

EXTREME HEAT & WILDFIRE SMOKE MANAGEMENT PLAN

For Skippers, Crew & Guests on the Salish Sea

Who this plan is for

This is a practical safety guide for the skipper, regular crew, and guests aboard a vessel during the Salish Sea summer sailing season (typically June through September). It is not a regulatory compliance document — it is a personal safety framework based on guidance from Environment and Climate Change Canada, the BC Centre for Disease Control, and general best practices for recreational mariners. It covers extreme heat while underway and at a marina berth, and wildfire smoke exposure. It includes both common sense and less well-known information, so it is relevant to both novice and experienced sailors.

1. WHY THIS MATTERS ON THE SALISH SEA

The Salish Sea has experienced increasing frequency and intensity of summer heat events, including the catastrophic heat dome of June 2021 and multiple subsequent extreme heat periods. The combination of a forecast super El Niño, and extensive marine heat waves for 2026 and 2027 indicate a high probability of sailors encountering extreme heat. The following factors are relevant:

- An open cockpit or foredeck in full sun provides almost no shade or natural sun relief — and reflected glare off the water adds to the heat load. Some cruising boats have partial shade from biminis.
- Sustained physical exertion. Sail handling, helming, anchoring, and rowing to shore are moderate-to-heavy physical work performed in full heat exposure.
- Dehydration sets in faster than most people expect, especially in people who are not acclimatized.
- Heat increases irritability, aggression and poor decision-making.
- Extreme heat causes unstable air, which may also create squall conditions, making situations more dangerous.
- Compressed medical response. In a marina, help is nearby. At anchor or underway in a remote bay, the nearest emergency care may be 30–90 minutes away by water or road.
- Crew vulnerability. Family and guests — including children, older adults, and people with health conditions — may not recognise their own symptoms or may be reluctant to speak up.
- Wildfire smoke. BC's wildfire seasons now routinely produce smoke events that reduce visibility, degrade air quality across the entire Salish Sea region, and compound heat stress significantly.

1.1 Heat Season Window for the Salish Sea

The primary heat risk period is June 1 through September 30. Within this window:

- June and July: highest risk of severe, rapid-onset heat events (including heat dome conditions driven by high-pressure blocking patterns).
- August and September: wildfire smoke risk is at its peak, often overlapping with continued hot weather. Smoke can arrive with little warning and affect large areas simultaneously.
- July through September: sea breezes typically develop in the afternoon in Georgia Strait, which can provide relief — however a strong El Niño plus an extensive “blob” marine heat wave in the NE Pacific may significantly reduce the westerly sea breeze.

2. MONITORING: WHAT TO CHECK AND HOW

Good preparation starts 48–72 hours before a passage or stay at anchor.

Skippers: Each morning of heat season, check: (1) humidex for the day, (2) Air Quality Health Index (AQHI) current and forecast, (3) any active heat or air quality warnings, (4) firesmoke.ca for the 24–48 h smoke forecast. Take 5 minutes. This is as important as checking the wind and tide.

2.1 Weather & Temperature

Resource	What to Look For
Environment Canada — weather.gc.ca	Humidex forecast for locations around Georgia Strait. Heat Warnings issued when daytime max $\geq 29^{\circ}\text{C}$ and overnight min $\geq 17^{\circ}\text{C}$ for two or more consecutive days, or when humidex reaches 38. Create an account to set and receive notifications.
WeatherCAN App and Alerts (Environment Canada)	Set app notification alerts for heat warnings, air quality, temperature and Special Weather Statements for your sailing area.
VHF Weather Channel WX1 / WX2	Canadian Coast Guard continuous marine forecasts for Strait of Georgia, Juan de Fuca, Haro Strait. Check before and during passage.
XM/SiriusXM Marine; PredictWind or other apps	Extended offshore forecasts; wind and temperature overlays useful for multi-day passage planning.

