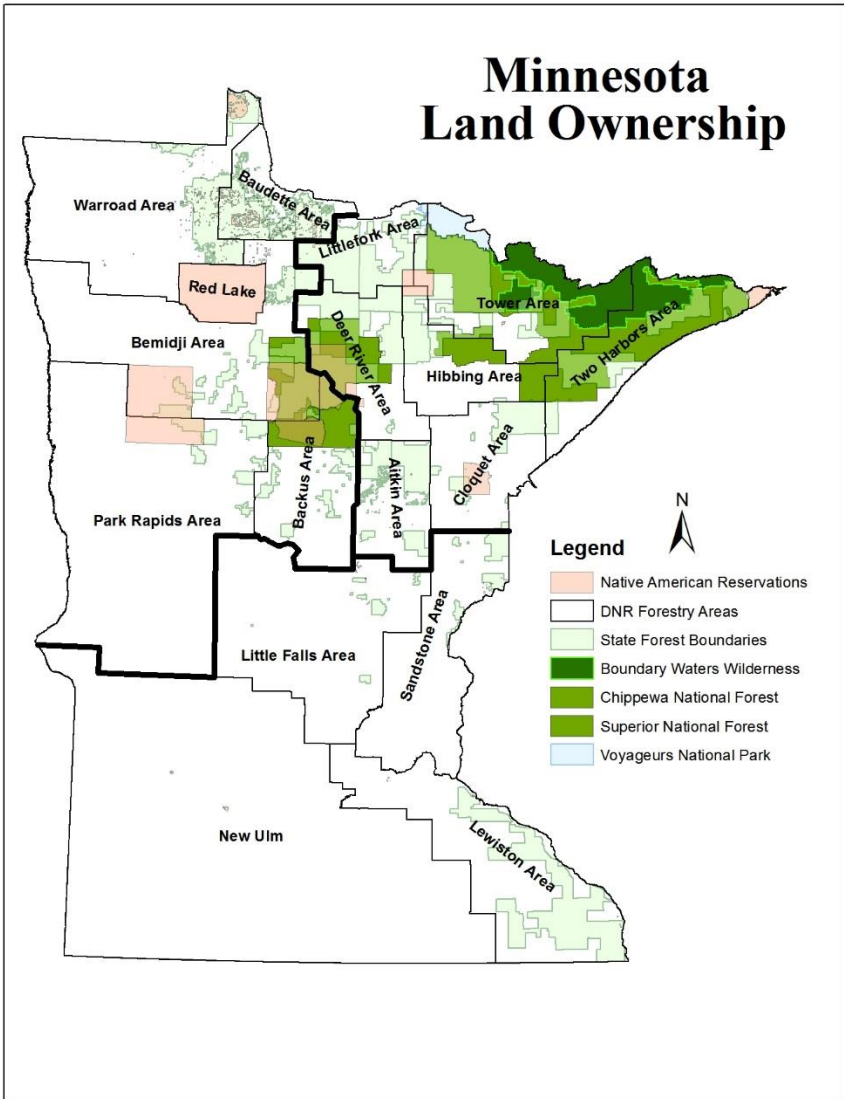
Joe Theisen – Radio Technician

Office: 218-322-2696

Joseph.Theisen@state.mn.us

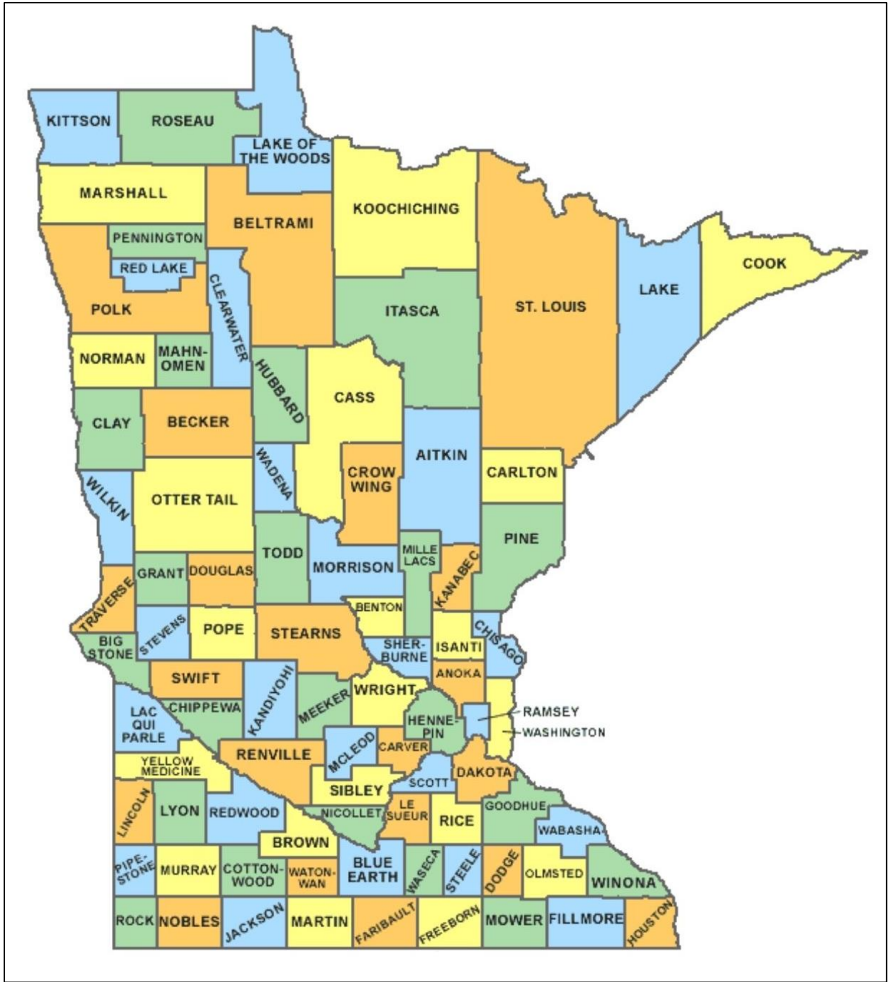
*All Tanker Base and Helibase phone numbers are listed in the Helibuddy.

Minnesota Land Ownership



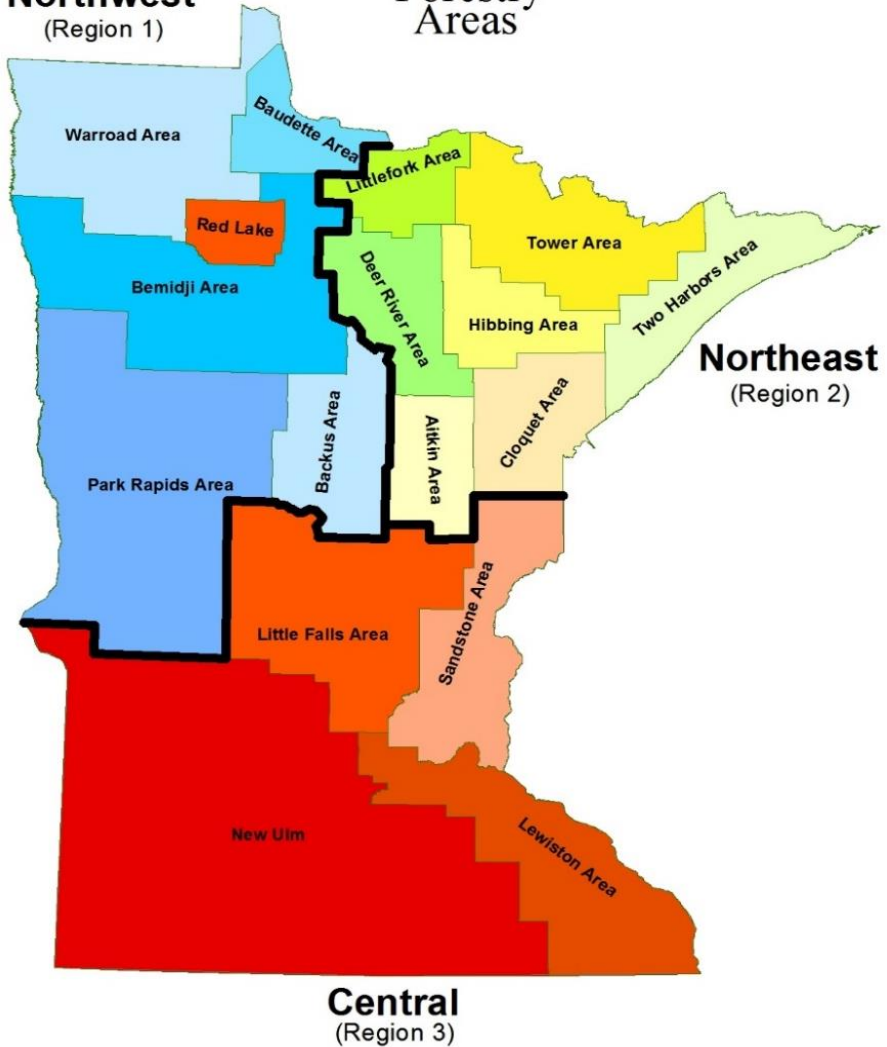
**Both Federal and State aviation and ground resources will respond to incidents on each other's protection areas as requested.*

Minnesota Counties



MN DNR Forestry Areas

Northwest
(Region 1)



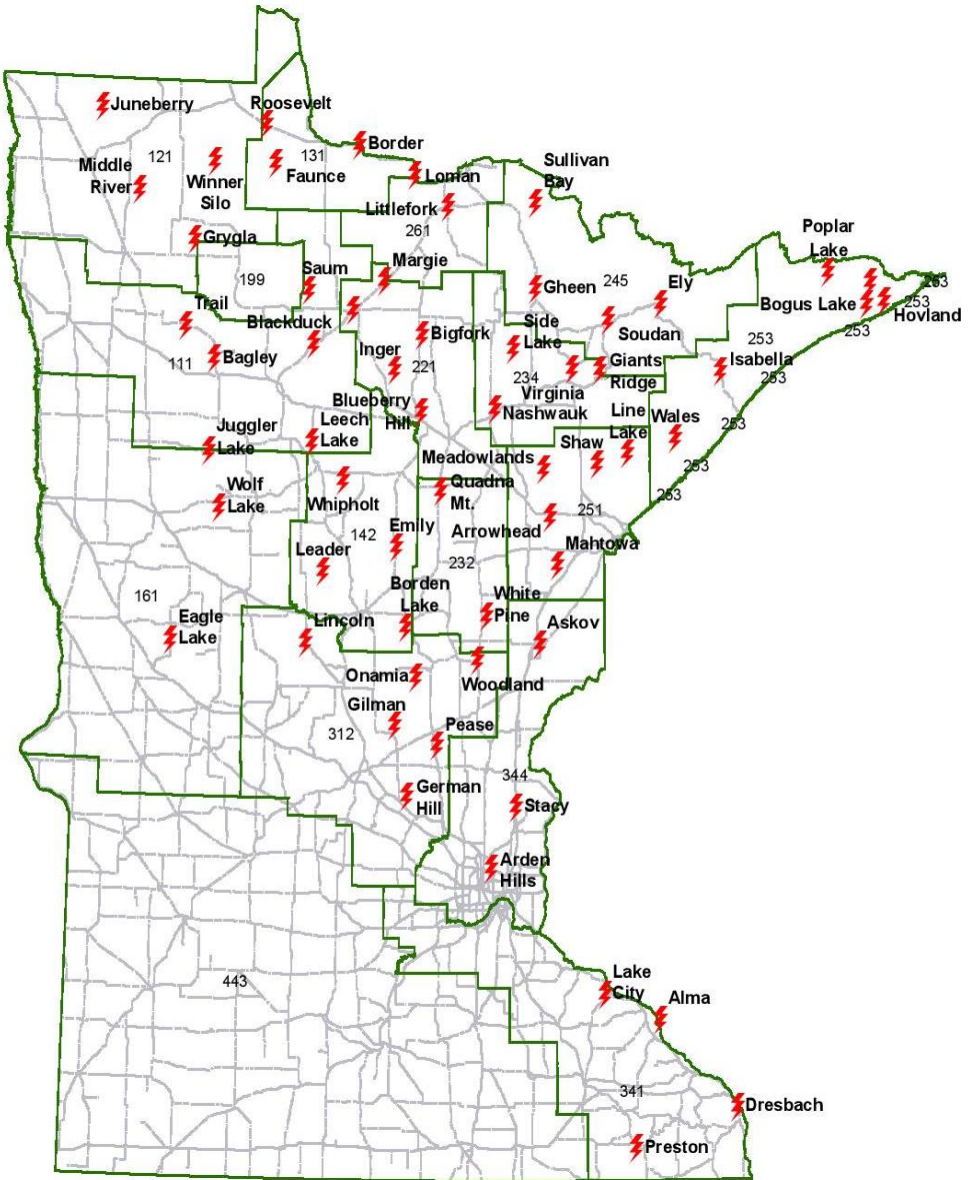
Northeast
(Region 2)

Central
(Region 3)

Each Area has multiple offices/field stations within the Area. You may be in contact or working with field station personnel but still operate under the Area office.

