

Wildlife, Tide Links & Coastal

SAFETY

GUIDE



2021-2022



coastsmart.ca

SCHRAMM DESIGN



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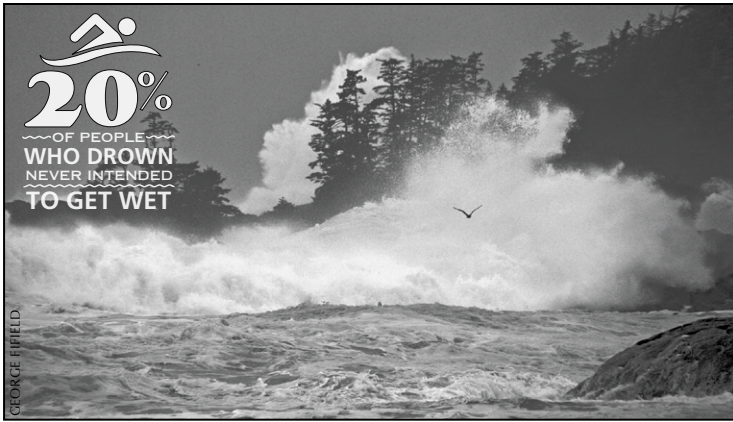
Please use this PDF to print out notices or to learn about safety online. Booklets with **monthly tides** are planned for 2022.

Information and Emergencies

- ▶ Call 911 for police, fire or ambulance
- ▶ Call 250.726.3604 to report human-wildlife interactions or national park reserve violations
- ▶ Pacific Rim National Park Reserve info: 250.726.4212

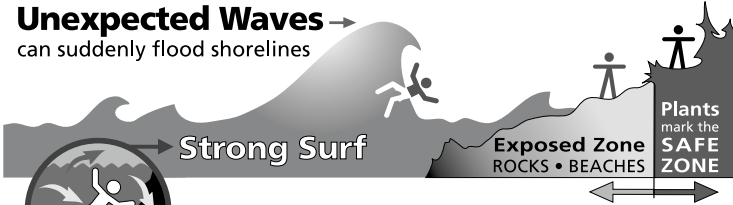
Visit coastsmart.ca for further information





Unexpected Waves →

can suddenly flood shorelines



Strong Surf

Plants mark the **SAFE ZONE**
Exposed Zone
ROCKS • BEACHES



Being swept away can be deadly

- Fighting surf is like being in a washing machine
- Swimming in wet clothes is like wearing concrete



The ocean is COLD

Cold shock can stop your breath instantly and seize your muscles within 10 minutes



Watch the ocean; unexpected waves can roll beach logs, flood the shore, and sweep you away.

DANGER when the surf is high

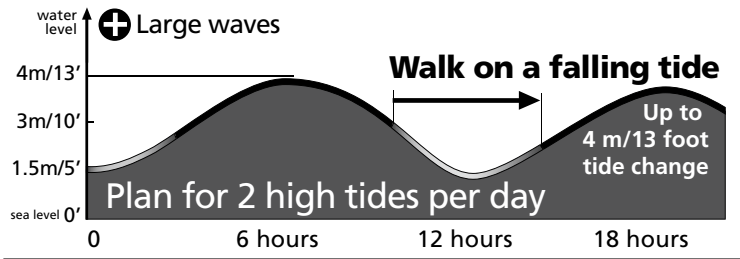
- Enjoy storm watching from a safe location (see page 16)
- Do not venture onto rocky headlands or beaches
- Beach logs can float, roll and crush unwary beach users

CAUTION when the ocean SEEMS calm

- Face the ocean as you explore; never turn your back on it
- Waves can suddenly sweep over rocks that look safe, bare rocks are kept clean by the powerful surf
- Observe beaches before hiking; they may flood suddenly
- Beware of dangerous rip currents and cold water (see page 6)
- Ocean and weather conditions can change very quickly



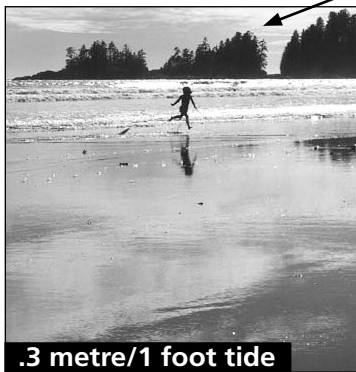
Waves travel in sets with extra large waves every 5 to 30 minutes. Set waves can be 4-5 times larger than other waves.