2.2 Air Quality (Wildfire Smoke)

Resource	What to Look For
airhealth.ca	Current AQHI by location. Check the nearest available station (Victoria, Nanaimo, Duncan, Campbell River). Updated hourly.
WeatherCAN App	Includes AQHI conditions and forecasts. Set AQHI in notifications.
FireSmoke Canada firesmoke.ca	48-hour smoke forecast maps for BC; shows where smoke plumes are expected to travel. Valuable for planning for smoke arrival.
BC Wildfire Service App or bcwildfire.ca	Fire map showing location and size of all active fires.
BC Air Quality Warnings aqwarnings.gov.bc.ca	Province-issued Air Quality Warnings and Special Air Quality Statements. Sign up for email alerts.
AQmap.ca (UBC / UNBC sensor network)	Real-time PurpleAir sensor data calibrated to AQHI-plus scale. Useful when you are in a location without an official AQHI station nearby.
VHF radio / Coast Guard	Marine forecasts may include references to reduced visibility from smoke.

3. HEAT RESPONSE ON THE WATER

The following thresholds apply to all aboard, regardless of age or fitness. The skipper is responsible for activating the appropriate level of controls. Communicate the level to all crew and guests at the start of each sailing day.

Humidex	Alert Level	Skipper's Actions on the Water
23–27	WATCH	<p>Beginning of heat range. Inform crew at start of day.</p> <ul style="list-style-type: none"> • Confirm drinking water aboard is adequate for all crew • Ensure sunscreen, hats, and sun protection are available
28–31	CAUTION	<p>Increased risk. Build hydration and shade into the day.</p> <ul style="list-style-type: none"> • Remind all aboard to drink one glass (250 mL) water every 20–30 min • Issue individual water bottles so everyone can monitor their water intake • Deploy cockpit awning, bimini, or sail shade if available • Ensure adequate water supply is available when using dinghy • Avoid heavy sail work (sail changes, spinnaker) in the peak heat window (11:00 am – 4:00 pm) where operationally possible. Continue with essential sail work such as reefing. • Check in with children and older crew frequently — they may not self-report symptoms
32–39	WARNING	<p>Significant risk. Active management required.</p> <ul style="list-style-type: none"> • Increase water intake: encourage one glass every 15 min; offer electrolyte drinks (low-sugar) • Limit heavy physical work; distribute tasks and rest in shade between efforts • Seek anchorage by early afternoon if possible and allow crew to cool below decks or swim • Wet bandanas or towels for crew to use on neck and wrists • Spray bottle in cockpit to wet down skin and clothing to promote evaporative cooling • Soak clothes (e.g. T-shirts) in water and then put them on • Consider motoring rather than hard-reaching or beating if wind requires extended physical effort
40–44	DANGER	<p>Serious risk for everyone, especially children and older adults.</p> <ul style="list-style-type: none"> • Strongly consider NOT departing from marina; comfort and safety at berth with power and shade is preferable to open water in extreme heat • If underway, seek anchorage or marina as soon as practicable; minimise time on deck • Open all hatches and ports; run cabin fan below; wet cockpit seats and deck • Crew rotations: no more than 30 min helming/deck duty without cool break below • Mandatory water intake: offer water to every crew member at minimum every 20 min regardless of whether they ask
45+	EXTREME	<p>Do not sail. Stay at berth or in sheltered marina.</p> <ul style="list-style-type: none"> • If ashore, seek air-conditioned public spaces (libraries, community centres, marinas with AC) • If already underway in deteriorating conditions, immediately proceed to nearest safe shelter — anchorage with shade, marina, or any harbour • These are life-threatening conditions for prolonged exposure; err strongly toward caution

3.1 At Marina / Berth in Heat

Being on a vessel at a marina in extreme heat presents its own risks — particularly because boat interiors can heat dramatically when closed up and can remain dangerously warm long after sunset. A 30°C day can produce interior temperatures above 45°C in a closed cabin within an hour.