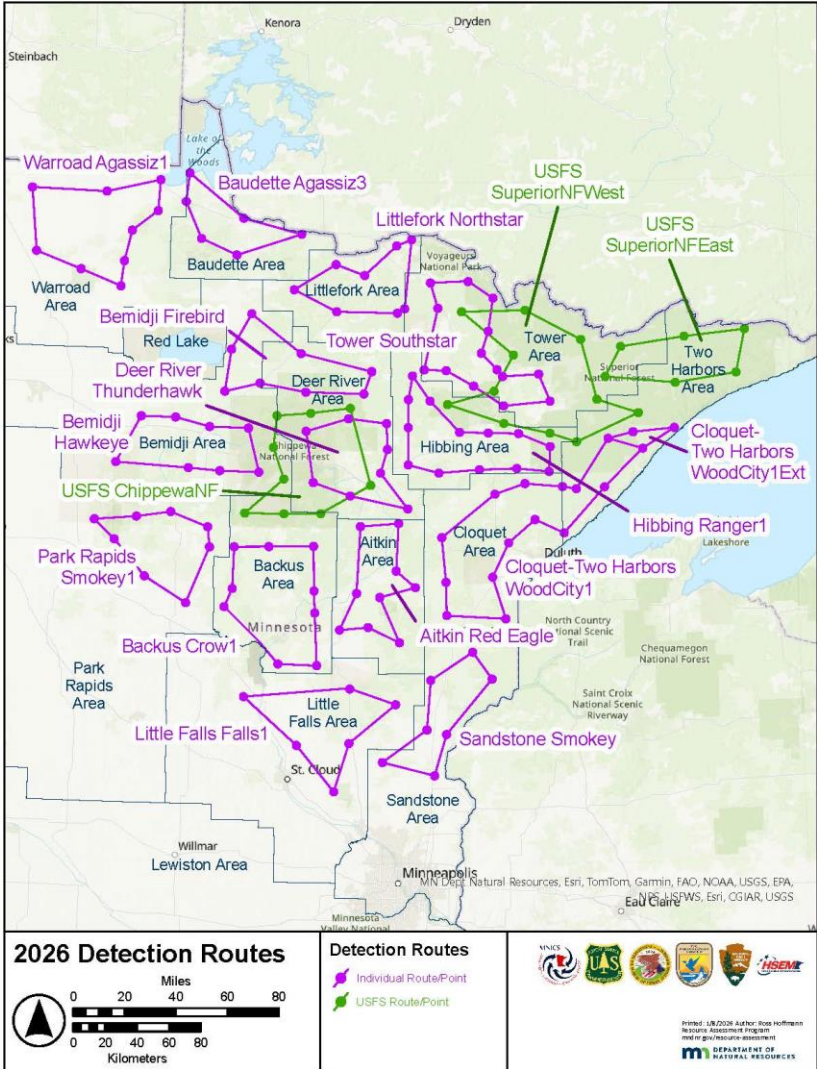
*Red Lake is not a DNR area or field station; it is a BIA Agency. Red Lake utilizes their own helicopter & Single Engine Scooper; however, DNR resources may be requested to assist.

MN DNR Repeaters



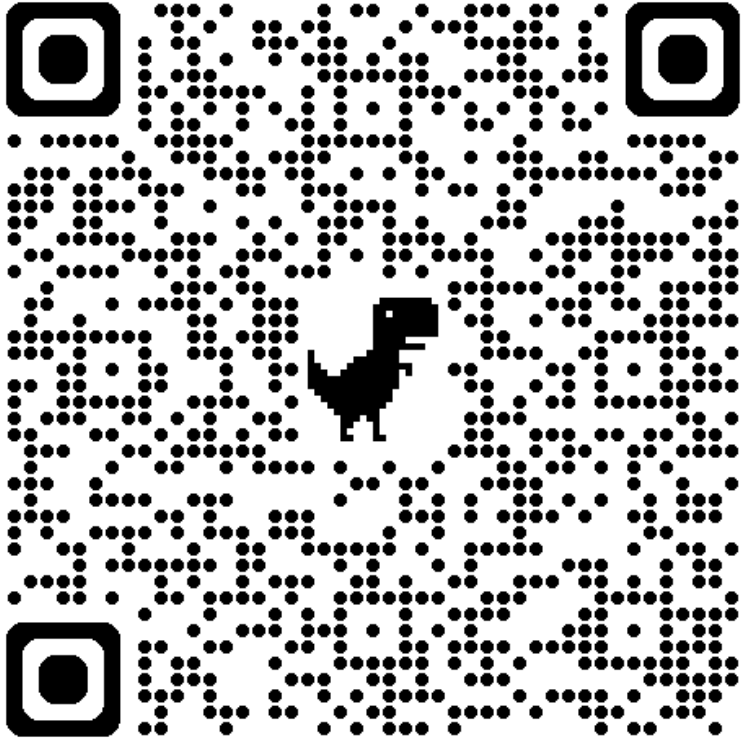
All repeater's frequencies are shown by DNR Area beginning on pg. 12.
*See the Helibuddy for VHF-FM aircraft Flight Following frequencies.

Detection Routes



MN Map QR Code

We have developed maps for use with Avenza and Foreflight. These maps include legal and jurisdictional information along with infested and special concern waters. Aerial hazard maps are also available.



Maps can also be accessed by visiting MNICS.org and searching for “iPad Maps.”

Operations

Aircraft primarily used in the state are Type III helicopters, SEATS, & water scooping fixed wing aircraft such as the Single Engine Scooper, CL-415s, & DeHavilland Beavers. The DNR has 6 Exclusive Use helibases & 3 to 5 primary Tanker Bases along with multiple CWN bases for both rotor wing & fixed wing aircraft. The USFS has an Exclusive Use helibase & CWN Tanker Base located in Ely. BIA aviation resources include an Exclusive Use helicopter, SEAT, & SES which are housed at the Bemidji Tanker Base with DNR aviation assets.

The elevation here is between 900' to 2,300' MSL with average temps of 50° - 80° F. Fire season progresses from the southern part of the state to the north beginning in the latter part of March through late May into early June. Summer seasons are possible but more typically MN will experience a fall fire season.

Tactical operations for DNR aircraft are daytime only – defined as ½ hour before sunrise to ½ hour after sunset. Please see the helicopter contract “Operations” section for additional information.

*Operating periods may be reduced during the Fall fire season as deemed necessary by the HOS & WAS.

Personnel Expectations

- If you are staying in a hotel, **you must take your belongings with you each day**. MN helitack personnel are a statewide resource and there is no guarantee you will be back to the same location each night.
- All time should be recorded on a CTR, signed & transferred to an electronic OF-288 (Red Dog) & submitted to the HOS for signature prior to your demobilization.
- Adhere to all 2:1 work/rest guidelines.
- Briefing will be attended each morning & personnel will participate in an AAR after each incident.
- Please return all equipment you have been issued at the end of your assignment or when changing base locations.
- Please be professional and courteous as you represent not only your home agency but also our aviation program.

Helitack Crew Configuration

The normal configuration of the crew for initial attack is the HMGB, two HECMs, two bladder bags, line gear, combi tool, and the Bambi bucket. If your helicopter's allowable weight is sufficient a third bladder bag can be utilized in place of the HMGB's combi tool. During the summer months, or in the extreme NE portion of the state, a chain saw may be carried in addition or in place of a bladder bag.

Each crewmember should have an overnight/three-day bag in the fuel truck so that if the fire they are dispatched to turns into a project fire, or they are mobilized to a different location in the state, they are prepared for an extended attack assignment.

Dispatch Expectations

The helicopter is dispatched by telephone call from the requesting Forestry Area or partner agency to the MNCC Aviation Desk. MNCC will complete a Tactical Aircraft Resource Order (TARO) form and email to the Tanker Base and HMGB. A follow up phone call will be made to the Tanker Base and HMGB to confirm the delivery of the TARO. Resources are not to launch until the phone call has been received & TARO info verified. The closet resource concept is utilized for dispatching all resources.

Prior to take off, the HMGB will complete flight planning with the pilot, check Hazard and Invasive Species maps, & provide direction to the fuel truck driver which should include fire location, route to fire, if/when to depart, radio frequencies, and a contingency plan. The HMGB can request additional information to be relayed to the fuel truck via phone through dispatch if necessary.

The helicopter should be airborne within 10 minutes of receiving a dispatch.

*The exception to this would be for a long-range dispatch where additional fuel would be needed & the aircraft possibly reconfigured to send a HECM in a chase rig.

Flight Following

Helicopters located at Tanker Bases will make an initial “ready to lift” call to the Tanker Base on the AM Ramp freq. For helicopters not located at a Tanker Base an initial “ready to lift” call will be made on the 800MHz to the assigned dispatching Tanker Base.

Once the helicopter is airborne, the HMGB begins Flight Following (FF) on the VHF-FM by calling their designated Tanker Base with the status, souls on board, ETE to the fire & establishes positive AFF using the appropriate Fire Air Net frequency. Air Net digital frequencies are primary with the analog frequencies built in for redundancy. Always announce if you are using a digital or analog frequency. Refer to the Helibuddy for frequency map & complete list of frequencies. If operating within 40nm of the assigned Tanker Base FF can remain on the “MIFC Simplex” frequency

AFF is utilized for Flight Following. If AFF is not established, 15-minute status and location checks must be utilized. Once flight following is established a courtesy call may be given to the requesting Forestry Area or Agency on their local freq. This call is to inform them of time until arrival, verify any known hazards, detection aircraft on scene, additional aircraft ordered, & operational frequencies.

Once you have arrived at the fire and contact has been established with the IC the HMGB will sign off with dispatch and establish flight following on scene for the duration of the fire. Upon release the HMGB will re-initiate flight following with the assigned Tanker Base that the flight originated with and close out with the incident.

*The primary function of the 800MHz for an HMGB is for the initial lift call from a remote helibase and to communicate with Fire Department and County Sherriff personnel on a fire. The MNCC Air Desk, “Fire Center,” also monitors the 800MHz radio, FRST A/G. This may be utilized as a back-up freq. if necessary.

