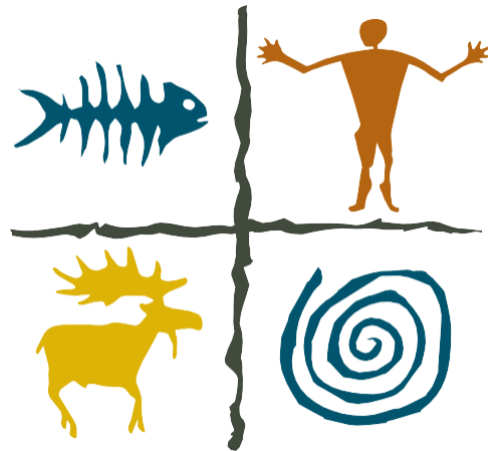


# Welcome Aboard!



**E B E L'S**  
VOYAGEUR HOUSEBOATS

This manual was created to assist you while on vacation. We hope you find it helpful.

Justin & Heather Ebel

Ebel's Voyageur Houseboats encourages guests to use this manual as a guideline for operations of the houseboat. It is their responsibility to ensure all houseboat passengers are aware of the charter agreement, policies, and rules and regulations that are reviewed upon check-in and orientation.

This manual is a guide to help refresh your memory regarding the houseboat operations previously reviewed with members of Ebel's staff. We have also included information that may be of interest to you and your crew members.

Not everything in this manual pertains to each houseboat, but it is a good reference point. Please radio base with any questions.

## Ebel's Logo



The Ebel's logo uses a series of ancient Indian pictographic symbols to reflect the profound spirituality that man has always experienced as he moved through the wild natural beauty of the northern border lakes region.

The design is composed of four interlocking Indian symbols. Each symbol is believed to depict one of the four life forces that come together to create the world as the American Indians of the Northwoods saw it.

The moose symbolizes the land and the wildlife that roam across it. The fish represents the lakes and the creatures that dwell there. The spiral form stands for air, wind, and the heavens. The human form is man taking his position as a humble yet essential part of this universe.

## **Trip Checklist**

### **While You Are Trying to Find Your Houseboat Site**

- Be sure to follow our maps and send a lead boat out ahead to scout spot (no saving spots).
- You must stay at a houseboat site or any undeveloped site further than 200 yards from a designated site (tent, houseboat, or day use). Know your site name and location on the navigational maps provided.
- Navigation on the lakes can be tricky, however, if you pay attention to the instructions given, your trip will be hassle free. Rock/beach pulls are \$200.00 (plus service fuel and any damages done to the houseboat or its equipment) and not covered by the additional insurance.
- The houseboat is not allowed on Canadian land or on private land.

## **Reminders While You Are on Vacation**

- Know your houseboat number. This is used to identify you on the lake by radio. Please use the radio to contact us as the first method of communication, we always have one on our side! There may be areas on the lake where the base can hear you, but you may not be able to hear the base. Please state your houseboat number, reason for calling, and your location. You can also try asking for a radio relay from another houseboat.
  - *If you have a question, please look in your manual for clarification and/or call us by radio. We can usually walk you through instructions over the radio.*
  - *Radio hours are 7am-6pm. Radio is monitored after hours for emergencies only.*
- Always charge your houseboat batteries according to the instructions given to you and written in this manual. Dead battery service calls due to inadequate charging are \$100.00 plus service fuel. Do not touch or alter our battery systems.
- We are proud to have Weber gas grills on all our houseboats. Please remember to push in and then turn the knobs to avoid stripping them. Replacements are \$30.00 each due to negligent use.
- Avoid spraying windows, screens, and light fixtures with bug spray, as the spray melts the plastic. Please clean up after yourself if you have killed bugs.
- If you have rented a small motor from us, you will have been instructed on how to moor it while at the houseboat site. Always tie to shore with the engine up! Always bail the small boat out after rain to ensure no damage. A bailer is supplied. Small motor operation instructions are in this houseboat manual.
- If your houseboat has a hot tub, please remember how to operate it. This is covered in the instruction process. Generators heat the hot tub when running and with the appropriate switch on. Hot tub covers are very expensive so please tie them down at night and when traveling. Please do not use them for anything other than covering the hot tub and do not sit on them. Replacement cost is \$699.00 each.
- We make a “lake run” on Wednesdays during high season. This service is free and includes pick up of garbage. You can call in advance to order items that you may need such as ice, bait and firewood. We cover Lake Kabetogama, Namakan Lake and North Sand Point Lake. If you are in Crane Lake, you can go by small boat to an area resort for any supplies needed.

## **Before Returning to Our Base**

- Bag all garbage.
- Wash all dishes and put away.
- Empty refrigerator(s).
- Pack all personal belongings.
- Place all dirty linens in one area.
- Please clean up after your pets. Excessive pet hair will result in an extra charge.
- Radio when you enter Sullivan Bay. You will drive the houseboat to our fuel dock.
- Arrive no later than 10:00am.
  - Docks open at 7am if any houseboats want to come in early. On large incoming days, there may be delays of up to 1 hour as we can only take in so many houseboats at a time.
  - Unload time may be limited, as other houseboats are returning. ***Have everything packed and ready to unload before you arrive at the fuel dock.***
- Fuel used, ice, bait, firewood, service calls, damage, etc. while purchased on vacation will be paid in the office upon return.
- Don't forget to tip the staff if they helped you! Tip jars are in the office. They appreciate it!

Please report any damage to the office. If something did not work, please let us know so we can address the issue.

We hope you had a fantastic, trouble-free trip and hope to see you back again!

# Radio Operation

These radios are a simple but effective means for communications. But to the uninitiated, they may be intimidating or confusing. Be brave, it is simpler than you think!