- Open all ports, hatches, and companionways during the day to maximize airflow. A forward hatch open and a cockpit hatch open creates a draft.
- Rig a sail shade or awning over the cockpit and as much deck area as possible.
- Store ice and keep a cool box accessible on deck for cooling cloths and cold drinks.
- Implement hydration protocol.
- Use spray bottles to wet skin and clothes, use cool / wet bandanas / towels.
- Never leave children, pets, or incapacitated persons alone in a closed cabin during heat.
- Consider sleeping in the cockpit under an awning rather than below decks during heat events.
- If the marina has amenities (showers, air-conditioned lounge), use them freely — a cool shower in the afternoon significantly reduces accumulated heat load.
- Wet down the deck and cockpit frequently; evaporative cooling from the deck surface helps.

4. HYDRATION — THE MOST IMPORTANT CONTROL

Dehydration is the most common cause of heat exhaustion on the water. It impairs judgment, coordination, and reaction time — exactly the faculties you need underway. The challenge is that thirst is a lagging indicator: by the time you feel thirsty in the heat, especially if it is windy, you are already mildly dehydrated.

4.1 Hydration Guidelines for Sailors

- Before departure: every crew member and guest drinks at least 500 mL (two glasses) of water before heading on deck.
- Underway: one glass (approximately 250 mL) per person every 20–30 minutes during heat conditions (humidex 28+). Do not wait to be asked — the skipper should actively offer water.
- Assign each person a water bottle and ensure they are consuming the contents on the chosen hydration schedule.
- In rough sea conditions fear of seasickness, or not wanting to go below to pee, can lead to resistance to adequate hydration. This can lead to dehydration and heat exhaustion.
- Hot physical work: increase to one glass every 15 minutes during heavy sail handling, anchoring, or rowing to shore.
- When the air temperature is below skin temperature (35–37 C) wind increases evaporative cooling, however above this temperature wind increases heating, sweat rate increases to cool, and dehydration occurs faster than in still air.
- Breathing dry, windy air causes increased fluid loss through the respiratory tract, increasing dehydration.
- Electrolytes: plain water is sufficient for shorter periods; add low-sugar electrolyte drinks (sports drinks) for periods exceeding 2–3 hours of heat exposure, or for crew who are sweating heavily.
- Children: children dehydrate more rapidly than adults and are often the last to say they feel unwell. Skipper should proactively offer water to all children on a fixed schedule regardless of whether they ask.
- Alcohol: alcohol significantly accelerates dehydration and impairs heat regulation. Restrict alcohol consumption during passage and in high heat conditions; never allow it to substitute for water intake.
- Coffee and high-caffeine drinks: are also mildly dehydrating; acceptable in moderation but should not reduce total water intake.

4.2 Water Supply Planning

- Calculate your expected time underway plus a contingency margin of 25+%. Plan for at least 2 litres per person per day in mild conditions; 3+ litres per person per day during heat events or active sailing. Include extra water for spray bottles and soaking clothes if conditions warrant.
- Top up the tank and/or fill jerry cans at the marina before every extended passage in heat season.
- When travelling by dinghy ensure it is equipped with enough water to meet hydration requirements.

- Carry a known quantity of bottled water as a backup reserve; do not rely solely on the watermaker (failure at the worst time is plausible).
- Keep water easily accessible in the cockpit — a full insulated water bottle or small cooler within arm’s reach of the helm is a simple but effective measure.

5. SUN PROTECTION

Reflected UV radiation from the water surface means sailors receive roughly double the UV exposure of land-based activities. Cumulative UV exposure is a significant health risk beyond immediate sunburn — it is the primary cause of skin cancer, which sailors face at elevated rates.

- Sunscreen: SPF 50+ broad-spectrum (UVA + UVB) applied before going on deck and reapplied every two hours or after swimming. Don’t forget ears, back of neck, and backs of hands.
- Hats: wide-brim hats or legionnaire-style hats with neck flap. Baseball caps leave the ears and neck unprotected and are a poor choice in full sun.
- Clothing: lightweight, long-sleeved UPF-rated shirts and pants are more effective than sunscreen for extended sun exposure. Light colours reflect more heat.
- Sunglasses: UV-rated polarised lenses reduce eye strain and UV damage. Particularly important when navigating with glare off the water.
- Lips: use SPF-rated lip balm; lips burn quickly and are prone to significant damage.
- Children: apply sunscreen more frequently to children than adults; ensure sun-protective clothing and hats are worn whenever on deck.
- Shade: use the bimini, cockpit awning, or sail shade whenever underway or at anchor in full sun. Spend time below decks voluntarily during the peak solar hours (11:00 am – 4:00 pm) when conditions allow.