Standard Operational Frequencies

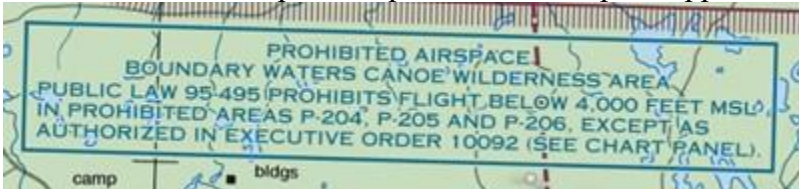
Air to Ground:	Rx	Tone	Tx	Tone	N/D
DNR Primary – A/G1	151.3400	110.9	151.340	110.9	N
DNR Secondary – A/G2	159.3000	110.9	159.300	110.9	N
Interagency - A/G3	166.6125	--	--	--	N
Interagency – A/G72	167.9500	--	--	--	N
USFS – A/G 51	168.3125	--	--	--	
USFS – A/G 19	169.1500	--	169.1500	--	N
Tac Channels:	Rx	Tone	Tx	Tone	N/D
DNR Primary – Tac 1	151.475	156.7	151.475	156.7	N
Interagency – MNICS Tac 2	170.475	---	170.475	--	N

Minnesota Airspace



Camp Ripley is a military installation in central MN with Restricted airspace. It does have a tower, but it is not always manned. Do not enter unless cleared by Miller Tower on 126.2.

The Boundary Waters Canoe Area is a designated wilderness within the Superior National Forest in NE MN. You may not descend below 4,000' MSL without prior approval. A TARO associated with a dispatch request constitutes prior approval.



Minnesota is home to two Military Operations Areas (MOAs): Beaver & Snoopy West, as well as multiple Military Training Routes (MTRs).

Several mining operations in NE MN blast on a regular basis. A TFR will be issued during blasting operations.

***Each day the MNCC Air Desk will email an Aircraft Status Report. The report will include all staffing assignments with contact info for the day, as well as any active TFRs, planned UAS activity, and known MOA/MTR use. ***

HMGB Tips & Reminders

- All pay documents, SAFECOM forms, etc. can be found on the Aviation jump drive or the assigned helibase computer.
- Each night a copy of the Daily Diary is submitted via email to the Air Desk: mnmncc_aviation@firenet.gov.
- At the end of the 6-day pay period all Daily Diaries and the Aircraft Use form is submitted via email to your helibase's manager.
- SAFECOMs are submitted to HOS Rob Johnson within 24 hours. Contact info listed on page 4 of this document.
- Conference calls are held Tuesdays/Thursdays at 1100. Phone numbers are found on page 5 of the helibuddy. Be prepared to report on the number of fires, fire behavior, flight time, or any issues/needs since the last call.



KNG P-150 Radios

KNG Programming

- To change or enter a frequency:

_ Menu – Keypad Prog. – ID: 000000 – Keypad – Channel – Edit
Chan

_ Select the Channel you want to edit within a zone.

_ Enter/Edit Channel as necessary

* Alpha/numerics are changed with keypad (like a cell phone)

_ Press ENT after each edit to save changes

KNG Cloning

-KNG-KNG

_ Destination Radio: Menu – Cloning – Dest. Clone

_ Source Radio: Menu – Cloning – Active Zone

-KNG to Legacy

_ Set Radios to desired Zone or Group

_ KNG: Menu – Cloning – Active Zone

-Legacy to KNG

_ Set radios to desired Zone or Group

_ KNG: Menu – Cloning – Destination Zone

_ Legacy: Enter Programing mode – Star – FCN

Northwest - Region 1

Warroad Area

Warroad Office: 218-386-1304 / 804 Cherne Drive NW

Area Fire Dispatch: 218-425-3121

*Dispatch located in Wannaska field station: 16945 Hwy. 89 Wannaska

*EU helibase at Roseau airport (KROX): 31072 – 420th Ave. Roseau

*CWN Seat base/helibase at Warroad airport (KRRT): 36955 Cty Rd 13 Warroad

*CWN helibase location at: Grygla airport (3G2): 335 S. 6th Ave. Grygla

Baudette Area

Area Office: 218-395-6039 / 206 Main St. E

Area Fire Dispatch: 218-395-6039

Bemidji Area

Area Office: 218-308-2065 / 2220 Bemidji Ave. North

Area Dispatch: 218-308-2072

Bemidji Tanker Base/EU Helibase (KBII): 218-210-7540

4125 Hangar Drive NW Bemidji

Park Rapids Area

Area Office: 218-732-3309 / 607 1st Street W.

Area Dispatch: 218-732-3309

*CWN helibase located at Park Rapids airport (KPKD): 301 Airport Rd. Park Rapids

Backus Area

Area Office: 218-947-8600 / 4391 Hwy. 87 NW

Area Dispatch: 218-203-4422 Located in the Brainerd Office / 1601 MN Drive

Brainerd Tanker Base/EU Helibase (KBRD): 218-316-3820

12834 Hwy. 210 E. Brainerd

Northeast – Region 2

Aitkin Area

Aitkin Office: 218-429-3011 / 1200 MN Ave. S

Area Fire Dispatch: 218-429-3029

Cloquet Area

Cloquet Office: 218-878-5640 / 305 E Business Park Dr.

Area Fire Dispatch: 218-878-5649

Hibbing Area

Hibbing Office: 218-231-8022 / 1208 E Howard St.

Area Fire Dispatch: 218-735-3958

*Dispatch is located in the Eveleth Field Station: 7979 Hwy. 37 Eveleth

Hibbing Tanker Base/EU Helibase (KHIB): 218-231-8050

10956 Hwy. 37 Hibbing

Deer River Area

Deer River Office: 218-212-2001 / 403 Division Street

Area Fire Dispatch: 218-328-8903

*Dispatch is located at the Grand Rapids field station: 1201 E Hwy. 2 Grand Rapids

*CWN Helibase located at the Grand Rapids Airport (GPZ): 1700 SE 7th Ave. Grand Rapids

Tower Area

Tower Office: 218-753-4517 / 650 Hwy. 169 Tower

Area Fire Dispatch: 218-300-7825

*CWN Helibase located at the Orr Airport (KORB): 11014 Nett Lake Rd. Orr

Littlefork Area

Littlefork Office: 218-888-9050 / 421 3RD Ave.

Area Fire Dispatch: 218-888-9050

Two Harbors Area

Two Harbors Office: 218-834-1420 / 1568 Hwy. 2

Area Fire Dispatch: 218-834-1418

*CWN helibase locations include:

Grand Marais airport (KCKC): 123 Airport Rd. Grand Marais

Two Harbors airport (KTWM): 608 Airport Rd. Two Harbors

Central – Region 3

Little Falls Area

Area Office: 320-232-1061 / 16543 Haven Road

Area Dispatch: 320-232-1083

Sandstone Area

Area Office: 320-245-6789 / 613 Hwy. 23 S

Sandstone Dispatch: 320-216-7557

Cambridge Field Station: 763-284-7201

Cambridge Dispatch: 763-284-7208

*Dispatch located at Cambridge Field Station 800 Oak Savanna Lane,
Cambridge

*EU helibase/CWN SEAT base located at Cambridge Municipal Airport (KCBG):
3125 Airport Ave N

*EU helibase located at General Andrews Tree Nursery: 85894 Cty Hwy 61 in
Willow River

*CWN helibase located at Anoka County-Blaine airport (KANE): 8891 Airport
Rd. Blaine, MN

Lewiston Area

Area Office: 507-522-5060 / 140 N Fremont St.

USFS – Chippewa & Superior Natl. Forests

Dispatch: 218-327-4175

*Dispatch is located in MIFC – 402 SE 11th St. Grand Rapids

Forest Aviation Officer: Blake Freking 218-343-9146

Ely Tanker Base/Helibase: 218-365-4831

Tankerbase/helibase at Ely Municipal airport (KELO): 1583 MN 1 Ely

Ely Seaplane Base: 218-365-7565

Seaplane base is located on Shagawa Lake: 1901 W Shagawa Rd. Ely

Superior - West Zone VHF-FM Freqs.

SUF NET	Superior National Forest	170.5250	0.0	170.5250	0.0	N
FERNBRG*	Superior NF Fernberg Repeater	170.5250	0.0	164.1375	100.0	N
ISABELA*	Superior NF Isabella Repeater	170.5250	0.0	164.1375	136.5	N
WEBER*	Superior NF Mt. Weber Repeater	170.5250	0.0	164.1375	141.3	N
WALES*	Superior NF Wales Repeater	170.5250	0.0	164.1375	114.8	N
LOOKOUT*	Superior NF Lookout Repeater	170.5250	0.0	164.1375	151.4	N
IDINGTN*	Superior NF Idington Repeater	170.5250	0.0	164.1375	146.2	N
CHISHLM*	Superior NF Chisholm Repeater	170.5250	0.0	164.1375	156.7	N
ELEPH LK*	Superior NF Elephant Lake Repeater	170.5250	0.0	164.1375	167.9	N
BUYCK*	Superior NF Buyck Repeater	170.5250	0.0	164.1375	123.0	N
MEANDER*	Superior NF Meander Repeater	170.5250	0.0	164.1375	127.3	N
SUF TAC1	Superior NF Tactical 1	169.1250	0.0	169.1250	0.0	N
R-9 FIRE	USFS Region 9 Fire Tactical	166.5625	0.0	166.5625	0.0	N
A/G 19	Chippewa/Superior NF Air/Ground Tac	168.1250	0.0	168.1250	0.0	N

Superior – East Zone VHF-FM Freqs.

SUF NET	Superior National Forest	170.5250	0.0	170.5250	0.0	N
FERNBRG*	Superior NF Fernberg Repeater	170.5250	0.0	164.1375	100.0	N
ISABELA*	Superior NF Isabella Repeater	170.5250	0.0	164.1375	136.5	N
HONYMON*	Superior NF Honeymoon Repeater	170.5250	0.0	164.1375	103.5	N
MIDTRL*	Superior NF Midtrail Repeater	170.5250	0.0	164.1375	107.2	N
GUNFLNT*	Superior NF Gunflint Repeater	170.5250	0.0	164.1375	110.9	N
DEVILS*	Superior NF Devil's Fish Repeater	170.5250	0.0	164.1375	131.8	N
SUF TAC1	Superior NF Tactical 1	169.1250	0.0	169.1250	0.0	N
R-9 FIRE	USFS Region 9 Fire Tactical	166.5625	0.0	166.5625	0.0	N
A/G 19	Chippewa/Superior NF Air/Ground Tac	168.1250	0.0	168.1250	0.0	N
COM USE1	Common Use 1	168.6125	0.0	168.6125	0.0	N
COM USE2	Common Use 2	163.7125	0.0	163.7125	0.0	N
NWS GM	National Weather Service - Grand Marais	162.4500	0.0	0.0000	0.0	W
R-9 FIRE	USFS Region 9 Fire	166.5625	0.0	166.5625	0.0	N
V-Fire23	Fire Mutual Aid - Local Fire Departments	154.2950	156.7	154.2950	156.7	N

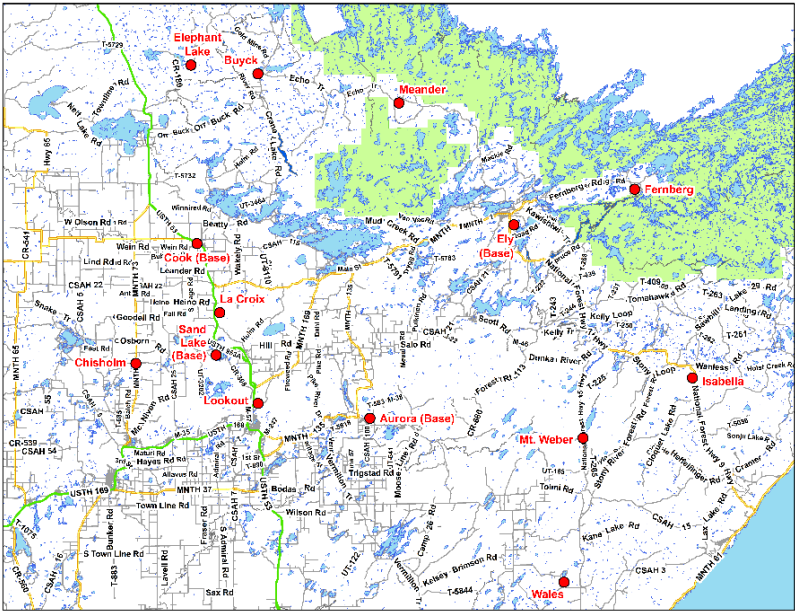
Chippewa – VHF-FM Freqs.