## Basic Radio Operations

- Your radio should always be left on. It is normal for the display to go dim to conserve energy, but it should always be on in case we need to get a message to you.
- Make sure the radio volume is set high enough for you to hear, we always suggest the volume at mid-range or higher to ensure that if needed, we can get a hold of you.
- **Unless otherwise instructed by our staff, your radio should be in the “Ebels Guest” channel.**
- To transmit, hold the microphone a couple inches from your lips and hold down the transmit button on the left side of the microphone. When the radio transmits, you will hear a brief high pitch tone that tells you that you are live and transmitting. You can speak in a normal conversational tone...like most people, the radios do not like to be yelled at. Once you have completed your transmission, simply release the button and you will be ready to receive the response.
- When initiating a conversation (hailing), identify the party you are hailing followed by your callsign and wait for the reply (e.g., “Ebels Base, this is Vista 61 Number 2”) once the conversation has been initiated, you do not need to repeat your call sign unless asked.
- When receiving a message, you will be able to see which of our radios is transmitting (and so can we!)
- NOAA Weather channels are provided in the radio to help you plan for a safe and fun adventure. Weather can change quickly up here, so we suggest that you listen to the NOAA forecast for 5 to 10 minutes in the morning and evening each day to make sure you are prepared.
- EMERGENCY Button: In the event of a life-threatening emergency, each radio in our fleet is programmed with an “Emergency” button. When pressed, this button sends a data packet to our base radio and triggers an alarm to let us know that you need immediate assistance. When pressed, this will send your houseboat information including the name of your boat, and your GPS location. See the following page for the specific location of this button. **Please respond immediately if this button is accidentally depressed (it happens)!**

## **Trouble Shooting**

- As mentioned above, the radio system may not have 100% coverage. You will know you are out of coverage if you attempt to transmit and you receive a “bonk” sound as you attempt to transmit on the “Ebels Guest” channel. If needed, we have provided the “Backup Chan” channel. This channel is a *DIRect* (Line-of-Sight) channel that may allow you to communicate with another boat in our fleet depending on conditions.
- Under certain conditions, our staff may direct you to another radio channel, Marine 9 may be directed by our maintenance staff, Marine 16 may be directed if you are having a safety or navigation issue and need direct communications with the nearest available park ranger, US Coast Guard or other Public Safety Boat.
- If radio communications are not working but you have cellular coverage, we can be reached at: 800-235-5475 or 218-374-3571. You can also text 218-244-5667.



## Radio Function Guide



- 1 Power On/Off: For your safety, your radio should always be left on throughout your adventure.
- 2 Volume: For your safety, the radio volume should always be left at an audible level through your adventure.
- 3 Channel Up/Down: See Radio Channel List for available channels and prescribed use.
- 4 Backlight Intensity: Press to scrolls through the display brightness settings
- 5 Unprogrammed
- 6 Unprogrammed
- 7 Emergency: This button will send a data message to the Ebels Staff to let them know that you are in distress and need immediate assistance. *Please use this button only if you or a member of your party have an emergency requiring immediate assistance.*
- 8 Push to Talk (PTT) aka “Transmit Button”

### Radio Channel List

**-1 “Ebels Guest” \*Note1: (Primary Channel)** This is the channel to use to contact your Ebels professionals for any of your needs. This channel provides our wide-area radio system coverage to ensure your safety and convenience.

-2 Backup Chan: see Note2: (Backup Channel) Only use this channel if you have problems contacting Ebels Staff. NOTE: this channel has limited “Line-Of-Sight range.

-3 Marine 09: see Note2: This is a Marine Channel that our staff may direct you to use in some events. *Please only use as directed by our staff.*

-4 Marine 12: see Note2: This channel is used to communicate to the Kettle Falls Station to call ahead to see if services are available.

-5 Marine 16: see Note2: This is the general maritime distress channel monitored by National Park Service, US Coast Guard, and other agencies as well as many private craft. *This channel should be used for emergencies only, or as directed by our staff.*

-6 WX I-Falls, MN: NOAA Weather from the International Falls, MN Tower Site. This channel is provided to allow you to monitor weather forecasts to better plan your adventure.

-7 WX: Orr, MN: NOAA Weather from the Orr, MN Tower Site. This channel is provided to allow you to monitor weather forecasts to better plan your adventure.

\*NOTE 1: This channel is a repeated channel which means that your radio communicates directly to our repeater location high atop the hill across the Ash River from our docks. This repeater then rebroadcasts the signal to all the radio fleet to extend the range. This as you use this channel, if for some reason the radio cannot reach the tower, the radio will give you a “bonk” sound letting you know that your communications are not getting through. In this event, you may need to switch to the “Ebels Guest DIR” channel to communicate via another Ebel’s boat within range.

\*\*NOTE 2: These channels are “Line-of-Sight” channels which can communicate over long distances over water but will have severe limitations transiting over terrain which can limit the overall effectiveness of communications.

# Tips for your Trip

## Loading your Houseboat

- Never load or overload your boat in a manner as to decrease its seaworthiness. Never allow more than the maximum capacity aboard. Do not carry along any unnecessary weight. Excess weight increases draft, fuel consumption and affects handling.
- Distribute the load evenly. Your vessel should be balanced from side to side, as well as from front to back. *Take special care not to overload the front or back deck.*

## Know the Weather

- Weather conditions can change rapidly. If you are on the water and observe a storm approaching, seek shelter in a protected cove away from the wind and waves.
- Do not travel in strong winds.
- Waves can be very severe when windy conditions exist. Again, seek shelter, *before* you are caught in high winds and waves. Lifejackets are advised for all passengers in adverse conditions.
- Operating in rough water or against strong headwinds may cause damage and consume a lot of fuel. If there are strong winds or a storm coming, it is best to seek shelter on shore.
- *Listen to the daily weather forecast, which is available on the business band radio.*

## Engine Use

- Once under way, it is most efficient to cruise at a moderate speed of around 2800 RPM's.

## Boat Fires

- Charcoal barbecues, Blackstones, deep fat fryers, etc. are prohibited for use on board your houseboat. *These may be used on shore only!*
  - *These items are the #1 cause of boat damage and fires.*
- The fire extinguishers are located on board your houseboat. Never hesitate to use one even on the smallest fire.