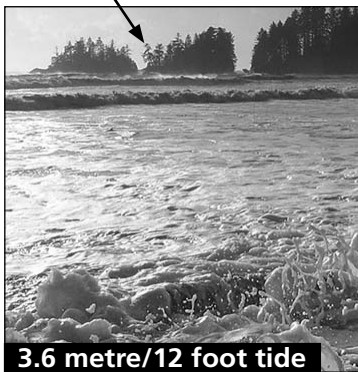
Time is measured on a 24 hour clock, so **1800 is 6:00 pm.**

Times for tides are not adjusted for Daylight Savings.

Day	time	metres	feet
1	1200	3.6	12.0
	1800	.3	1.0



.3 metre/1 foot tide



3.6 metre/12 foot tide

Florencia Beach: low tide at noon, then 6 hours later the beach is flooded.

LET THE TIDES DECIDE your day. Begin beach hikes an hour before low tide so you have time to return. Shallow beaches like Florencia and Schooner flood quickly. Rocky coastlines are also vulnerable.

PLAN for the tides to rise!

Do not risk getting trapped between waves and rolling logs. **Wait** a couple hours for the tide to drop if you are stuck on a rising tide.



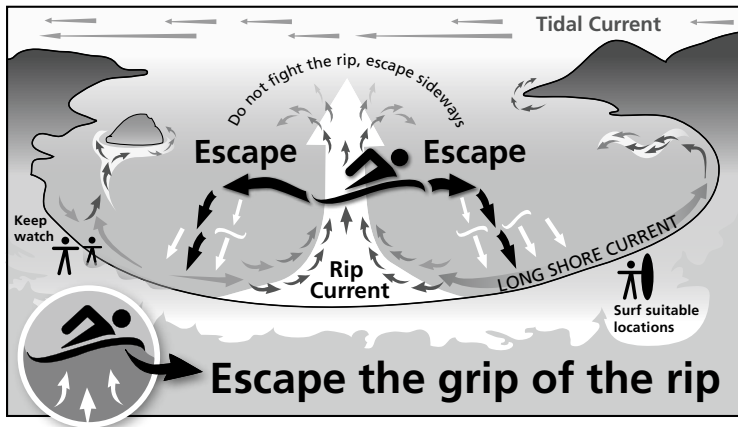
4 metre/13 foot tide with storm surge

Wickaninnish Beach at a **high tide**; the beach is flooded and logs are rolled by waves. **Storm waves can flood shores on any tide.**



.6 metre/2 foot tide

Wickaninnish Beach at a **low tide**; observe the beach for 10 minutes to judge the reach of larger waves before walking. Wave sizes can change.



Escape the grip of the rip

What is a Rip Current?

A strong current that begins near the shore and rushes out to sea. Currents are strongest around islands, sandbars or headlands.

How can I escape a rip current?

- STAY CALM – do not fight the current, escape sideways
- Swim parallel to the beach until you're free to turn shoreward
- If you can't escape stay with your surfboard and signal for help

How to avoid a rip:

- Take a surf lesson to learn about local rip current locations
- Surfers watch a landmark to avoid drifting into rips
- Rips can occur anywhere near breaking waves. Look at signage for areas where extra strong rips occur. Rips flowing between breaking waves can be invisible or choppy and discoloured.

Why are surfers in the rip current?

Experienced surfers use rip currents to get into deeper water, this tactic can be dangerous for the inexperienced.



Is it safe to swim in the surf?

NO! People have drowned here. Waves can easily overwhelm a swimmer. Do not use inflatable rafts.

Keep watch, beaches are unsupervised

Use a buddy system to keep watch for each other playing near the water or surfing.



The ocean is COLD

Cold shock can stop your breath instantly and seize your muscles in 10 minutes. Wear a wetsuit to avoid hypothermia.

If you are trapped by a high tide (or a set of waves):

- Do not try to race past fast waves and heavy rolling logs
- Wait behind shifting beach logs for the ocean to recede
- If a flooded headland blocks your return wait for a lower tide

BE BEAR AWARE:

Problem or habituated bears are created by humans who provide them with access to food. Once conditioned for easy food from humans, animals often become a public safety hazard.