CPF NET	Chippewa National Forest	173.7750	0.0	173.7750	0.0	N
CPF NO*	Chippewa NF North Repeater	173.7750	0.0	164.1250	110.9	N
CPF EA*	Chippewa NF East Repeater	173.7750	0.0	164.1250	127.3	N
CPF SO*	Chippewa NF South Repeater	173.7750	0.0	164.1250	103.5	N
CPF TAC1	Chippewa NF Tactical 1	171.5500	0.0	171.5500	0.0	N
R-9 FIRE	USFS Region 9 Fire Tactical	166.5625	0.0	166.5625	0.0	N
A/G 19	Chippewa/Superior NF Air/Ground Tac	168.1250	0.0	168.1250	0.0	N
COM USE1	Common Use 1	168.6125	0.0	168.6125	0.0	N
COM USE2	Common Use 2	163.7125	0.0	163.7125	0.0	N

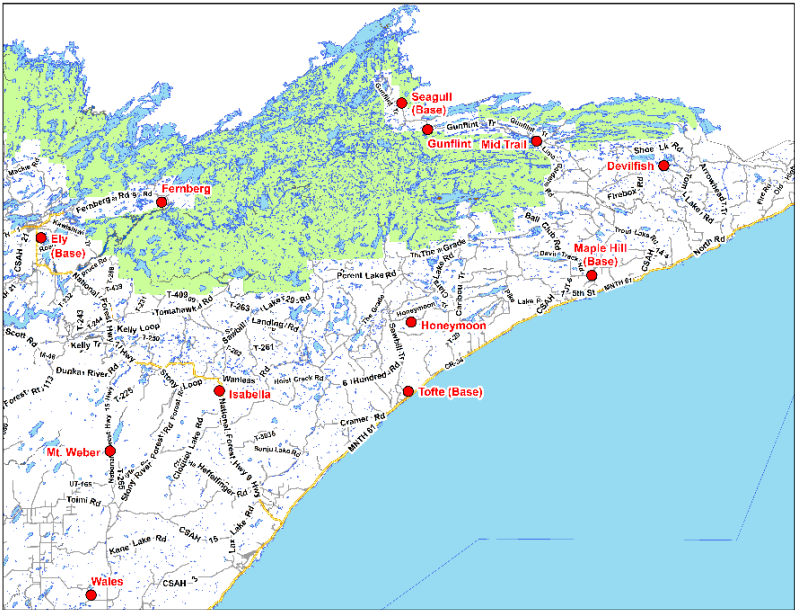
USFS Repeater Map

Repeater locations for the Superior National Forest.

SUF West



SUF East



Fuels & Fire Behavior

Fires in MN are predominately wind driven, fast moving fires through flashy fuels. Fuel models vary from lowland/upland grass & peat to mature hardwood & pine stands. It is common to have fire in or near an urban interface setting with multiple Agencies & Fire Departments responding.

The DNR utilizes the Canadian Indices Matrix system for daily fire weather predictions. Information on the Canadian Indices & how to read the numbered matrix system can be found in the Helibuddy or on the Cotton bookmarks web page. Web page information can be found on pg.27.

PEAT FIRE SUPPRESSION/MOP-UP

What is peat?

Peat is a brownish-black organic soil made up of partially decomposed, loosely compacted plant matter. Most peat soils also contain a great deal of woody & rooted material. Initial Attack must be done aggressively to limit the surface area of burning peat & to prevent deep burning. Peat fires only get worse over time without aggressive suppression action. They can burn all winter. There are several categories of peat lands:

- Forested peat land - most of these bogs are covered with a stunted forest of black spruce & occasionally tamarack.
- Open bog or swamp peat land -these areas are dominated by a lawn of sedges. Woody plants are found in small, scattered islands.
- Brush peat land – predominately willow & alder brush

Things to Consider when Suppressing Peat Fires

- Values at risk (farmlands, wetlands, homes)
- Trees may have all supporting roots burned away, watch out for falling trees!
- Peat fires are very costly to extinguish
- Peat fires will burn underground, under the snow, through the winter
- Smoke can be a health hazard for people with respiratory problems
- Dense smoke can cause problems with visibility on highways
- Suppression can tie up resources for a long time

What To Do - Peat fires tend to be extended attack incidents. Dig down into peat to determine if there is any available moisture. It is best to apply water directly using a straight stream and stir burning peat to extinguish it.

Depending on the amount of burning peat flooding of the area may be necessary.



Common Equipment Used in MN

Bombadier J- 5

- 110 gal. water capacity
- 1.8 psi
- Top speed 22mph
- 2 styles – single operator or side by side



Bombardier Muskeg

- 350 gal. water capacity
- 2.9 psi
- Top speed 6.5 mph



Alltrack AT-50

- 500 gal. water capacity
- 3.4 psi
- Top speed 14 mph



Marshmaster

- 110 gal. water capacity
- Operates on land or in water
- Top speed on land – 8 mph
- Top speed on water – 2 mph



CL- 415

- Water scooping aircraft
- 1,600 gal. water capacity
- Can provide foam for up to 40 loads



Fire Boss / Single Engine Scooper

- Water scooping aircraft
- 800 gal. water capacity
- Can utilize foam & gel, self-sufficient for up to 20 loads, must be ground loaded for retardant



Invasive Species

Please help us protect our resources by minimizing the spread of invasive Species (I.S.). Info on invasive species can be found in the Helibuddy & the “Infested Waters & Water of Special Concern Plan.” This plan is available in the helibase plan or on the aviation thumb drive. All hazard maps & GPS document the known location of I.S. in our waterways. Each helicopter fuel truck should be equipped with a spare bucket - if not please contact Mike McLaughlin to see if a spare bucket is available. If you have picked out of a plant infested area, please allow the bucket to dry & then “pick” it clean before returning to service. If you have used an animal infested waterway the bucket must be pressure washed with hot before returning to service. **NEVER cross contaminate!**

Pay attention to vehicle & foot travel, if you identify I.S. please take the appropriate measures to prevent further spreading of them.



Spotted knapweed



Eurasian water-milfoil



Common tansy

DETERMINING WHETHER TO UTILIZE INFESTED WATERS OR NOT

Things to consider:

-If I don't use this water, is loss of life or property likely?

If yes, use the infested lake.

If no, do not use the infested lake.

-Is there a non-infested lake within a reasonable distance?

-Can I contain the fire using a farther, non-infested source?

If yes, do not use the infested water.

If no, use the infested water.

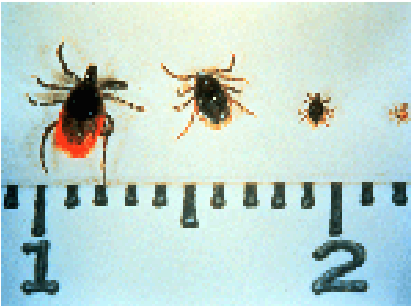
***If infested water was used and you are requested to another fire, utilize the second bucket, or ask dispatch/ATGS for guidance.**

SAFETY INFORMATION

Parasites: Giardia & other parasites can be found in most lakes and streams. Be careful to avoid using unfiltered water when filling canteens, washing dishes & swimming. To treat water, use approved water filters, add iodine or boil water for 5-7 minutes.

Poison Ivy: Poison ivy can be found throughout the State. The poison is absorbed by the skin almost immediately, although symptoms may not appear for 12 to 24 hours. Washing the exposed skin with soap & cold water can remove residual poison & prevent it from being spread. Treat affected skin with calamine.

Ticks: Both deer & wood ticks are found in MN. **MN has a high occurrence of Lyme disease.** Check your body frequently, wear repellent, stop periodically to check your clothing & body, upon returning to your workstation perform a head-to-toe tick check. It is recommended to place field clothing in the dryer for at least 1hr before washing to kill any ticks. Finally shower & check head-to-toe again at the end of the day. If you find a tick attached, identify the type & remove it. To safely remove an embedded tick grasp the tick close to the skin with a pair of tweezers. Pull the tick outward slowly, gently, & steadily. Don't squeeze the tick. Cover the bite area with an antiseptic. If a red target-shaped rash appears around the bite, seek medical attention immediately.



(Scale is in cm)

The tick on the left is an adult female blacklegged tick, which is red & dark brown. To her right is an adult male blacklegged tick, which is smaller and dark in color. A nymph blacklegged tick is the second from the right, & a blacklegged tick larva is to the far right.

Adult females & nymphs can transmit infections through their bite.

Bees & Hornets: If stung by a bee or hornet, remove the stinger by scraping, do not squeeze. If swelling occurs, treat with calamine, baking soda or mud. Keep victim calm & be alert for signs of anaphylactic shock, including nausea, severe swelling & closing of airways. If any symptoms occur, seek immediate medical attention.

Hypothermia: Hypothermia is common even during the summer months. Take caution in & around the water on cold or windy days. Get victims out of wet clothes & into dry, warm clothing or sleeping bags.

Dehydration: Drink plenty of water throughout the day.

Sunburn: Use sunscreen. The temperature may not feel warm, but the rays are intense. Especially be aware of sun reflecting off water.

Canoe Safety

Portages: Watch your footing & balance. Don't carry more than you can handle safely.

Paddle hazards: Do Not Run Rapids. It looks easy, but it's dangerous. Know your limits when paddling on windy days. It's better to be wind bound than drowned.

Slippery rocks: Sounds simple but can be treacherous. Watch footing, especially when loading/unloading at boat landings and on ledge rock.