# Parking Your Boat

## At a Dock

- ***Approach the dock slowly.*** A houseboat is a large, heavy vessel that has a lot of momentum. Begin *slowing early* and use “reverse” only if needed to slow the vessel.
- ***Change your direction with small turns of the steering wheel.*** The steering acts slowly due to the size and weight of the boat. Also, with the engines located on the stern (back) of the vessel, you’ll experience a wider tail swing than the bow. Imagine that there is a pivot point in the center of the boat.
- ***Shift into Neutral—Pause.*** Never shift into gear (forward or reverse) without first pausing at the idle speed. Allow the RPMs to drop to 1000 or less to avoid gear damage.
- ***Shift into Reverse.*** Shifting into reverse will cause you to slow. The engines act as a braking system.
  - ***Know which way the motor is pointed to make desired maneuver before adding throttle.***
- ***Warning: Never attempt to dock or moor from the upper helm.***

## Important

- Maintain a slow speed in reverse and don’t *rev* the engines. This can cause damage to the motor and may kick the engine up out of the water.
- When backing up, turn the wheel in the *opposite* direction that you want the bow to go.
- ***Remember that there are no brakes on a houseboat.*** Make sure to come into a dock very slowly. The momentum can be slowed down by shifting into reverse, but it will not stop it completely!

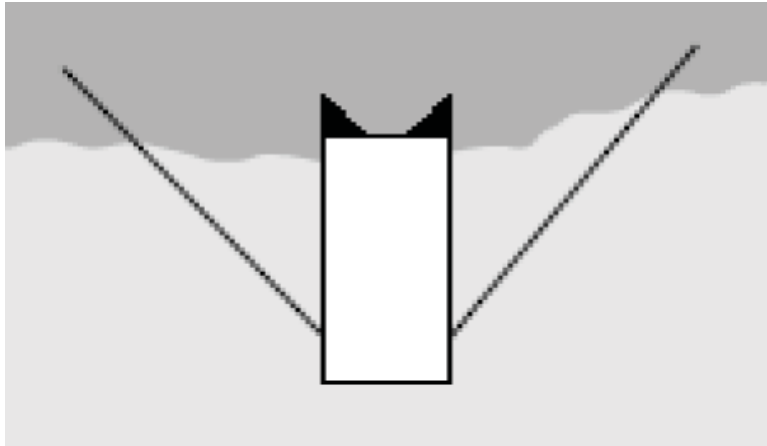
## Returning to the Fuel Dock

- Listen for instructions from dock hand. They will guide you in from the end of our fuel dock.



## At a Houseboat or Undeveloped Site

- *Select a site.*
  - Choose a spot that is well protected from the wind, waves and rocks.
  - Scout the site with your small boat to ensure proper mooring.
- *Approach the site to that the houseboat is at a 90-degree angle, or nose in perpendicular to the beach.* Make sure to prepare the boat and crew prior to the beaching.
- *Post a watch on the front deck to keep the driver informed about the depth, rocks, etc.* This person should never be outside the railings or doors of the boat and should hold onto something for balance as the boat is being beached.
- Keep the remaining passengers in the cabin to avoid being “bow-heavy” when beaching.
- ***Do not ram the shoreline! You will get stuck!***
- Be sure you have at least 6 feet of water under the stern for engine clearance.
- Once the bow has touched the beach and the boat has stopped, add additional forward power to the engines to secure the houseboat up on the beach at a 90-degree (perpendicular) angle, allowing both pontoons to be secure to the shoreline.
- Leave engines in gear at an idle speed to hold the boat square to the beach until the mooring ropes are set. The captain should remain at the wheel while the engines are running.
  - Don’t leave the controls while the engine is running and in gear.
- ***Mooring usually takes more than 1 person. Listen to your instructor’s advice and have a plan to tie up before you reach shore.***



## **Getting Off the Beach**

- ***Move small boats out of the equation*** while backing up if enough help is present. If not enough help is present to detach the small boat, keep to the side with the nose facing the back of the boat. Ensure you will not run over the boat and/or its ropes.
- ***Start the engines.*** The captain can use the motors to hold the boat square to the beach until the mooring ropes have been pulled in.
- ***Untie the knot from the mooring post/tree.*** Be certain that the mooring ropes do not get into the turning propellers. Pull all lines back onto the boat and stow them, so they can't fall into the water while underway.
- ***Put the engines into reverse.*** Keep the RPM's low when in reverse. Revving the engines while in reverse can cause damage. *Do not exceed 4000 RPM's while in reverse.*
- ***Turn the wheel from side to side.*** If the boat does not back freely from the beach, turn the wheel from side to side. This will cause the stern to *swing* back and forth. Let the swing go for 10-15 feet on either side. This way, you will *wiggle* the heavy pontoons off the beach. You may also ask the crew to stand on the back deck, which will also lighten the bow where the boat is stuck.
- ***Be careful not to submerge the engine or engines with excessive weight on the back deck.***

# Houseboating Overnight

Houseboaters are allowed to stay overnight at both designated and undesignated houseboat sites, which are available on a first-come, first-served basis. You are responsible for knowing the rules and regulations of the overnight permit.

- **Designated sites** have a symbol sign with name and number indicating that they are a designated site, beach or rock access, metal fire rings, and mooring posts or rings to secure vessels
- **Undesignated sites** are any undeveloped shoreline location that is at least 200 yards away from any developed site or structure
- There is a **limit of two houseboats** per designated or undesignated site.
- Houseboats are required to have a permit for overnight use
- There is no limit to the number of houseboats/permits allowed in the park at one time
- Reservations are not site-specific, but rather issued per houseboat for the number of nights stayed in the park
- Permits can be purchased starting November 15 annually for all the next summer season
- There is a \$15 nightly fee in addition to a \$10 reservation service fee per transaction

## Know Where to Go!

Houseboaters may not stay overnight:

- At day use sites or tent sites.
- Within 200 yards of a designated tent, houseboat, or day use site or on private or leased land.
- Within 1/4 mile of any park-developed area
- Within 1/4 mile of any structure.
- Houseboats use houseboat sites and undeveloped areas. Tent campers use tent sites. Day use is not allowed at a houseboat site as there is no toilet.

# Towing Tips

## Towing other Vessels

- At least one small boat is required to be taken along on your houseboat vacation with Ebel's.
- A small boat can enhance your time in Voyageurs National Park. You can use your small boat to access areas that the houseboat cannot. Plus, you can travel farther in less time and therefore use less fuel.