6. RECOGNISING & TREATING HEAT ILLNESS

The skipper and all experienced crew should know these conditions and responses. On a boat underway, professional medical help may be 30–90 minutes away. What happens in the first 10 minutes matters.

Condition	Signs & Symptoms	What to Do
Heat Cramps	Painful muscle spasms, usually in legs or abdomen. Heavy sweating. Normal alertness.	Move to shade below decks. Rest. Drink water and electrolytes. Gentle stretching. Do not return to heavy work until cramps fully resolve.
Heat Exhaustion	Heavy sweating. Cool, pale, clammy skin. Weak and rapid pulse. Headache, dizziness, nausea. May feel faint. Still alert and oriented.	Move to coolest part of boat immediately (below decks). Lie down with legs elevated. Apply cool, wet cloths to forehead, neck, armpits – keep wet using spray bottle. Sip cool water. Monitor closely. If no improvement in 15 min or worsening, call Coast Guard (Ch 16) and prepare to seek emergency care.
HEAT STROKE — EMERGENCY	Body temperature very high (feels burning hot). Skin hot and flushed, may be dry OR damp. Confusion, slurred speech, irrational behaviour. Rapid strong pulse. May lose consciousness. May have STOPPED sweating.	CALL COAST GUARD CH 16 IMMEDIATELY – declare MAYDAY or PAN PAN. Cool the person as fast as possible: immerse in seawater, apply ice/cold packs to neck, armpits, groin. Remove excess clothing. Do not give fluids if confused or unconscious. Proceed immediately to nearest emergency medical care — motor if needed regardless of wind.

Σ Heat Stroke is a Boat Emergency — Call the Coast Guard

If someone aboard is confused, can’t walk straight, has hot skin and has stopped sweating in extreme heat, or loses consciousness: CALL COAST GUARD ON VHF CHANNEL 16 and request immediate assistance for suspected heat stroke. Coast Guard will coordinate a response. Do not assume the person will recover on their own. Heat stroke is fatal without rapid cooling and medical intervention.

6.1 First Aid Supplies to Carry

The following items should be included in your first aid kit during heat season:

- Instant cold packs (minimum 4–6; can be used on neck, armpits, groin for heat stroke)
- Electrolyte sachets or tablets
- Clinical thermometer (to assess body temperature if heat stroke suspected)
- Cooling towels (phase-change or wet-cool type)
- Spray bottle to continuously wet skin and clothing
- Insulated water bottle or small cooler with ice accessible from cockpit
- VHF radio with Coast Guard frequencies programmed and within reach of helm

7. WILDFIRE SMOKE ON THE SALISH SEA

BC's wildfire seasons have lengthened and intensified with climate change. The interior of BC, Washington State, and Oregon now routinely produce large wildfires from June through October that push smoke into the Salish Sea region. Smoke can arrive with surprisingly little warning — a pristine morning can become an AQHI 8 afternoon within a few hours as wind patterns shift.

Smoke from wildfires contains fine particulate matter (PM2.5) — microscopic particles that penetrate deep into the lungs and enter the bloodstream. Unlike dust or pollen, which are stopped by the nose and throat, PM2.5 bypasses these defences entirely. The health risks compound with heat: smoke-irritated airways are less able to cool blood efficiently, and increased breathing demand during physical exertion on a boat means a sailor inhales more smoke per hour than a person at rest.