***Water/lakes are NOT to be utilized as a Safety or Deployment Zones!!**

Forestry VHF Zones & Frequencies

Group - 3		Warroad Area										
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC		
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----		
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----		
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----		
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----		
5	Marshall FD	----	MARSHALL FD	154.2050	114.8	----		154.2050	114.8	----		
6	Roseau FD	----	ROSEAU FD	154.3550	114.8	----		154.3550	114.8	----		
7	Warroad	----	WARROAD	151.3850	----	4F9	1273	151.3850	----	4F9		
8	Warroad	MIDDLE RIVER*	MIDDLE RIVER*	151.3850	----	4F9	1273	159.4350	----	31D		
9	Warroad	GRYGLA *	GRYGLA *	151.3850	----	4F9	1273	159.4350	----	61F		
10	Warroad	WINNER SILO *	WINNER SILO *	151.3850	----	4F9	1273	159.4350	----	4A4		
11	Warroad	LUDE *	LUDE *	151.3850	----	4F9	1273	159.4350	----	40B		
12	Warroad	JUNEBERRY *	JUNEBERRY *	151.3850	----	4F9	1273	159.4350	----	586		
13	Warroad	STRANDQUIST *	STRANDQUIST *	151.3850	----	4F9	1273	159.4350	----	526		
14	BIA - RED LK	Red Lake *	RED LAKE *	166.2750	----	----		159.4125	114.8	----		
15	Red Lake Smplx	----	RED LK SIMPLEX	166.2750	114.8	47C	1148	166.2750	114.8	----		
16	USFWS	----	USFWS	171.7500	----	----		171.7500	127.3	----		
17	BIA - RED LK S	Red Lake South *	RED LAKE S *	166.2750	114.8	47C	1148	172.4250	114.8	----		

Group - 4		Baudette Area										
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC		
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----		
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----		
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----		
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----		
5	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----		
6	V-MED 28	----	V-MED 28	155.3400	156.7	----		155.3400	156.7	----		
7	Birchdale FD	----	BIRCH FD	154.2200	114.8	----		154.2200	114.8	----		
8	LOW/Law	----	LOW/LAW	155.7000	114.8	----		155.7000	114.8	----		
9	Littlefork	LT-FORK *	LT-FORK *	151.1750	----	4F9	1273	159.4650	----	4F9		
10	Littlefork	LOMAN *	LOMAN *	151.1750	----	4F9	1273	159.4650	----	455		
11	Bemidji	SAUM *	SAUM *	151.2650	----	555	1365	159.2700	----	5EA		
12	Warroad	LUDE *	LUDE *	151.3850	----	4F9	1273	159.4350	----	40B		
13	Baudette	BORDER *	BORDER *	151.3250	----	4F9	1273	159.3150	----	339		
14	Baudette	FAUNCE *	FAUNCE *	151.3250	----	4F9	1273	159.3150	----	586		
15	Baudette	----	BAUDETTE	151.3250	----	4F9	1273	151.3250	----	4F9		
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----		

Group - 5		Bemidji Area										
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC		
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----		
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----		
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----		
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----		
5	Bemidji	----	BEMIDJI	151.2650	----	555	1365	151.2650	----	555		
6	Bemidji	BAGLEY *	BAGLEY *	151.2650	----	555	1365	159.2700	----	555		
7	Bemidji	JUGLER LAKE *	JUGLER LAKE *	151.2650	----	555	1365	159.2700	----	40B		
8	Bemidji	LEECH LAKE *	LEECH LAKE *	151.2650	----	555	1365	159.2700	----	788		
9	Bemidji	TRAIL *	TRAIL *	151.2650	----	555	1365	159.2700	----	586		
10	Bemidji	HINES *	HINES *	151.2650	----	555	1365	159.2700	----	4CE		
11	Bemidji	SAUM *	SAUM *	151.2650	----	555	1365	159.2700	----	5EA		
12	Chip Net	----	CPF NET	173.7750	----	----		173.7750	----	----		
13	BL Fire - Bemidji	----	BL BEMIDJI FD*	155.8200	123.0	----		150.9950	D116	----		
14	BIA SMPLEX	----	BIA SMPLEX	172.4250	----	----		172.4250	----	----		
15	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----		
16	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----		

Group - 6		Park Rapids Area																		
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC				Transmit	Tone	Tx NAC								
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----				151.4750	156.7	----								
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----				151.3400	110.9	----								
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----				170.4750	----	----								
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----				159.3000	110.9	----								
5	Park Rapids	----	PARK RAPIDS	151.3850	----	555	1365			151.3850	----	555								
6	Park Rapids	WOLF LAKE *	WOLF LAKE *	151.3850	----	555	1365			159.4350	----	555								
7	Park Rapids	LEECH LAKE *	LEECH LAKE *	151.3850	----	555	1365			159.4350	----	555								
8	Bemidji	JUGLER LAKE *	JUGLER LAKE *	151.2650	----	555	1365			159.2700	----	555								
9	Park Rapids	EAGLE LAKE *	EAGLE LAKE *	151.3850	----	555	1365			159.4350	----	555								
10	Park Rapids	Floyd Lake *	FLOYD LAKE *	151.3850	----	555	1365			159.4350	----	555								
11	Becker Paging	----	BECKER PAGING	152.0075	----	----				152.0075	----	----								
12	BIA SMPLEX	----	BIA SMPLEX	172.4250	----	----				172.4250	----	----								
13	Bemidji	Bagley*	BAGLEY *	151.2650	----	555	1365			159.2700	----	555								
14	Chip Net	----	CPF NET	173.7750	----	----				173.7750	----	----								
15	V-MED 28	----	V-MED 28	155.3400	156.7	----				155.3400	156.7	----								
16	Airguard	----	AIRGUARD	168.6250	----	----				168.6250	110.9	----								

Group - 7		Backus Area																		
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC				Transmit	Tone	Tx NAC								
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----				151.4750	156.7	----								
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----				151.3400	110.9	----								
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----				170.4750	----	----								
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----				159.3000	110.9	----								
5	Backus	----	BACKUS	151.1750	----	586	1462			151.1750	----	586								
6	Backus	LEADER *	LEADER *	151.1750	----	586	1462			159.4650	----	586								
7	Backus	WHIPHOLT *	WHIPHOLT *	151.1750	----	586	1462			159.4650	----	586								
8	Backus	BORDEN LAKE *	BORDEN LAKE *	151.1750	----	586	1462			159.4650	----	586								
9	Backus	EMILY *	EMILY *	151.1750	----	586	1462			159.4650	----	586								
10	Aitkin	----	AITKIN	151.2650	----	455	1109			151.2650	----	455								
11	Park Rapids	----	PARK RAPIDS	151.3850	----	555	1365			151.3850	----	555								
12	Little Falls	----	LITTLE FALLS	151.4000	----	61F	1567			151.4000	----	61F								
13	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----				151.4150	156.7	----								
14	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----				154.2950	156.7	----								
15	Chippewa	Whipolt	CPF SO*	173.7750	----	----				164.1250	103.5	----								
16	Airguard	----	AIRGUARD	168.6250	----	----				168.6250	110.9	----								

Group - 8		Lt-Fork Area																		
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC				Transmit	Tone	Tx NAC								
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----				151.4750	156.7	----								
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----				151.3400	110.9	----								
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----				170.4750	----	----								
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----				159.3000	110.9	----								
5	Littlefork	----	LT-FORK	151.1750	----	4F9	1273			151.1750	----	4F9								
6	Littlefork	LT-FORK *	LT-FORK *	151.1750	----	4F9	1273			159.4650	----	4F9								
7	Littlefork	MARGIE *	MARGIE *	151.1750	----	4F9	1273			159.4650	----	4F9								
8	Littlefork	LOMAN *	LOMAN *	151.1750	----	4F9	1273			159.4650	----	4F9								
9	Littlefork	RAINY*	RAINY *	151.1750	----	4F9	1273			159.4650	----	4F9								
10	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----				154.2950	156.7	----								
11	DEER RIVER	NORTHOME *	NORTHOME *	151.3850	----	455	1109			159.4350	----	455								
12	Tower	SULLIVAN BAY *	SULLIVAN BAY *	151.2650	----	40B	1035			159.2700	----	40B								
13	Baudette	BORDER *	BORDER *	151.3250	----	4F9	1273			159.3150	----	4F9								
14	KOOCH Safety	----	KOOCH SAFETY	151.3550	----	----				151.3550	----	----								
15	Roadsaft	----	ROAD SAFETY	151.4975	----	----				151.4975	77.0	----								
16	Airguard	----	AIRGUARD	168.6250	----	----				168.6250	110.9	----								

Group - 9		Tower Area																	
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC									
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----									
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----									
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----									
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----									
5	Tower	----	TOWER	151.2650	----	40B	1035	151.2650	----	40B									
6	Tower	ELY *	ELY *	151.2650	----	40B	1035	159.2700	----	61F									
7	Tower	SOUDAN *	SOUDAN *	151.2650	----	40B	1035	159.2700	----	4A4									
8	Tower	SULLIVAN BAY *	SULLIVAN BAY *	151.2650	----	40B	1035	159.2700	----	4F9									
9	Tower	GHEEN *	GHEEN *	151.2650	----	40B	1035	159.2700	----	83B									
10	Tower	GIANTS RIDGE *	GIANTS RIDGE *	151.2650	----	40B	1035	159.2700	----	339									
11	SUF Net - West	----	SUF WDIR	170.5250	----	----		170.5250	----	----									
12	VNP Net Dig	----	VNP-DIG	166.9000	----	100	256	166.9000	----	100									
13	Littlefork	LT-FORK *	LT-FORK *	151.1750	----	4F9	1273	159.4650	----	4F9									
14	Hibbing-Eveleth	SIDE LAKE *	SIDE LAKE *	151.3250	----	40B	1035	159.3150	----	40B									
15	USFS	SUF Tac 1	SUF TAC 1	169.1250	----	----		169.1250	----	----									
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----									

Group-10		Two Harbors Area																	
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC									
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----									
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----									
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----									
4	Two Harbors	----	DNR A/G 2	151.1750	----	40B	1035	151.1750	----	40B									
5	Two Harbors	WALES *	WALES *	151.1750	----	40B	1035	159.4650	----	585									
6	Two Harbors	FINLAND *	FINLAND *	151.1750	----	40B	1035	159.4650	----	430									
7	Two Harbors	ISABELLA *	ISABELLA *	151.1750	----	40B	1035	159.4650	----	555									
8	Two Harbors	LUTSEN *	LUTSEN *	151.1750	----	40B	1035	159.4650	----	3CE									
9	Two Harbors	BOGUS LAKE *	BOGUS LAKE *	151.1750	----	40B	1035	159.4650	----	3B4									
10	Two Harbors	DEVILFISH *	DEVILFISH *	151.1750	----	40B	1035	159.4650	----	4CE									
11	Two Harbors	POPLAR LAKE *	POPLAR LAKE *	151.1750	----	40B	1035	159.4650	----	61F									
12	Two Harbors	HOVELAND *	HOVELAND *	151.1750	----	40B	1035	159.4650	----	47C									
13	Cloquet	LINE LAKE *	LINE LAKE *	154.4300	----	40B	1035	159.3675	----	40B									
14	SUF Net East	----	SUF EDIR	171.5250	----	----		171.5250	----	----									
15	USFS	SUF Tac 1	SUF TAC 1	169.1250	----	----		169.1250	----	----									
16	Lake Co. 911	----	LAKE CO 911	155.7450	----	----		----	----	----									

Group-11		Deer River Area																	
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC									
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----									
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----									
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----									
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----									
5	DEER RIVER	----	DEER RIVER	151.3850	----	455	1109	151.3850	----	455									
6	DEER RIVER	DEER RIVER *	DEER RIVER *	151.3850	----	455	1109	159.4350	----	455									
7	DEER RIVER	BIGFORK *	BIGFORK *	151.3850	----	455	1109	159.4350	----	68F									
8	DEER RIVER	INGER *	INGER *	151.3850	----	455	1109	159.4350	----	585									
9	DEER RIVER	NASHWAWK *	DR-NASHWAWK *	151.3850	----	455	1109	159.4350	----	3E8									
10	DEER RIVER	NORTHOME *	NORTHOME *	151.3850	----	455	1109	159.4350	----	4F9									
11	Aitkin	QUADNA *	QUADNA *	151.2650	----	455	1109	159.2700	----	455									
12	A/G 19	----	A/G 19	168.1250	----	----		168.1250	----	----									
13	Bemidji	HINES *	HINES *	151.2650	----	555	1365	159.2700	----	4CE									
14	Chippewa North	MAX *	CPF NO*	173.7750	----	----		164.1250	110.9	----									
15	Chippewa East	MARCELL *	CPF EA*	173.7750	----	----		164.1250	127.3	----									
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----									