## **Here are a few guidelines to follow to help make towing additional boats easier:**

- Do not tie small boats to the side of your houseboat when underway. This can cause extensive damage to both boats.
- Use at least 15 feet of towline, tying the line to the rear on the houseboat and the bow eye of the small craft.
- **Never** use the bow cleat on the small boat for towing—they are **not** strong enough. Have a member of your crew attend to the towline when starting or stopping the houseboat.
- Use gentle acceleration to get under way and lone slowing when stopping are required. This way you will have ample time to tend to the towed craft(s).
- Make sure to put the towed craft(s) alongside the houseboat when backing up or tie up to the houseboat after it has already been turned around.
- Make sure if backing up, a crew member is watching tow ropes so they do not get stuck in the props.
- ***Periodically check the craft in tow. You are responsible for towed boat.***



# **Stay Safe**

## **Life Vests**

- *Children under 10 years of age must always wear a lifejacket when underway and outside of the houseboat cabin. Fines can be up to \$1,000.00 per violation.*
- Know where your lifejackets are stored. Be sure that you and every member of your crew always have a Personal Flotation Device immediately accessible.
- Children should only be allowed to remove their life vest when in the closed confines of the houseboat cabin or when moored.

## **Swim Safe**

- Before swimming near your houseboat, turn off engines and generator. Allow air to clear.
- Carbon monoxide stays low, near the water and can be deadly.
- Propellers may turn even when out of gear and can cause serious injury.
- Do not jump or dive from the upper deck or from any railings.
- Rocks and branches can be hidden beneath the water's surface.
- You should not swim from an unmoored houseboat.
- Never swim in the main channel, bay or any areas with excessive boat traffic.
- Do not swim under houseboat or run on the top decks.
- Do not use boarding ramp or gang plank as a diving board. The unsupported end can bend or break, causing damage or injury.
- Always use a slide foot first and wet.
- It is important that you know the water depth and check for rocks or underwater hazards.

## **Extra Fuel**

- We supply about 25 gallons of premium gas. Storage of personal fuel containers is limited to 4 Coast Guard approved containers of 6 gallons each and ***must be stored in your tag along boat. Note: We do not allow storing, transporting or dispensing fuel from containers on the houseboats. This must be done on shore or in your personal boat.***
- ***Be aware of all ignition sources.*** The additional insurance agreement does not cover damage resulting from the improper storage, transportation or dispensing of fuel.

## **For your Health**

- Drink only from the freshwater faucets on board your houseboat. Do not drink lake water.
- *Giardia Lamblia* is a tiny protozoan often found in streams and lakes. It can cause diarrhea, cramps, and/or bloating.

## **You are in the Wilderness**

- Help keep wild animals wild. Please do not feed wild or domestic animals you may encounter along the lake.
- Do not leave food in open containers.
- Keep all dishes and utensils clean and secure in drawers or cupboards. Do not leave doors to the houseboat open. Pull in gangplank at night.
- When wind appropriate, allow your anchor lines to *droop* in the water slightly, mice should not be able to climb aboard.
- Help keep bugs at bay by limiting the amount you come in/out of the houseboat. ***Cover your drains (sink and shower) with a cloth, as bugs will come up the pipe.***

## **Carbon Monoxide Warning**

- Carbon Monoxide (“CO”) is a colorless, odorless gas produced by the combustion of fossil fuels. This occurs in all gasoline engines and propane powered equipment. CO is poisonous.
- Signs of exposure include nausea, dizziness, headache and drowsiness. CO poisoning can result in brain damage or death.
- Provide adequate ventilation whenever using propane appliances, generators and outboard motors. Houseboats with generators are equipped with CO detectors. Listen to and believe alarms! ***Do not tamper with CO detectors!***
- Never tie two or more houseboats together. Never tie tag boat on the side of the houseboat. These things may cause CO to enter boats and due to restricted air flow, the CO has nowhere to ventilate.
- We recommend that you not utilize the rear deck of the houseboat while engines and/or generator are operating as CO fumes may be present.
- ***Never sleep or swim while the generator is running.***

## **Designate a Responsible Captain**

- The captain of a houseboat must be at least 18 years of age.
- If alcohol is being consumed, make sure a responsible driver remains alcohol free. Heat, sun and water glare intensify human reactions to alcohol. Most serious boating accidents are alcohol or drug related. Alcohol and drugs impair judgment, reactions, and alertness.

## **Avoid Driving at Night**

- Operating your rental boat after sunset is dangerous and is ***prohibited***. All boats must moor each night, the only exception is in the case of a medical emergency.

## **Practice Courteous Boating**

- Never operate any vessel in an unsafe, reckless, or negligent manner.
- Wakeless speed is considered less than 1000 RPM's and does not produce a noticeable wake behind your craft.
- You are responsible for any damage or injuries caused by your wake, whether in a marina or in the open lake. Slow down when in a harbor or within 150 feet of another boat, person or shore.

## **Wakes and Waves**

- Approach a large wake or wave *slowly*, in gear for maneuverability, and at a 45-degree angle. This will minimize its impact on your houseboat.
- Close the front cabin doors when encountering large waves or wakes.
- Wind can cause rough water and large waves and swells on the lake. It is a good idea to seek shelter in a protected bay and wait for calmer waters.
- Failure to avoid, handle, or navigate through or around large wakes and waves may result in loss of control, physical damage, personal injury, or being thrown overboard.

## **Bow Riding**

- Riding on the houseboat outside of any gates or rails is illegal and hazardous.
- Keep all gates closed when the houseboat is in motion. Keep all arms and legs within railings.
- Falling off a moving houseboat may result in serious injury or death from impact, contact with propellers or drowning.

# Buoys

## GREEN

Can buoys are green with odd numbers.  
Keep them to the left when going upstream.



## RED

Nuns buoys are red with even numbers.  
Keep them to the right when going upstream.



**The U.S. Coast Guard Buoy System:** The Coast Guard numbered red and green buoy system is used to guide boaters and mark hazards. To use this system, you need to know the direction of lake flow. All waters flow downstream towards the Kettle Falls Dam.