Support Healthy Wildlife

- Keep all wildlife attractants unavailable to wildlife when not in use. Store attractants in bear-proof storage lockers, hard-sided vehicles and buildings.
- Respect wildlife closures.
- Be alert for animals while driving. Do not stop for roadside wildlife.
- Wildlife attractants include: food, garbage, coolers, beverages containers, insect repellents, toiletries and soap, barbecue and cook stoves, cooking implements, pet food, fuel and plastic.
- Keep your distance, do not approach for close-up photos or selfies.

Let's Talk about Natural Bears: **Spring:** bears may be seen foraging for new green vegetation at the edge of streams, open wet areas, or on roadsides.

Summer: with the first ripe berries, bears devote much of their time to feeding on this high-energy food. **Fall:** bears feed on insects, berries, small mammals, and during spawning runs, bears frequently fish along salmon-bearing streams.

Be alert and look for bear sign such as tracks, droppings or game trails in the bush. Bears do not like surprises. Sing, talk loudly, or use a bell.

Avoid close contact and give the bear room to avoid you. If you meet a bear, stay calm. Talk in a normal voice and wave your arms to let the bear know you are human. Back away slowly.

Black bears are the only species of bear found on Vancouver Island, and are common in this region. Researchers make a conservative estimate of 64 individual bears in and around the Long Beach area. Bear trails, feeding habitats, bedding and winter den sites are abundant throughout the area.

BIRDS & RACCOONS:

Like black bears, smaller animals such as raccoons, Stellar jays, raven and crows can also become conditioned to human food.



You may see black bears, cougars or wolves anywhere in the region.

WOLVES are most active at dawn and dusk, but are seldom seen. Unleashed dogs have been attacked; keep pets on a leash for their own safety.

DEER have become very accustomed to humans in this region. Though habituated, they remain wild and will kick if they feel threatened.

COUGARS are solitary animals most active at dawn and dusk. They are seldom seen. However, pets and people can become prey. Deer are a primary food for cougars.

SEA LIONS are powerful carnivores that have learned to enter harbours seeking handouts from people. **DO NOT FEED** or approach these wild animals. People have been injured.

If you encounter a predator:

- Pick up small children
- Face the animal & retreat slowly – **do not run** or play dead
- In the unlikely event of an attack, try to appear bigger. Be aggressive; shout, wave a stick, and throw rocks.

Pets & Predators:

Keep pets on a leash; free-roaming pets are more likely to be attacked. Ask Parks Canada staff for more info. about predators.

NEVER feed wildlife: Wildlife attracted to roads are often killed by cars. Obey speed limits and watch for wildlife.

BE HELPFUL NOT HARMFUL

You are one of 1.1 million visitors per year to this region. Please help protect the wilderness you have come to see. Birds, marine life, animals and plants rely on this area; be a considerate visitor.

1: Pets must be on LEASH—it's the law!

Leashed pets are at a much lower risk of attack by cougars, wolves and bears. A dog's impact on other people and wildlife is also reduced. Pets must be leashed at all times when in Pacific Rim National Park Reserve, and on district trails (see page 9). Responsible owners also pick up after their pets.



Bog Trail, with a carefully planned boardwalk



Sundew: a tiny carnivorous bog plant that traps insects

2: Stay on TRAILS

Footprints crush sensitive mosses, lichens and wildflowers, stay on trails. Sand dune and bog plants are especially slow to recover from disturbances. Forests are also sensitive, trails are built to minimize impact.



3: Leave no MARK upon the land

LITTER: please help pick up beach litter. Six-pack plastic ties, pull tabs, plastic beads, foam and nets are very dangerous to animals.

FIRES: Where allowed, keep fires small, away from logs and below the high tide line. Use water (not sand) to put out fires, covered coals are a burn risk.

4: TIDEPOL MANNERS

Tidepools should only be visited at **LOW** tides if the ocean is **CALM**. All areas have a splash zone that extends well up the beach or rocks. Use this guide to plan when tides are low.



Tidepool areas are often slippery. Step very carefully on the rocks around tidepools as mussels, barnacles and sea anemones can be crushed. Handling creatures can injure or kill them; be gentle. If you turn over rocks, replace them. Take only pictures; leave shells, sea stars and plants at the beach. Travellers who put beach treasures in their vehicle, often experience a **VERY** smelly drive. Shells may seem empty but are often a home for small creatures.