Group-12		Hibbing Area											
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC			
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----			
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----			
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----			
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----			
5	Hibbing-Eveleth	----	HIBBING	151.3250	----	40B	1035	151.3250	----	40B			
6	Hibbing-Eveleth	NASHWAUK *	HIBBING-NASH*	151.3250	----	40B	1035	159.3150	----	555			
7	Hibbing-Eveleth	SIDE LAKE *	SIDE LAKE *	151.3250	----	40B	1035	159.3150	----	40B			
8	Hibbing-Eveleth	VIRGINIA *	VIRGINIA *	151.3250	----	40B	1035	159.3150	----	384			
9	Hibbing-Eveleth	SAX * (was SHAW)	SAX *	151.3250	----	40B	1035	159.3150	----	68F			
10	Hibbing-Eveleth	BRIMSON * (new)	BRIMSON *	151.3250	----	40B	1035	159.3150	----	2E8			
11	SUF Net West	----	SUF WDIR	170.5250	----	----		170.5250	----	----			
12	Tower	----	TOWER	151.2650	----	40B	1035	151.2650	----	40B			
13	Deer River	----	DEER RIVER	151.3850	----	455	1109	151.3850	----	455			
14	Cloquet	----	CLOQUET	154.4300	----	40B	1035	154.4300	----	40B			
15	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----		151.4150	156.7	----			
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----			

Group-13		Aitkin Area											
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC			
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----			
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----			
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----			
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----			
5	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----		151.4150	156.7	----			
6	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----			
7	V-LAW 31	----	V-LAW 31	155.4750	156.7	----		155.4750	156.7	----			
8	V-MED 28	----	V-MED 28	155.3400	156.7	----		155.3400	156.7	----			
9	Roadsft	----	ROAD SAFETY	151.4975	----	----		151.4975	77.0	----			
10	AK F/E	----	AITKIN F/E	154.4450	141.3	----		154.4450	141.3	----			
11	AK INT S	----	AITKIN INT S *	155.0100	141.3	----		156.0300	156.7	----			
12	AK INT N	----	AITKIN INT N *	155.0100	141.3	----		156.0300	141.3	----			
13	Aitkin	QUADNA *	QUADNA *	151.2650	----	455	1109	159.2700	----	455			
14	Aitkin	WHITE PINE *	WHITE PINE *	151.2650	----	455	1109	159.2700	----	68F			
15	Aitkin	----	AITKIN	151.2650	----	455	1109	151.2650	----	455			
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----			

Group-14		Cloquet Area											
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC			
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----			
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----			
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----			
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----			
5	Wisc DNR	WISC RED	WISC RED	151.4300	----	----		151.4300	136.5	----			
6	Two Harbors	----	2 HARBORS	151.1750	----	40B	1035	151.1750	----	40B			
7	Two Harbors	WALEs *	WALEs *	151.1750	----	40B	1035	159.4650	----	585			
8	Hibbing	----	HIBBING	151.3250	----	40B	1035	151.3250	----	40B			
9	Sandstone	ASKOV *	ASKOV *	151.3850	----	586	1462	159.4350	----	384			
10	Cloquet	MAHTOWA *	MAHTOWA *	154.4300	----	40B	1035	159.3675	----	339			
11	Cloquet	DULUTH *	DULUTH *	154.4300	----	40B	1035	159.3675	----	31D			
12	Cloquet	LINE LAKE *	LINE LAKE *	154.4300	----	40B	1035	159.3675	----	40B			
13	Cloquet	SHAW * (actual)	SHAW *	154.4300	----	40B	1035	159.3675	----	430			
14	Cloquet	ELMER *	ELMER *	154.4300	----	40B	1035	159.3675	----	455			
15	Cloquet	ARROWHEAD *	ARROWHEAD *	154.4300	----	40B	1035	159.3675	----	68F			
16	Cloquet	----	----	154.4300	----	40B	1035	154.4300	----	40B			
17	Carlton Co. 911	----	CARLTON 911	154.2500	----	----		----	----	----			
18	S.L.C. 5th 911	----	ST LOUIS CO. 911	155.9550	----	----		----	----	----			

Group-15 Lt-Falls Area										
Channel	Name - Alias	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----
5	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----		151.4150	156.7	----
6	Little Falls	----	LT-FALLS	151.4000	----	61F	1567	151.4000	----	61F
7	Little Falls	LINCOLN *	LINCOLN *	151.4000	----	61F	1567	159.3750	----	5EA
8	Little Falls	ONAMIA *	ONAMIA *	151.4000	----	61F	1567	159.3750	----	788
9	Little Falls	GILMAN *	GILMAN *	151.4000	----	61F	1567	159.3750	----	656
10	Little Falls	WOODLAND *	WOODLAND *	151.4000	----	61F	1567	159.3750	----	455
11	Little Falls	GERMAN HILL *	GERMAN HILL *	151.4000	----	61F	1567	159.3750	----	42E
12	Little Falls	PEASE *	PEASE *	151.4000	----	61F	1567	159.3750	----	526
13	Backus	----	BACKUS	151.1750	----	5B6	1462	151.1750	----	5B6
14	Sand/Camb	----	CAMBRIDGE	151.3250	----	5B6	1462	151.3250	----	5B6
15	Sandstone	----	SANDSTONE	151.3850	----	5B6	1462	151.3850	----	5B6
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----

Group-16 Sandstone/Cambridge Area										
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----
5	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----
6	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----		151.4150	156.7	----
7	Sandstone	ASKOV *	ASKOV *	151.3850	----	5B6	1462	159.4350	----	3B4
8	Sandstone	----	SANDSTONE	151.3850	----	5B6	1462	151.3850	----	5B6
9	Sand/Camb	----	CAMBRIDGE	151.3250	----	5B6	1462	151.3250	----	5B6
10	Sand/Camb	STACY *	STACY *	151.3250	----	5B6	1462	159.3150	----	3E8
11	Sand/Camb	ARDEN HILLS*	ARDEN HILLS*	151.3250	----	5B6	1462	159.3150	----	61F
12	Little Falls	----	LT-FALLS	151.4000	----	61F	1567	151.4000	----	61F
13	Little Falls	GERMAN HILL *	GERMAN HILL *	151.4000	----	61F	1567	159.3750	----	4CE
14	Little Falls	PEASE *	PEASE *	151.4000	----	61F	1567	159.3750	----	526
15	Cloquet	----	CLOQUET	154.4300	----	40B	1035	154.4300	----	40B
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----

Group-17 Rochester Area										
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----
2	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----
3	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----
5	DNR Tac 3	----	DNR TAC 3	151.4150	156.7	----		151.4150	156.7	----
6	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----
7	V-MED 28	----	V-MED 28	155.3400	156.7	----		155.3400	156.7	----
8	V-LAW 31	----	V-LAW 31	155.4750	156.7	----		155.4750	156.7	----
9	Rochester	----	ROCHESTER	151.2650	----	4F9	1273	151.2650	----	4F9
10	Rochester	ALMA*	ALMA*	151.2650	----	4F9	1273	159.2700	----	3E8
11	Rochester	LAKE CITY *	LAKE CITY *	151.2650	----	4F9	1273	159.2700	----	47C
12	Rochester	AMHERST *	AMHERST *	151.2650	----	4F9	1273	159.2700	----	585
13	Rochester	DRESBACH *	DRESBACH *	151.2650	----	4F9	1273	159.2700	----	656
14	Sand/Camb	----	CAMBRIDGE	151.3250	----	5B6	1462	151.3250	----	5B6
15	USFWS	----	USFWS	171.7500	----	----		171.7500	127.3	----
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----

Group 18		Superior Nat'l Forest Area		SUF						
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	
1	SUF Net	----	SUF WDIR	170.5250	----	----		170.5250	----	
2	SUF Repeater	Buyck *	BUYCK *	170.5250	----	----		164.1375	123	
3	SUF Repeater	Chisholm *	CHISHOLM *	170.5250	----	----		164.1375	156.7	
4	SUF Repeater	Devilfish *	DEVILFISH *	171.5250	----	----		164.8250	131.8	
5	SUF Repeater	Elephant Lake *	ELEPHANT LK *	170.5250	----	----		164.1375	167.9	
6	SUF Repeater	Fernberg W*	W FRNBRG *	170.5250	----	----		164.1375	100	
7	SUF Repeater	Gunflint *	GUNFLINT *	171.5250	----	----		164.8250	110.9	
8	SUF Repeater	Honeymoon *	HONEYMOON *	171.5250	----	----		164.8250	103.5	
9	SUF Repeater	Idington *	IDINGTON *	170.5250	----	----		164.1375	146.2	
10	SUF Repeater	Isabella *	ISABELLA *	170.5250	----	----		164.1375	136.5	
11	SUF Repeater	Lookout*	LOOKOUT *	170.5250	----	----		164.1375	151.4	
12	SUF Repeater	Meander *	MEANDER *	170.5250	----	----		164.1375	127.3	
13	SUF Repeater	Midtrail *	MIDTRAIL *	171.5250	----	----		164.8250	107.2	
14	SUF Repeater	Wales *	WALES *	170.5250	----	----		164.1375	114.8	
15	SUF Repeater	Mt. Weber *	Mt. WEBER *	170.5250	----	----		164.1375	141.3	
16	SUF Repeater	Fernberg E*	E FRNBRG *	171.5250	----	----		164.8250	100	

Group-19		Chippewa, BIA, USFWS								
Channel	Area	Repeater	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC
1	Chip Net	---	CPF NET	173.7750	----	----		173.7750	---	----
2	Chippewa North	MAX *	CPF NO*	173.7750	----	----		164.1250	110.9	----
3	Chippewa East	MARCELL *	CPF EA*	173.7750	----	----		164.1250	127.3	----
4	Chippewa South	SOUTH *	CPF SO*	173.7750	----	----		164.1250	103.5	----
5	CPF TAC 1	----	CPF TAC 1	171.5500	----	----		171.5500	----	----
6	SUF TAC 1	----	SUF TAC 1	169.1250	----	----		169.1250	----	----
7	BIA SMPLEX	----	BIA SMPLEX	172.4250	----	----		172.4250	----	----
8	BIA - GR PORT	Mt. Maude *	BIA GR PORT *	172.4250	----	----		171.7250	156.7	----
9	BIA - NETT LK	Nett Lake *	BIA NETT LAKE *	172.4250	----	----		171.7250	100	----
10	BIA - WHT EARTH	Naytah *	BIA WHT EARTH*	172.4250	----	----		171.7250	103.5	----
11	BIA - LEECH LK	Bena *	BIA LEECH LK *	172.4250	----	----		171.7250	88.5	----
12	BIA - RED LK	Red Lake *	BIA RED LAKE *	166.2750	----	----		159.4125	114.8	----
13	USFWS	----	USFWS NET	171.7500	----	----		171.7500	127.3	----
14	USFWS TAC 1	----	USFWS TAC 1	168.3500	107.2	----		168.3500	107.2	----
15	NATION CALLOUT	----	NAT. CALL OUT	168.5500	----	----		168.5500	----	----
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	110.9	----
17	BIA - RED LK S	Red Lake South *	BIA RED LK S *	166.2750	114.8	47C	1148	172.4250	114.8	----