Traveling downstream, the vessel will remain to the right-hand side of red markers and to the left-hand side of green markers.

Opposite traveling upstream (away from Kettle Falls).

Traveling upstream, the vessel will remain to the left-hand side of red markers and to the right-hand side of green markers.

***Important – Know the direction the water is flowing. Are you traveling towards Kettle Falls (downstream) or away from Kettle Falls (upstream)?***

## Orange Stripe or Circle

Informational buoys which advise boaters of a wakeless area.



## Orange Diamond

Indicates an underwater danger (sand bar, rocks, etc.). Never pass between the shoreline and a danger buoy. *Not all rock hazards are marked due to changing water levels.*



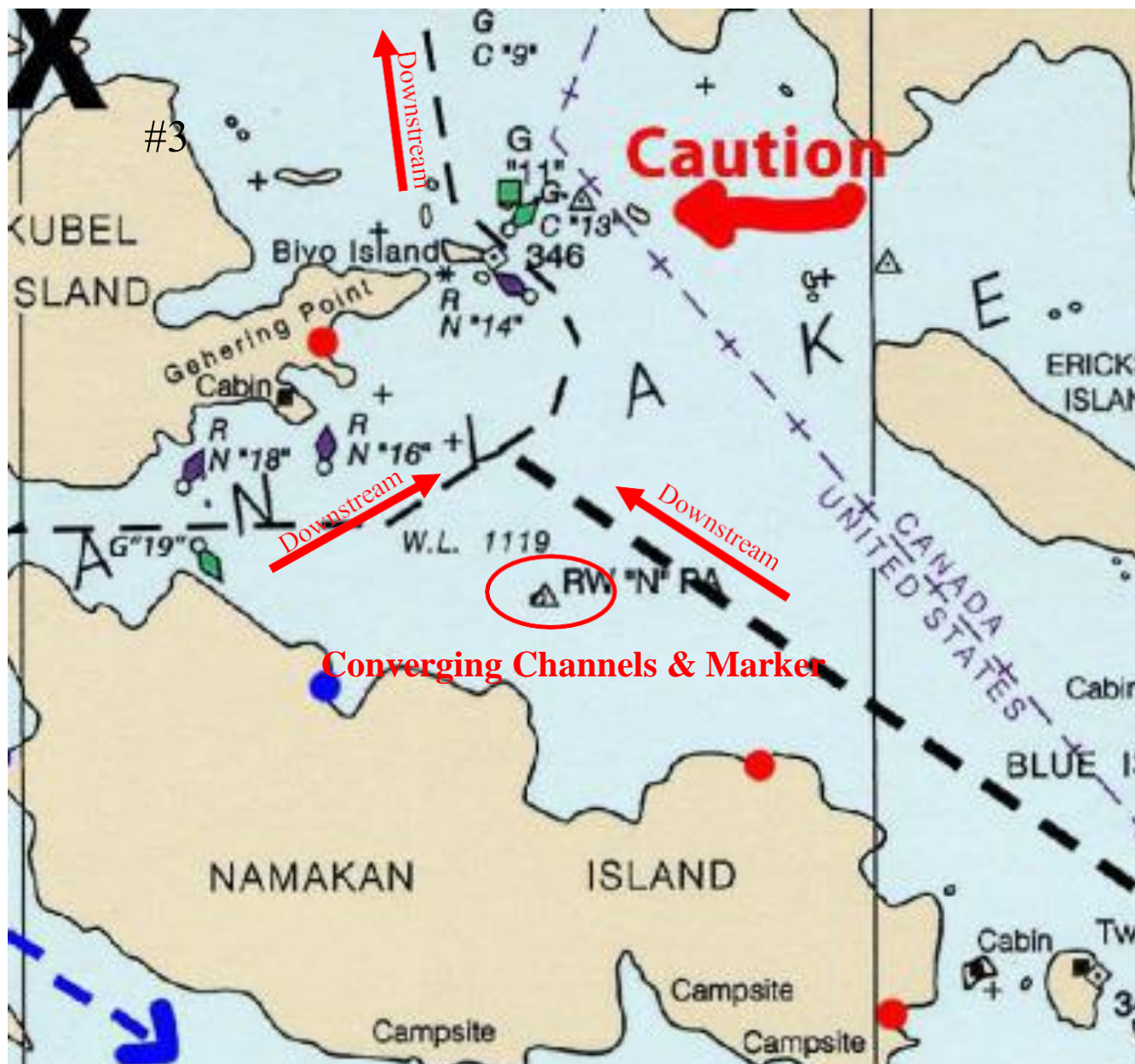
## Convergence Marker

The navigational markers switch sides at this marker on Namakan Lake



These are blown up areas of the maps that show safe passage for some of the trickier areas of navigation.