7.1 The AQHI Scale — What It Means for Sailors

The Air Quality Health Index (AQHI) runs from 1 to 10+. It is calculated from three pollutants including PM2.5 and is updated hourly at airhealth.ca. During smoke events, it primarily reflects PM2.5 concentrations. Refer to the AQHI-Plus reading if available in your area during smoke events, as it weights PM2.5 more heavily.

AQHI	Risk	General Public	At-Risk *	Sailors / Boating Actions
1–3	LOW	Enjoy usual outdoor activities.	Enjoy usual activities.	<ul style="list-style-type: none"> • Normal sailing activities • Monitor forecast for changes
4–6	MODERATE	Continue outdoor activities unless experiencing symptoms such as coughing or throat irritation.	Consider reducing or rescheduling strenuous outdoor activity if experiencing symptoms.	<ul style="list-style-type: none"> • Proceed with normal activities but watch for symptoms • Reduce sustained heavy exertion (spinnaker runs, tacking to weather) • At-risk crew: consider limiting deck time
7–10	HIGH	Consider reducing or rescheduling strenuous outdoor activity if experiencing symptoms.	Reduce or reschedule strenuous activities outdoors. Children and elderly should take it easy.	<ul style="list-style-type: none"> • Limit sustained physical exertion on deck • Wear N95/KN95 respirators for any extended deck work • Run HEPA air purifier below deck if available • At-risk crew (asthma, COPD, heart disease, children, elderly) move below decks or do not sail • Consider anchoring and sheltering below if conditions allow
10+	VERY HIGH	Avoid strenuous outdoor activities.	Avoid outdoor activities. Seek indoor shelter.	<ul style="list-style-type: none"> • Do not sail if avoidable. Stay below decks or in sheltered indoor facility • If underway, proceed immediately to nearest marina or sheltered anchorage • Everyone: N95/KN95 if on deck • At-risk crew: should not be on deck at all

* At-risk includes: people with asthma, COPD, heart disease, or diabetes; children under 18; adults over 65; pregnant persons; anyone with a current respiratory infection.

7.2 Smoke on the Water: Additional Hazards

- **Visibility:** heavy smoke can reduce visibility to less than 1 nautical mile. This creates collision risk, particularly in busy traffic areas such as Active Pass or Dodds Narrows. Treat reduced smoke visibility the same as fog: slow down, Nav lights, use radar and AIS if available, sound fog signals, monitor VHF Ch 16.
- **Smoke and heat together:** smoke raises your AQHI risk level at the same time as heat raises your humidex risk level. Manage both simultaneously. The compound effect on health is greater than either alone.
- **Wildfire observation:** if you can see an active fire from the water, note its location and report to Coast Guard if it appears to be expanding or has no active fire suppression response present. Do not approach.

7.3 Reducing Smoke Exposure on a Sailboat

- **Close up the boat:** during high AQHI smoke conditions, close companionway, hatches, and ports as much as practical to reduce PM2.5 infiltration below decks. Use a portable HEPA air purifier below decks if available. This conflicts with the recommendation in section 3.1 to open the boat for cooling. In smoky conditions closing up the boat takes priority.
- **Respirators:** standard cloth or surgical masks provide limited protection against PM2.5. A well-fitted N95 or KN95 respirator (properly worn, no gaps) reduces PM2.5 inhalation significantly. Carry enough for the whole crew.
- **Timing:** smoke is often lighter in the morning before winds develop. Consider early departures and arriving at anchorage before afternoon smoke intensifies.
- **Route selection:** smoke from interior fires often arrives from the northeast or east. Georgia Strait locations (Nanaimo, Comox, Powell River area) may have worse air quality than the Gulf Islands or Juan de Fuca approaches, depending on wind direction. Check firesmoke.ca 24–48 hours ahead.
- **Medications:** crew members with asthma or COPD should ensure their rescue inhalers and any other respiratory medications are on board and accessible before every passage during smoke season. Smoke can trigger attacks rapidly and with little warning.
- **If smoke arrives unexpectedly at sea:** close up the boat, reduce exertion, give everyone water, put N95s on anyone with respiratory conditions, and assess whether to seek shelter.