How to read the tides:

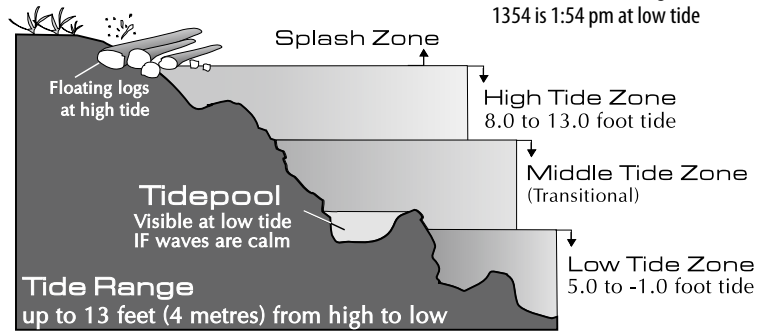
○ Full moon

Thursday at noon the tide is 3.8 m or 12.5 feet high.

Mid-day high tide times are **bold**.

Day	time	metres	feet	jour	heure	mètres	pieds
1	0007	3.5	11.5	10	0022	2.0	6.6
THU	1159	3.8	12.5	SAT	0635	3.0	9.8
JEU	1834	0.3	1.0	SAM	1354	1.3	4.3

TIME: **0635** is 6:35 am at high tide
1354 is 1:54 pm at low tide



NOTE: ALL zones have a splash zone that may extend well up the beach or rocks.

SHOREBIRD SURVIVAL

The Long Journey

Shorebirds depend on a chain of vitally important sites to complete their long annual migrations between the northern breeding areas (Canada and Alaska) and southern wintering grounds (which can be as far as southern South America). Each link of the chain provides crucial resources to the birds in preparation for their next stop. The Tofino-Long Beach area, with 16 square kilometres of prime mudflats and 25 kilometres of sandy beach, is one such significant habitat for migratory birds within the Pacific Flyway.

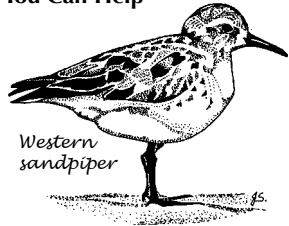
A Safe Haven at the Tofino mudflats

These mudflats are a critical wetland. Studies show that eelgrass beds in Browning Passage support some of the highest water-bird densities in British Columbia. The 16 km area supports 200,000 shorebirds. This area is designated as a protected wildlife management area, an Important Bird Area (IBA), and part of the Western Hemisphere Shorebird Reserve network.

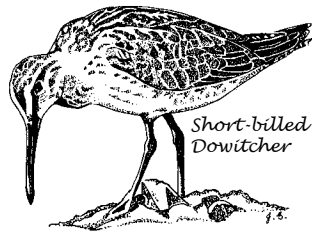
Re-fuelling

The time migratory birds spend in this area is short yet essential for feeding and resting. The migration route can be up to 7,000 km for some shorebirds with up to 2,000 km between stops; for some the next stop is Alaska. Feeding opportunities are better at low tide and some birds will almost double their body weight during a stopover. Their time here is short, but critical; some birds only stop for 3 days!

You Can Help

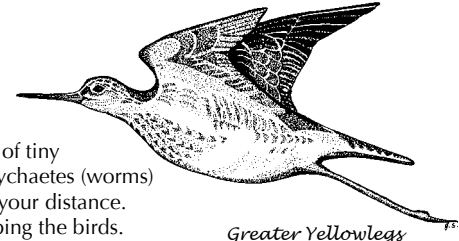


It is important not to stress shorebirds during their critical feeding and resting stops. They can not afford to waste the energy required to avoid dogs and people. Give shorebirds space: walk away from them and **keep your dog on leash**. Think of all the disturbances they encounter throughout the day.



Where to see Shorebirds:

Mudflats and beaches are the most common places to view shorebirds. Shorebirds spend much of their time poking through coastal sand in search of tiny crustaceans, ghost shrimp, polychaetes (worms) and other invertebrates. Keep your distance. Use binoculars to avoid disturbing the birds.



When? During peak migration, shorebirds arrive by the thousands. The best time to see them is during their migrations. During the northward spring migration (late April to May) their numbers peak and then drop abruptly. During the southward fall migration (August to September), their numbers are more spread out and sightings are sporadic.

Who's Who? Shorebirds can be difficult to recognize. Features to note: body size, bill shape, bill length, distinctive colours, behaviour and habitat. Become familiar with a few of the common species and carry a guidebook for those rare sightings! Use binoculars so you don't get too close.