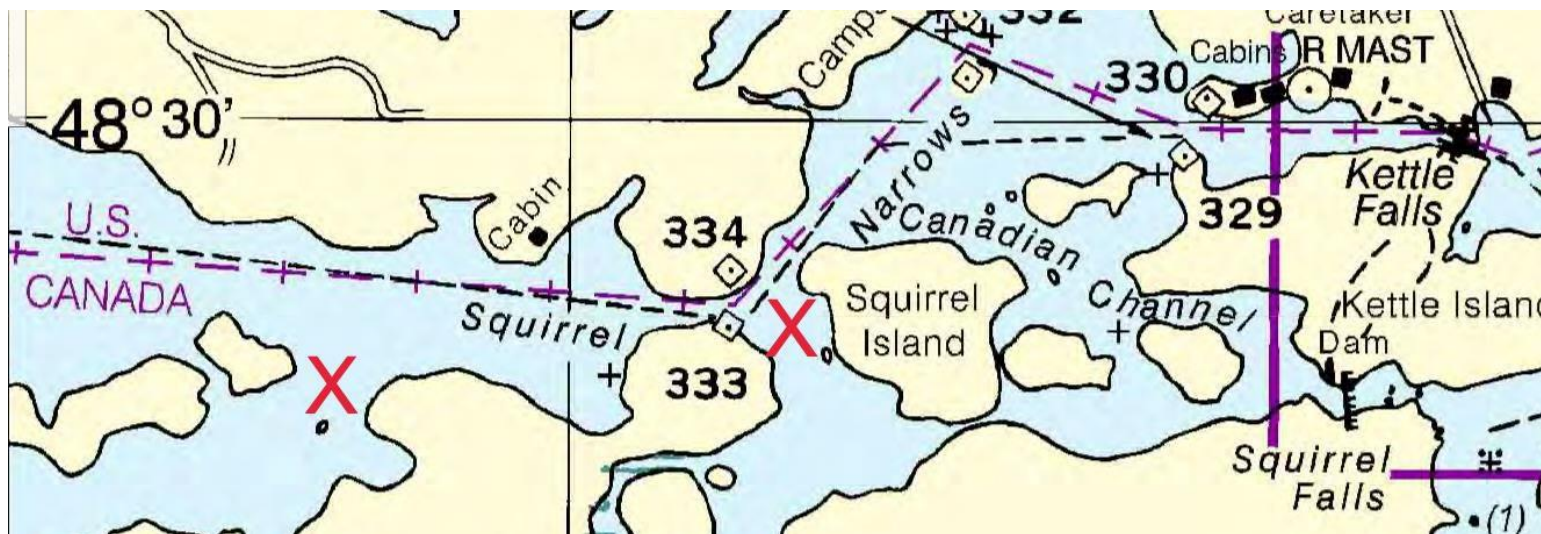
## Converging Channels and Buoys - Map #2



All waters flow downstream to Kettle Falls.

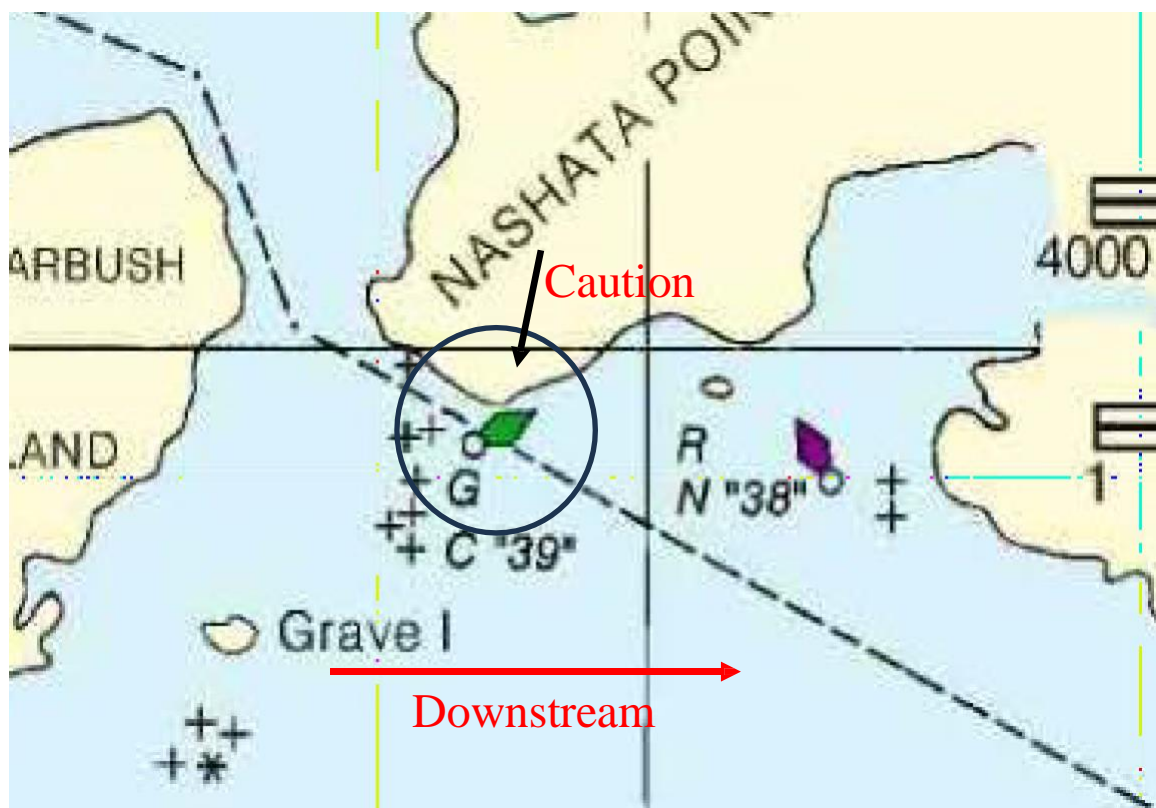


## Kettle Falls Map #3



Do not mistake the US/Canadian border with the navigational channel.  
 The navigational channel is dashed black.  
 This could result in running aground.