7.4 Smoke Season Monitoring Routine

From August 1 through September 30, add the following to the daily morning check:

1. Check current and forecasted AQHI on apps or web.
2. Check firesmoke.ca for 48-hour forecast of smoke locations.
3. Check BC Wildfire Service map or app for any new fires within 200 km.
4. Check marine forecast on VHF for any smoke or visibility advisories.
5. Decide: proceed as planned, adjust route to avoid smoke corridor, delay departure, or stay at berth.
6. Brief all crew on the air quality level and actions in effect for the day.

8. VULNERABLE CREW: CHILDREN, OLDER ADULTS & HEALTH CONDITIONS

Family and friends aboard a sailboat are often the most vulnerable to heat and smoke — and the least likely to self-report symptoms either because they don't want to ruin the trip or because they are not aware of how serious their condition is becoming. It is important to proactively monitor all aboard.

8.1 Children

- Children's bodies generate more heat relative to their weight than adults and have less efficient sweating.
- Children may not stop activity when hot and may not recognise early symptoms. Do not rely on them to tell you they are unwell.
- Heat exhaustion in children can progress to heat stroke faster than in adults.
- Apply sunscreen to children at least every two hours; even 15 minutes of unprotected exposure on the water in peak sun can cause significant sunburn.
- Ensure children wear a life jacket whenever on deck; in heat, children may be lethargic and off-balance.

- If a child is quiet, lethargic, or stops eating and drinking during hot weather, treat this as an early warning sign and move them below decks or into shaded areas immediately.

8.2 Older Adults

- Adults over 65 are less able to regulate body temperature efficiently; their bodies acclimatize more slowly to heat.
- Many medications common in older adults (diuretics, beta-blockers, certain antihistamines, antipsychotics) impair heat regulation or promote dehydration. Ask guests to mention any regular medications.
- Cognitive effects of heat (mild confusion, slow responses) may be subtle in older adults and can be mistaken for other conditions. If an older crew member seems “off,” treat it as a heat concern and move to shade and water immediately.

8.3 Crew with Health Conditions

- Asthma and COPD: smoke is a direct trigger. These crew members should not be on deck during AQHI 7+ and should have rescue medication immediately accessible at all times.
- Heart disease: extreme heat increases cardiac demand significantly. Crew with heart conditions should not perform heavy physical work in heat above humidex 32 and should be monitored closely in all heat conditions.
- Diabetes: heat affects insulin absorption and blood sugar regulation. Diabetic crew should be extra vigilant about hydration and should monitor blood glucose more frequently during heat events.
- Pregnancy: pregnant persons are at elevated risk from both heat and smoke. Follow at-risk guidance for both heat and AQHI levels.

Skipper’s Pre-Departure Health Check

Before departure on any multi-day trip in heat season, ask all crew and guests: Do you have any health conditions the skipper should know about? Do you have any medications aboard? Are you feeling well and hydrated? This takes two minutes and can prevent a serious emergency.

9. CREW BRIEFING GUIDE

At the start of each sailing day in heat season, and at the start of any passage with new crew or guests, the skipper should cover the following points. This does not need to be a formal presentation — five minutes in the cockpit over a cup of tea is enough.

9.1 Daily Briefing Checklist

- Today’s humidex forecast and what alert level applies
- Today’s AQHI and whether any air quality warnings are in effect
- Water: where is it, how much do we have, and the schedule for drinking it: Assign water bottles
- Sunscreen and hats: expectation that everyone applies before going on deck
- Signs of heat illness: what to watch for in yourself and others, and to tell the skipper immediately
- VHF radio: location, channel 16, and how to call Coast Guard in an emergency (for any guest who may need to do this)
- The rule: if you feel dizzy, nauseous, confused, or unwell for any reason, say so immediately. There is no stigma.