Group 20		Statewide Interop Group								
Channel	Name - Alias	Operation	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC
1	V-CALL 10	Nation I-Op	V-CALL 10	155.7525	156.7	----		155.7525	156.7	----
2	V-TAC 11	Nation I-Op	V-TAC 11	151.1375	156.7	----		151.1375	156.7	----
3	V-TAC 12	Nation I-Op	V-TAC 12	154.4525	156.7	----		154.4525	156.7	----
4	V-TAC 13	Nation I-Op	V-TAC 13	158.7375	156.7	----		158.7375	156.7	----
5	V-TAC 14	Nation I-Op	V-TAC 14	159.4725	156.7	----		159.4725	156.7	----
6	MNCOMM	Mn. Common	MNCOMM	155.3700	156.7	----		155.3700	156.7	----
7	V-FIRE 23	Statewide Fire	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----
8	MNFIRG 2	Stwd Fire Tac	MNFIRG 2	154.0100	156.7	----		154.0100	156.7	----
9	MNFIRG 3	Stwd Fire Tac	MNFIRG 3	153.8300	156.7	----		153.8300	156.7	----
10	DNR TAC 1	DNR Forestry	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----
11	V-LAW 31	Stwd Law Enf.	V-LAW 31	155.4750	156.7	----		155.4750	156.7	----
12	V-MED 28	Statewide EMS	V-MED 28	155.3400	156.7	----		155.3400	156.7	----
13	IR 2	Incident Resp.	INC RESP 2 *	170.4125	----	----		165.9625	167.9	----
14	V-TAC 14R	Tac 14 Rpt	V-TAC 14R	159.4725	156.7	----		154.6875	156.7	----
15	NGRPTR*	Nat'l Guard Rpt	NAT'L GUARD	????	----	----		????	----	----
16	LE 2 *	Fed L.E. - Dig	FED LE 2 *	167.2500	----	68F	1679	162.2625	----	68F

Group 21		GLFFC Interop Group											
Channel	Name - Alias	Operation	Alias	Receive	Tone	Rx NAC		Transmit	Tone				
1	Manitoba Local	GLFFC I-OP	MAN LOC	163.2900	----	----		163.2900	----				
2	M B Fire L1	GLFFC I-OP	MB FIRE1	163.0200	----	----		163.0200	----				
3	M B Fire L2	GLFFC I-OP	MB FIRE2	163.6650	----	----		163.6650	----				
4	M B Emerg Loc	GLFFC I-OP	MB EMERG	158.5500	----	----		158.5500	----				
5	Mich UP A/G	GLFFC I-OP	MI AG UP	171.5750	----	----		171.5750	----				
6	Mich DNR Tac 1	GLFFC I-OP	MIFMD T1	151.3250	----	----		151.3250	----				
7	Mich DNR Tac 2	GLFFC I-OP	MIFMD T2	159.2700	----	----		159.2700	----				
8	Mich LP A/G	GLFFC I-OP	MI AG LP	171.4250	----	----		171.4250	----				
9	MnDNR Tac 1	GLFFC I-OP	MN DNR TAC1	151.4750	156.7	----		151.4750	156.7				
10	MNDNR A/G 1	GLFFC I-OP	MN DNR A/G1	151.3400	110.9	----		151.3400	110.9				
11	V-CALL 10	GLFFC I-OP	V-CALL 10	155.7525	156.7	----		155.7525	156.7				
12	V-TAC 11	GLFFC I-OP	V-TAC 11	151.1375	156.7	----		151.1375	156.7				
13	Wisconsin Red	GLFFC I-OP	WISC RED	151.4300	----	----		151.4300	----				136.5
14	Wisconsin A/G	GLFFC I-OP	WISC A/G	170.4750	156.7	----		170.4750	156.7				156.7
15	Wisconsin Purp	GLFFC I-OP	WISC PUR	151.1600	71.9	----		151.1600	71.9				
16	Airguard	Air Emergency	WISC AIRGUARD	168.6250	----	----		168.6250	----				110.9

Group 22		State & Fed Tacs - A/G's											
Channel	Name - Alias	Operation	Alias	Receive	Tone	Rx NAC		Transmit	Tone	Tx NAC			
1	DNR Tac 1	----	DNR TAC 1	151.4750	156.7	----		151.4750	156.7	----			
2	Tac 2/MNICS	----	TAC 2/MNICS	170.4750	----	----		170.4750	----	----			
3	DNR A/G 1	----	DNR A/G 1	151.3400	110.9	----		151.3400	110.9	----			
4	DNR A/G 2	----	DNR A/G 2	159.3000	110.9	----		159.3000	110.9	----			
5	DNR A/G 4	----	DNR A/G 4	172.3750	----	----		172.3750	----	----			
6	V-FIRE 23	----	V-FIRE 23	154.2950	156.7	----		154.2950	156.7	----			
7	Chip Tac 1	----	CPF TAC 1	171.5500	----	----		171.5500	----	----			
8	SUF TAC 1	----	SUF TAC 1	169.1250	----	----		169.1250	----	----			
9	BIA STWD	----	BIA SMPLEX	172.4250	----	----		172.4250	----	----			
10	BIA - RED LK	----	BIA RED LK	166.2750	114.8	47C	1148	166.2750	114.8	----			
11	USFWS TAC 1	----	USFWS TAC 1	168.3500	107.2	----		168.3500	107.2	----			
12	A/G 03	----	A/G 03	166.6125	----	----		166.6125	----	----			
13	A/G 19	----	A/G 19	168.1250	----	----		168.1250	----	----			
14	A/G 72	----	A/G 72	169.1500	----	----		169.1500	----	----			
15	A/G 51	----	A/G 51	168.3125	----	----		168.3125	----	----			
16	Airguard	----	AIRGUARD	168.6250	----	----		168.6250	----	----			110.9

Helibase Zones & Frequencies

ZONE 28	BEMIDJI HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	PARK RAPIDS
6	BEMIDJI
7	BAGLEY *
8	LEECH LAKE *
9	JUGGLER LAKE *
10	SAUM *
11	A/G 03
12	BIA-SIMPLX
13	A/G 19
14	CPF NET
15	CPF NO*
16	AIRGUARD

ZONE 29	BEMIDJI HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	DNR TAC 3
6	DNR A/G 4
7	TRAIL *
8	GRYGLA *
9	NORTHOME *
10	CPF SO *
11	BIA RED LK
12	BIA RED LAKE *
13	REDTAC
14	USFWS TAC 1
15	A/G 72
16	AIRGUARD

ZONE 30	BRAINERD HELIBASE
Channel	Alias
1	DNR TAC 1
2	MNICS TAC 2
3	DNR A/G 1
4	DNR A/G 2
5	BACKUS
6	LEADER *
7	BORDEN LAKE *
8	WHIPHOLT *
9	EMILY *
10	LT-FALLS
11	LINCOLN*
12	ONAMIA *
13	GILMAN *
14	WOODLAND*
15	WHITE PINE*
16	AIRGUARD

ZONE 31	BRAINERD HELIBASE
Channel	Alias
1	DNR TAC 1
2	MNICS TAC 2
3	DNR TAC 3
4	DNR A/G 1
5	DNR A/G 2
6	DNR A/G 4
7	A/G 03
8	BACKUS
9	LEADER *
10	BORDEN LAKE *
11	AITKIN
12	QUADNA *
13	CPF NET
14	CPF SO*
15	PARK RAPIDS
16	AIRGUARD

ZONE 32	CAMBRIDGE HELIBASE
Channel	Alias
1	DNR A/G 1
2	DNR TAC 1
3	MNICS TAC 2
4	DNR A/G 2
5	CAMBRIDGE
6	STACY *
7	ARDEN-HILLS*
8	SANDSTONE
9	ASKOV *
10	LT-FALLS
11	GERMAN HILL *
12	PEASE *
13	GILMAN *
14	WOODLAND*
15	USFWS TAC 1
16	AIRGUARD

ZONE 33	G-RAPIDS HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	DNR A/G 2
4	MNICS TAC 2
5	DNR TAC 3
6	DNR A/G 4
7	AITKIN
8	QUADNA *
9	WHITE PINE*
10	BACKUS
11	WHIPHOLT *
12	LEADER *
13	EMILY *
14	MIFC SMLPX
15	CENTRAL *
16	AIRGUARD

ZONE 34 G-RAPIDS HELIBASE	
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	DNR A/G 2
4	MNICS TAC 2
5	DEER RIVER
6	DEER RIVER *
7	DR-NASHWAUK *
8	NORTHOME *
9	CPF NET
10	CPF NO*
11	CPF SO*
12	CPF EA*
13	CPF TAC 1
14	A/G 03
15	A/G 72
16	AIRGUARD

ZONE 35 HIBBING HELIBASE	
Channel	Alias
1	DNR TAC 1
2	MNICS TAC 2
3	DNR A/G 1
4	DNR A/G 2
5	HIBBING
6	SAX *
7	HIBBING-NASH*
8	SIDE LAKE *
9	VIRGINIA *
10	DEER RIVER
11	TOWER
12	RIDGE *
13	GHEEN *
14	LT-FORK
15	LT-FORK *
16	AIRGUARD

ZONE 36 HIBBING HELIBASE	
Channel	Alias
1	DNR TAC 1
2	MNICS TAC 2
3	DNR A/G 1
4	DNR A/G 2
5	DNR A/G 4
6	2 HARBORS
7	ISABELLA*
8	WALES *
9	FINLAND *
10	BOGUS LAKE *
11	CLOQUET
12	ELMER *
13	LINE LAKE*
14	A/G 03
15	A/G 19
16	AIRGUARD

ZONE 37 ROSEAU HELIBASE	
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	DNR A/G 2
4	DNR A/G 4
5	MNICS TAC 2
6	N'WEST*
7	NATL FF
8	ROSEAU FD
9	FAUNCE *
10	WARROAD
11	LUDE *
12	STRANDQUIST*
13	JUNEBERRY*
14	GRYGLA *
15	WINNER SILO *
16	AIRGUARD

ZONE 38 ROSEAU HELIBASE	
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	DNR A/G 2
4	MNICS TAC 2
5	DNR TAC 3
6	V-MED 28
7	BAUDETTE
8	BORDER *
9	N'WEST*
10	BIA SIMPLX
11	BIA-GR PORT *
12	WARROAD
13	JUNEBERRY*
14	GRYGLA *
15	WINNER SILO *
16	AIRGUARD

ZONE 39 ROSEAU HELIBASE	
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	A/G 03
4	A/G 72
5	V-MED 28
6	N'WEST*
7	BIA SIMPLX
8	BIA RED LK
9	RED LAKE *
10	RED TAC 1
11	MAN LOC
12	MB EMERG
13	OFC TAC
14	ONT FIRE
15	WINNER SILO *
16	AIRGUARD

ZONE 40	WILL RIV HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	V-FIRE 23
6	SANDSTONE
7	ASKOV *
8	MAHTOWA*
9	WOODLAND*
10	PINE FIRE
11	AITKIN
12	CAMBRIDGE
13	MIFC SMPLX
14	A/G 72
15	A/G 03
16	AIRGUARD

ZONE 41	WILL RIV HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	SANDSTONE
5	WISC RED
6	WISC PUR
7	WISC A/G
8	DECK
9	N'EAST*
10	CENTRAL*
11	N'CENTRAL*
12	ARROW*
13	WESTERN*
14	N'WEST*
15	SOUTH*
16	AIRGUARD

ZONE 42	G-MARAIS HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	A/G 72
6	A/G 19
7	BOGUS LAKE *
8	DEVILFISH *
9	HOVLAND *
10	ISABELLA*
11	SUF TAC 1
12	HONEYMOON*
13	MIDTRAIL*
14	BIA-GR PORT *
15	BIA SIMPLX
16	AIRGUARD

ZONE 43	ORR HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	A/G 03
6	ELY *
7	SOUDAN *
8	SULIVAN BAY*
9	GHEEN *
10	RIDGE *
11	BIA SIMPLX
12	BIA LEECH LK *
13	VNP NET
14	VNP MAKOOD*
15	VNPSULLIVAN BAY*
16	AIRGUARD