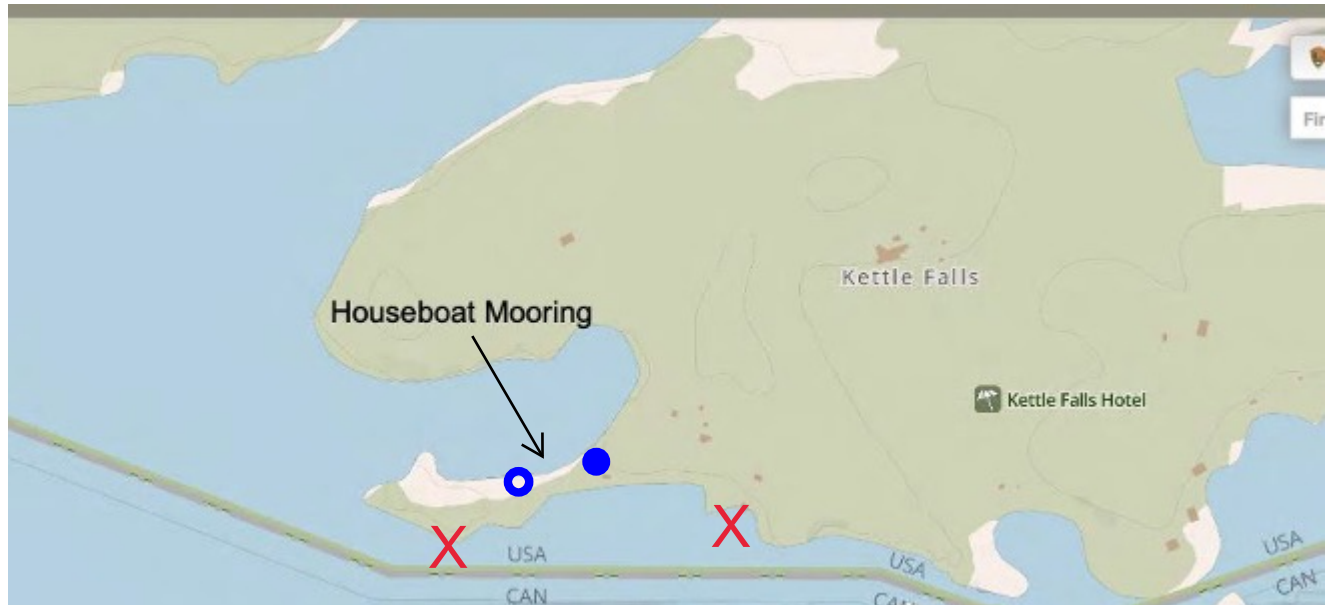
## Nashata Point Map #2



You must stay in between the green buoy and Nashata Point.  
 You must ensure you are not too close to shoreline.  
 Use extreme caution.



# Kettle Falls Area



This is the area that houseboat mooring sites are located.  
The main docks at Kettle Falls are *off limits* to houseboats.

## **Battery Charging Procedures**

Batteries must be charged *twice* each day regardless of travel time.

Start outboard and run idle for a *bare minimum* of 1 hour in the morning and 1 hour in the evening. This should prevent any problems with low or dead batteries.

***Running your outboard at idle burns virtually no fuel, when in doubt, start your engine!***

Showers, lighting, fridge, water pumps, CD player, 12-volt receptacles and the radio all draw down batteries. **Run outboard engine while charging cell phones using the 12-volt receptacles.**

You can never overcharge a battery and it does not cost a lot to run your engine at idle. If you are up at night playing games, taking a shower, etc. you must run your outboard. Think of this: If you left a dome light on in your car, you would have a dead battery.

Any time you notice dimmer than average lights or the check light illuminated on the refrigerator, this is a sign that you are possibly overdrawing the house batteries and **must** increase charging time!

Our house batteries cannot be 100% isolated from the starting batteries. Running down the house batteries too low can eventually begin wearing on the starting battery, making it difficult to start the engine.

**Do not touch or alter our battery system.**

## **Oil Light**

A flashing oil light is simply an oil change reminder. ***You can disregard any flashing oil lights.***

Any time there is a continuous audible tone with a flashing light, please radio base.

## Shift Throttle Operation

**Black** lever controls 3 functions:

- Forward
- Neutral
- Reverse

**Red** lever controls RPM's/speed

**Black** lever must always be in the neutral position to start engine.

**Red** lever *must* always be in the down position, 1000 rpm's or less before shifting black lever to desired gear.

*Always pause in neutral before shifting*, allowing the engine to idle down.

*Incorrect operation of controls can result in damage to lower unit of engine.*

# Small Motor Operation

The small boat is equipped with a throwable and a paddle. It is your responsibility to bring enough life jackets aboard the small boat from the houseboat for use.

1. Tilt the motor down before use.



2. Ensure that all appropriate levers are in the neutral position and the lanyard clip is installed to safety shutoff.



3. Prime the fuel bulb and make sure the tank vent is open. Confirm the line connectors are fastened appropriately to gas tank and engine.
4. Pull motor over slowly. If it does not pull freely, it is not in neutral, or the lockout is engaged. Do not force! *Note: The lockout could be engaged due to trying to start the motor in gear. This could cause damage.*
5. Pull motor until it starts. Excessive pulling of engine could result in flooding.
6. Tilt motor up when finished.

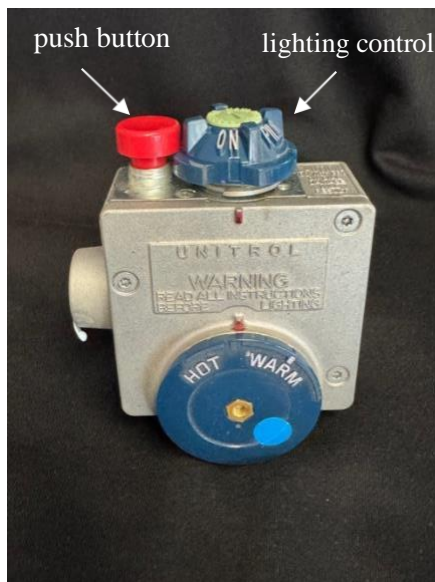


# Hot Water Heater

## Pilot Lighting Instructions

1. Turn lighting control to **OFF** position.
2. Wait at least 5 minutes to allow gas which may have accumulated in burner compartment, to escape.
3. Turn lighting control dial to **PILOT** position.
4. Depress and hold push button (*red or blue*) while lighting pilot burner (*use stick lighter*).
5. Allow pilot to burn 30 seconds before releasing (*red or blue*) push button.
6. If pilot does not remain lit, repeat operation allowing a longer period before releasing (*red or blue*) push button.
7. Turn lighting control dial counterclockwise to **ON** position (*main burner should fire up*).
8. Set temperature control dial between warm and hot.
9. Close access door.

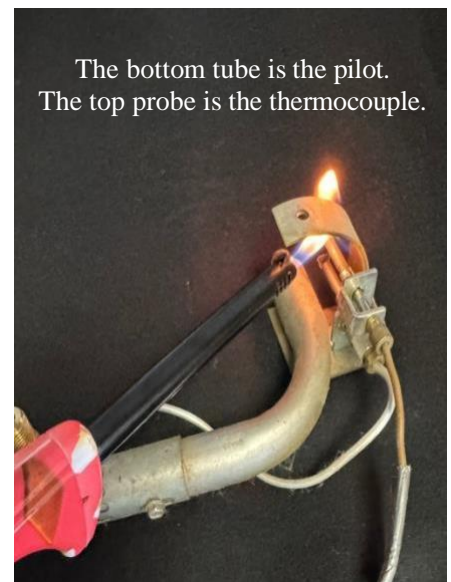
The best method to complete this is in your small boat so that you can easily see and be eye level with the hot water heater.