9.2 Talking to Guests About Heat

Many guests have no sailing experience and no heat safety awareness. They may not know that open-water sailing in full sun is much more physically demanding than it looks. A friendly two-sentence framing goes a long way:

Suggested wording for guests:

"Sailing in the heat is a lot of fun, but the sun and physical work add up fast on the water. Today we’re keeping everyone hydrated on a schedule, wearing hats and sunscreen, and if anyone feels off at all — dizzy, headache,

nausea, anything — tell me right away and we'll sort it out. There's no toughing it out".

10. PASSAGE PLANNING IN HEAT & SMOKE CONDITIONS

Good passage planning during heat season incorporates heat and smoke risk as seriously as wind and tide. The following questions should be part of every trip plan:

10.1 Before You Go

- Is there a Heat Warning or Air Quality Warning in effect for any part of the planned route or destination?
- What is the humidex forecast for the peak heat window of the day (noon to 5:00 pm)?
- Is the AQHI forecast to reach moderate (4+) or high (7+) at any point during the passage?
- Where is the nearest safe shelter if conditions deteriorate mid-passage? (List anchorages, marinas, and public docks along the route before departing.)
- Do you have enough water for all crew plus a 25+% reserve?
- Does anyone aboard have a health condition that raises their risk level?

10.2 Go / No-Go Decision Framework

Condition	Decision
Humidex forecast ≤ 39 , AQHI 1–6, experienced crew	Proceed with standard controls in place.
Humidex 40–44 OR AQHI 7–10, any crew	Strong preference to delay or modify: shorter passage, early start and anchor by midday, at-risk crew stay ashore.
Humidex 45+	Do not depart. Wait for conditions to improve.
AQHI 10+ (Very High)	Do not depart. At-risk crew should not be on deck. Shelter below with ventilation closed.
Heat Warning AND AQHI 7+ simultaneously	Remain at berth or shelter. The compound risk of simultaneous heat and smoke is significantly greater than either alone.
Children or at-risk crew aboard, humidex 40+	Do not sail regardless of other conditions.

10.3 Anchorage Location Selection in Heat

- Prefer anchorages with tree shade over the boat in the afternoon (eastern or northeastern shore of an island, or under a bluff).
- Avoid anchorages on light colored shell or sand beaches in full south or southwest sun — reflected heat from the water and bottom significantly increases heat load.
- Anchorages with good tidal current flow provide cooling air movement when the wind dies; calm, enclosed bays can trap heat in dead-calm conditions.
- Swim access: being able to cool off in seawater is one of the most effective heat management tools available on a boat. Anchor where swimming is practical.

11. EMERGENCY CONTACTS & RESOURCES

Emergency / Resource	Contact / Link
Coast Guard — ALL marine emergencies	VHF Channel 16 (ALWAYS monitor underway). Telephone: 1-800-567-5111 (Pacific Region)
Ambulance / Land Emergency	9-1-1 (use when at marina or ashore)
HealthLink BC (nurse advice line)	8-1-1
Nearest Emergency Room — Sidney area	Saanich Peninsula Hospital, 2166 Mt Newton Cross Road, Saanichton — 250-652-3911
Nearest Emergency Room — Victoria	Victoria General Hospital, 1 Hospital Way — 250-727-4212
BC Poison Control	1-800-567-8911
Environment Canada Weather — Marine	weather.gc.ca WeatherCAN app VHF WX1/WX2
Air Quality (AQHI)	airhealth.ca WeatherCAN app AQHI Canada app
Wildfire Smoke Forecast	firesmoke.ca BC Wildfire Service App: bcwildfire.ca
BC Air Quality Warnings	aqwarnings.gov.bc.ca
Real-time Smoke Sensor Map	aqmap.ca
Skipper's cell (fill in)	[Your cell number]
Marina of current berth (fill in)	[Marina name and phone number]

Note:

The 2021 BC Heat Dome

The June 2021 heat dome killed nearly 600 British Columbians in less than a week. Temperatures reached 40°C+ on southern Vancouver Island. On the water, conditions included extreme solar radiation, high humidity, and temperatures that remained above 30°C overnight. The Salish Sea region is expected to experience heat events of similar or greater intensity as climate change progresses.