ZONE 44	PK RAPIDS HELIBASE
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	DNR A/G 4
6	PARK RAPIDS
7	WOLF LAKE *
8	LEECH LAKE *
9	EAGLE LAKE *
10	JUGGLER LAKE *
11	LEADER *
12	WHIPHOLT *
13	BIA SIMPLX
14	A/G 19
15	CPF NET
16	AIRGUARD

ZONE 45	SOUTH REGION
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MNICS TAC 2
4	DNR A/G 2
5	A/G 51
6	DNR TAC 3
7	DNR A/G 4
8	LEWISTON
9	ALMA *
10	LK CITY *
11	AMHERST *
12	DRESBACH *
13	USFWS TAC 1
14	USFWS
15	CHAN 0015
16	AIRGUARD

ZONE 46	SUF
Channel	Alias
1	SUF TAC 1
2	R-9 FIRE
3	A/G 19
4	A/G 72
5	SUF EDIR
6	ISABELLA*
7	HONEYMOON*
8	MIDTRAIL*
9	GUNFLINT*
10	FERNBRG EAST
11	DEVILFISH *
12	SUF WDIR
13	FERNBERG WEST
14	Mt. WEBER *
15	WALES *
16	AIRGUARD
17	BUYCK *
18	ELEPHANT LK*
19	CHISHOLM *
20	MEANDER*
21	IDINGTON *
22	LOOK-OUT *
23	NATL FF
24	AIRGUARD

ZONE 47	AIRNET
Channel	Alias
1	DNR TAC 1
2	DNR A/G 1
3	MINICS TAC2
4	DNR A/G 2
5	DNR TAC 3
6	DNR A/G 4
7	MIFC SMPLX D
8	Calros Smplx
9	N'EAST*
10	CENTRAL*
11	N'CENTRAL*
12	ARROW*
13	WESTERN*
14	N'WEST*
15	SOUTH*
16	AIRGUARD

ZONE 48	REVERSE
Channel	Alias
1	MIFC SMPLX D
2	CARLOS SMPLX D
3	N EAST*RD
4	CENT*RD
5	N CENT*RD
6	ARROW*RD
7	WESTERN*RD
8	N WEST*RD
9	SOUTH*RD

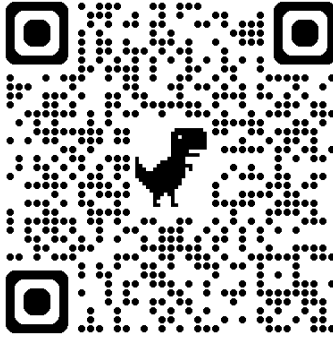
ZONE 49	WISCONSIN
Channel	Alias
1	WIS RED
2	WIS BROWN
3	WIS PURPLE
4	RED CLIFF*
5	PATTISON*
6	BENNETT*
7	LAMPSON*
8	SHELL LAKE*
9	FREDERIC*
10	DRESSER*
11	HILLSDALE*
12	BALDWIN*
13	PRESCOTT*
14	NELSON*
15	ARCADIA
16	LAC CRESCENT*
17	ELMWOOD*
18	CHIP FALLS*
19	HOLCOMBE*
20	OSSEO*
21	NEILSVILLE*
22	RIDGEVILLE*
23	BLACK RIVER FALL
24	NECEDAH*
25	GENOA*
26	SENECA*
27	BLOOMINGTON*
28	KIELER*
29	ASH RIDGE*
30	HIGHLAND*
31	BLUE MOUNDS*
32	BARABOO*

33	MADISON*
34	MONTICELLO*
35	IRON RIVER*
36	HAYWARD*
37	METEOR*
38	RED CLIFF*
39	GRAND VIEW*
40	MELLEN*
41	PARK FALLS*
42	SPIRIT*
43	MERCER*
44	BENNETT PKF*
45	HOLCOMBE*
46	PERKINSTOWN*
47	BOULDERJUNCTION
48	CLEAR LAKE*
49	RHINELANDER*
50	LOOKOUT MTN*
51	RIB MTN*
52	CARY MOUND*
53	PLOVER*
54	ROME*
55	NECE*
56	OXFORD*

HELITACK INFORMATIONAL RESOURCES

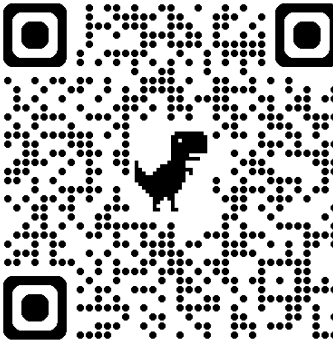
<http://cottonbookmarks.homestead.com/bookmarks.html>

Find: Aircraft Status Report, Statewide Sit. Report, Weather Stations, Radar, Canadian Fire Danger Indices, Sunrise/Set charts, & more.



<http://mnics.org/wpress/> - password: mnallrisk

Find: IAPs, Fire Behavior, Aerial Tactics, Airspace De-confliction Guide, Pilot In briefs, Frequency Cards, Hazards Maps, etc.



Helibase Plan – found at each base, includes information on base facilities & equipment, dispatching & flight following procedures, pay docs, helibase operations, & much more.

Working Safely & Effectively with EMS Helicopters in MN

There are multiple EMS life flight providers in MN. No matter where you are located in the state there is an EMS helicopter stationed within one flight hour from your location. EMS helicopters are requested through the county dispatch system.

Preparing for EMS Helicopter Ops:

- Is the landing area adequate? Does the patient need to be moved to a more suitable location?
- Assess hazards in the area – power lines, towers, trees, etc.
- Provide a lat/long in degrees decimal minutes to the hundredths position.
- Assign 1 person to coordinate all personnel on scene & to communicate with the pilot.

Communications:

- Was the radio to communicate between the helispot & helicopter established through dispatch? I.e.: FM or 800MHz?

Air to Ground Frequencies

FM - VMED 28 Rx/Tx – 155.3400 Tone – Tx 156.7
800MHz – S-tac channel as assigned by dispatch.

Air to Air Frequency – AM 123.100 or as assigned.

Crash Rescue Procedures

In the event of an incident or accident preservation of life, including your own, is the number one priority. Remember that wildland firefighters are not trained or equipped to respond to all incidents that could occur.

- ✓ Declare an emergency to the Tanker Base or 911
- ✓ Identify an IC
- ✓ Secure & assess the scene
- ✓ Take response actions if it is safe to do so
- ✓ Administer first aid as necessary
- ✓ Provide incident updates & begin documentation of the incident

Medical Incident Report

FOR A NON-EMERGENCY INCIDENT, WORK THROUGH CHAIN OF COMMAND TO REPORT AND TRANSPORT INJURED PERSONNEL AS NECESSARY.

FOR A MEDICAL EMERGENCY: IDENTIFY ON-SCENE INCIDENT COMMANDER BY NAME AND POSITION AND ANNOUNCE "MEDICAL EMERGENCY" TO INITIATE RESPONSE FROM IMT COMMUNICATIONS/DISPATCH.

Use the following items to communicate situation to communications/dispatch.

1. CONTACT COMMUNICATIONS / DISPATCH (Verify correct frequency prior to starting report)

Ex: "Communications, Div. Alpha, Stand-by for Emergency Traffic."

2. INCIDENT STATUS: Provide incident summary (including number of patients) and command structure.

Ex: "Communications, I have a Red priority patient, unconscious, struck by a falling tree. Requesting air ambulance to Forest Road 1 at (Lat./Long.) This will be the Trout Meadow Medical, IC is TFLD Jones. EMT Smith is providing medical care."

Severity of Emergency / Transport Priority	<input type="checkbox"/> RED / PRIORITY 1 Life or limb threatening injury or illness. Evacuation need is IMMEDIATE <i>Ex: Unconscious, difficulty breathing, bleeding severely, 2nd - 3rd burns more than 4 palm sizes, heart stroke, disoriented</i> <input type="checkbox"/> YELLOW / PRIORITY 2 Serious Injury or illness. Evacuation may be DELAYED if necessary. <i>Ex: Significant trauma, unable to walk, 2nd - 3rd burns not more than 1-3 palm sizes.</i> <input type="checkbox"/> GREEN / PRIORITY 3 Minor Injury or illness. Non-Emergency transport <i>Ex: Sprains, strains, minor heat-related illness.</i>
Nature of injury or illness & Mechanism of injury	Brief Summary of Injury or Illness <i>(Ex: Unconscious, Struck by Falling Tree)</i>
Evacuation Request	Air Ambulance / Short Haul/Hoist Ground Ambulance / Other
Patient Location	Descriptive Location & Lat. / Long. (WGS84)
Incident Name	Geographic Name + Medical <i>(Ex: Trout Meadow Medical)</i>
On-Scene Incident Commander	Name of on-scene IC of incident within an incident <i>(Ex: TFLD Jones)</i>
Patient Care	Name of Care Provider <i>(Ex: EMT Smith)</i>

3. INITIAL PATIENT ASSESSMENT: Complete this section for each patient as applicable (start with the most severe patient)

Patient Assessment: See IRPG PAGE 106

Treatment:

4. EVACUATION PLAN:

Evacuation Location (if different): (Descriptive Location (drop point, intersection, etc.) or Lat. / Long.) Patient's ETA to Evacuation Location:

Helispot / Extraction Site Size and Hazards:

5. ADDITIONAL RESOURCES / EQUIPMENT NEEDS:

Example: Paramedic/EMT, crews, immobilization devices, AED, oxygen, trauma bag, IV/fluid(s), splints, rope rescue, wheeled litter, HAZMAT, extrication

6. COMMUNICATIONS: Identify State Air/Ground EMS Frequencies and Hospital Contacts as applicable

Function	Channel Name/Number	Receive (RX)	Tone/NAC *	Transmit (TX)	Tone/NAC *
COMMAND					
AIR-TO-GROUND					
TACTICAL					

7. CONTINGENCY: Considerations: If primary options fail, what actions can be implemented in conjunction with primary evacuation method? Be thinking ahead.

8. ADDITIONAL INFORMATION: Updates/Changes, etc:

REMEMBER: Confirm ETAs of resources ordered. Act according to your level of training. Be Alert. Keep Calm. Think Clearly. Act Decisively.

MN DNR IA Fire Size-Up

Fire Name: _____ ***Fire # (RAN####CY):** _____

IC Name: _____ **Cause:** _____

Location: (40) _____ S _____ T _____ R _____

Lat: N ____° ____' Long: W ____° ____'

Estimated Size: __ Spot __ <1/4 ac. __ 1/2 - 3/4 ac. __ 1 ac. __ 1 - 5 ac.
__ 5 - 10 ac. __ 10 - 20 ac. __ 21+ ac. (est. size _____)

Fuels: __ Grass (Upland/Lowland) __ Brush __ Slash __ Timber (*Specify type*): _____
Other _____

Character: __ Smoldering __ Creeping __ Running __ Crowning __ Spotting

Spread Potential: __ Low __ Medium __ High __ Extreme

Structures Threatened: __ Yes (List _____) __ No

Winds: Dir.: _____ Speed: __ Calm __ 0-5 mph __ 5-10 mph __ 10-20 __ 20+* *Gusts _____

Hazards (ground or aerial): _____

Best Access: _____

Additional Resource Needs: __ Aircraft __ Engine/Tender __ Crew __ Hvy. Equip.
__ Law Enforcement/Investigator Other _____

Resources on Scene: _____

Ownership: _____

Other Reporting Info. (coordinate with dispatch)

Date/Time of Start: _____ **Date/Time Reported:** _____

Date/Time of IA: _____ **Date/Time Controlled:** _____

Date/Time Contained: _____ ***Responsible Party:** _____

***Res. Party Address:** _____ ***Res. Party Phone #:** _____

IC Signature