**Unitrol Gas Control**



**Hot Water Heater**



**Burner Tube Assembly**

***Do not store anything (kayaks, firewood, canoes, etc.) against the hot water heater vent.***

## Refrigerator or Freezer

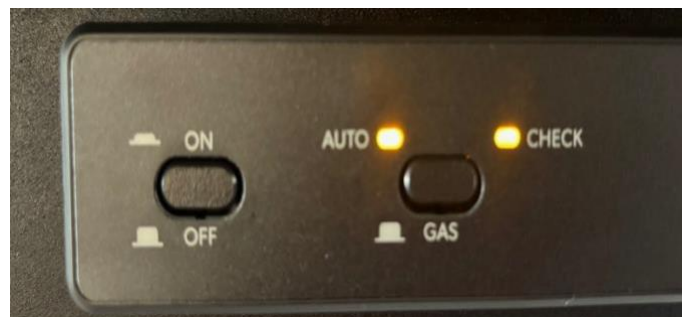
- We provide a large cooler on all houseboats. This should be used for drinks and snacks, so that the refrigerator does not need to be opened as often. *Try to open the refrigerator door only when necessary.*
- Remember that the warmest areas of the refrigerator are on the upper door shelves. The coolest areas are under the cooling fins and at the bottom. *The refrigerator will not cool as efficiently as your household refrigerator.*
- Having food frozen upon arrival is helpful in keeping the refrigerator running properly.
- Try to beach the houseboat as level as possible to help the flow of propane.
- The freezer on the houseboat is not designed for deep or quick freezing.
- Do not place warm items in the freezer. Condensation from warm items will adversely affect the operation of the freezer resulting in frosting the box.
- If the freezer box is frosted over, the refrigerator will struggle to stay cold.
- The coldest part of the freezer is at the bottom. Ice cubes can be made if placed in direct contact with the bottom of the freezer.

### Trouble Shooting

- When the refrigerator is on and functioning, only the “auto” light should be illuminated. if the “check” light is on, that means the refrigerator is not functioning as it should be.
- If the check light is illuminated,
  - 1. The battery voltage on house batteries is low. *Start your outboard engine.* Toggle the refrigerator off, wait 10 seconds, and toggle back to on. Wait 5 minutes to see if the check reappears.
  - 2. LP supply is out or propane tank is off. Lift the cylinders to confirm there is propane and check to assure the tank valves are in the “on” position.



**correct refrigerator position**



**low batteries/start your outboard**



# Toilet

***Ensure the foot pedal is not stuck after each flush.*** This will cause your blackwater tank to fill with lake water and overflow onto the houseboat's floor/carpet.

Blackwater tanks are long and narrow, ***but shallow***. Tanks can develop a "cone". This does ***not mean*** the holding tank is full. If this happens:

1. Turn off the water valve at the toilet or the water pump switch at the helm.
2. Get a sturdy stick from shore.
3. Push the foot pedal down, flapper open, then push the sturdy stick down the throat of the toilet to break up the "cone." (***Make sure the stick stays intact and does not break off into the toilet.***)
4. Now you can determine if the obstruction "cone" is gone or if the blackwater tank is full.
5. If the cone is gone, follow the next steps. If the blackwater tank is full, call base on the radio.
6. Turn the water valve at the toilet or water pump switch at the helm back on.
7. Push the foot pedal down to see if the toilet will flush.
8. Ensure the foot pedal is not stuck down.

## Hummingbird GPS

*This is not intended for navigational use. It is a secondary reference to aid the use of navigational maps provided. (Using the GPS solely to navigate will result in running aground and will not be accepted as an excuse.)*

*These units are set up with a Navionics chip as it is the best map for our area. The Hummingbird is not equipped with a transducer to show depth.*

1. Power on – press once.
2. When prompted, press menu
3. Startup option
  - Arrow over to normal and select
4. Press Exit
5. Press View to Display
  - You may have to press view more than once to view the navigation page.
6. Wait for GPS to position fix.
  - Bar at top disappears.
7. Press the + to zoom in and the – to zoom out.

Tip: The 500' and 1000' range view is best for speeds houseboats travel.



## Fresh Water Pump

Fresh water pumps are located at the kitchen and vanities. Please do not force, be gentle.

Directions: Move the handle back and forth to pump the water from the tank to the sink. You may have to pump it a few times before water flows. *Use the prime lock position when finished to keep the faucet in prime hold position.*

We provide approximately 30 gallons of fresh water. It is recommended to bring some with.



prime lock position

## Gray Water

The Clean Boating Act of 2008 deemed *discharge incidental to the normal operation of recreational vessels* to be acceptable and encourages best management practices be always used.

In the effort to reduce graywater please:

- scrape/wipe dishes before washing
- use sink strainer
- use disposable dishes/flatware when possible
- place nothing down sink (oils, grease, food, etc.)
- reduce water use (short showers, sinks off while brushing teeth, etc.)
- bathe in lake when possible
- use nontoxic and phosphate-free/biodegradable soaps

## Thank You

“For every shared sunset and sunrise on this trip, thank you.”

This land of spectacular beauty and rich history was first proposed as a national park in 1891. So, you left your car behind and set out on a water highway through the heart of the continent, there are countless out-of-the-way places to find adventure.

We sincerely thank you for choosing Ebel's! We pride that we are a family-owned business for over 50 years providing houseboat vacations in Minnesota. Voyageurs National Park is so large that unless you spend years here, you won't see all it has to offer. When you are ready to come join us again, we offer a 10% return guest discount (valid all season).

If you could take a few minutes to leave us an online review (Google, Yelp, Trip Advisor, etc.), it would be greatly appreciated!

Thank you!

Justin & Heather Ebel and Crew