APPENDIX A — QUICK REFERENCE CARD

Laminate and post in cockpit or attach near the helm.

HEAT CRAMPS	HEAT EXHAUSTION	HEAT STROKE — EMERGENCY
<ul style="list-style-type: none"> • Painful muscle spasms • Heavy sweating • Still alert and oriented <p>DO: Shade + rest + water/electrolytes</p>	<ul style="list-style-type: none"> • Heavy sweating; pale, clammy • Weak pulse, dizzy, nauseous • Still conscious and aware <p>DO: Cool cloths below decks, sip water, monitor. Call Ch 16 if not improving.</p>	<ul style="list-style-type: none"> • Hot, flushed skin (dry or damp) • Confused, slurred speech • May lose consciousness <p>CALL CH 16 NOW. Cool with seawater + ice packs to neck/armpits/groin. Head to nearest emergency.</p>

HUMIDEX LEVELS	AQHI (SMOKE/AIR QUALITY)
<p>23–27: Watch — monitor, prepare</p> <p>28–31: Caution — hydrate, shade</p> <p>32–39: Warning — limit exertion, rest</p> <p>40–44: Danger — seek shelter, minimize deck time</p> <p>45+: STAY AT BERTH</p>	<p>1–3: Low — normal activities</p> <p>4–6: Moderate — watch for symptoms, at-risk reduce exertion</p> <p>7–10: High — N95 for extended deck work; at-risk crew below decks</p> <p>10+: Very High — close boat, N95 mandatory, seek shelter</p>

<p>شُ DRINK WATER</p> <p>500 mL before you go. 250 mL every 20 min. Offer it to everyone — don't wait to be asked.</p>	<p>œ FIND SHADE</p> <p>Rig the bimini or awning. Use the cabin. Go below if you feel warm. Shade is your first tool.</p>
<p>Ó WATCH THE CREW</p> <p>Kids and older adults won't always say they're struggling. Check in. Quiet and still = early warning sign.</p>	<p>كِي CH 16 FOR EMERGENCIES</p> <p>Confused, hot skin, stops sweating in heat = heat stroke. Call Coast Guard Ch 16 immediately. Cool them now.</p>

Coast Guard VHF Ch 16 | Ambulance: 9-1-1 | HealthLink BC: 8-1-1 | Air Quality: airhealth.ca | Smoke Forecast: firesmoke.ca

APPENDIX B — PRE-DEPARTURE HEAT SEASON CHECKLIST

Complete before any passage or extended marina stay during heat season.

σ	WEATHER & AIR QUALITY
σ	Check humidex forecast for today and tomorrow
σ	Check AQHI current and forecast at airhealth.ca
σ	Check firesmoke.ca 48-hour smoke forecast
σ	Check for active Heat Warning or Air Quality Warning along route
σ	Check VHF and or digital weather forecast (Ch WX1/WX2)
σ	WATER & PROVISIONS
σ	Water tank topped up and/or jerry cans filled
σ	Minimum 3 litres per person per day calculated and aboard for passage duration plus 25% reserve
σ	Individual water bottles available to monitor intake. Water spray bottles and insulated water bottle / cooler accessible from cockpit
σ	Electrolyte drinks/sachets aboard for heat conditions
σ	Ice or cold packs in icebox or fridge
σ	SAFETY & PPE
σ	Sunscreen SPF 50+ aboard and accessible for all crew (not buried in a bag)
σ	Hats (wide brim or legionnaire-style) available for all crew and guests
σ	N95 / KN95 respirators aboard — enough for full crew — for smoke conditions
σ	Instant cold packs in first aid kit (minimum 4)
σ	This plan reviewed and crew/guests briefed
σ	CREW HEALTH
σ	All crew and guests asked about health conditions and medications
σ	Rescue medications (inhalers, EpiPens, etc.) identified and accessible
σ	Children's conditions or sensitivities noted
σ	Emergency contacts for all crew aboard noted in ship's log
σ	Nearest emergency facilities along route identified