Found on outside rocky coast:

- Black Oystercatcher
- Black Turnstone
- Surfbird

Found on mudflats and beaches:

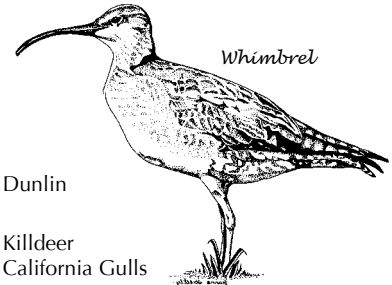
- Black-bellied Plover
- Semi-palmated Plover
- Dunlin
- Greater Yellowlegs
- Least Sandpiper
- Long-billed Dowitcher
- Short-billed Dowitcher
- Western Sandpiper
- Whimbrel

Found on mudflats in winter:

- Sanderling
- Dunlin

Found in a variety of habitats:

- Common Snipe
- Killdeer
- Glaucous-winged Gulls
- California Gulls



ROCKY SHORES

Intertidal Zone: Tides occur 4 times daily, changing up to 4 metres in depth. This creates a challenge for hundreds of species of plants and animals that must adapt to both cold saltwater and hot sunshine/air. Animals & plants are distributed in different zones according to their tolerances to these conditions. Please do not remove plants or animals, and BEWARE of dangerous waves.



SEA STARS - By pushing their stomachs through their mouths, sea stars digest mussels or barnacles inside their own shells.



SEA URCHINS - Slow moving, spiny relatives of sea stars that eat algae on rocks.



SEA ANEMONE - are not plants but animals that sting prey and pass food to their central mouth with sticky tentacles.

SPLASH Zone: Infrequent water exposure. This zone can flood with waves at any tide. **LICHENS** form colourful "paint" on rocks. They are a combination algae and fungi. **PERIWINKLES** will drown if immersed in saltwater.



Splash
Zone

High
Tide Zone

HIGH Tide Zone: Immersed 30% of the time.

LIMPETS feed on algae, return to the same spot every low tide.



FINGER LIMPET

Middle Tide Zone

— Portion of time exposed to water (black) vs. air (white)

MIDDLE Tide Zone: Immersed half of the time, this zone is dominated by blue and California **MUSSELS** that filter and eat plankton. Strong "hairs" of secreted protein hold the shellfish to the rocks. Also **SEA-SAC SEAWEED** (plump fingers filled with sea-water) and shore crabs abound.

WORMS

Middle Tide

Low Tide Zone

Tidepool

LOW Tide Zone:

Immersed 70% of the time. **SEA URCHINS, SUNSTARS, CLAMS, OYSTERS, BLACK CHITON** and **SNAILS** live here.

RAZOR CLAM

Low Tide

Subtidal Zone

TIDEPOLS

Tidepool dwellers in the surf zone live in an oxygen and food-rich environment but they also face many challenges. At low tide, oxygen levels fall and temperatures fluctuate: heating up in the summer and cooling down in the winter. At high tide, large waves impact the pool and its inhabitants.



TIDEPOL SCULPINS - can change colour to match pool decor.



HERMIT CRABS - borrow empty snail shells for homes.



CORALLINE ALGAE - are pink plants which resemble coral when branched, and pink painted rocks in their encrusting form.

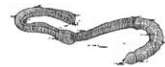
ACORN BARNACLES can be heard at low tide closing their trap doors to conserve moisture.



ACORN BARNACLES

SANDY SHORES

Just below the surface of the sand, animals hide from predators and the heat of the sun. **BEACH HOPPERS** are small shrimp-like creatures who burrow near the high tide line, and come out mostly at night to eat beach debris.



Drag a finger through the sand near the high tide line and you may find tiny red **BLOODWORMS**, that feed on organic matter in the sand.



Small "volcanos" on the sand in the low tide zone are likely **RAZOR CLAM** burrows. See page 29.



Storm Watching: Be CoastSmart

Know before you go near the water



Storm watching viewpoint on the Wild Pacific Trail. Tragically, people are swept off rocky shores every year. **STAY ON TRAILS.**



Kwisitis Visitor Centre deck



Wave hazard sign

October to March is the most dramatic time for storm watching. Though exhilarating, waves and wind can be dangerous. A wave weighs **1 tonne per cubic metre**. Watch from a safe location:

- Kwisitis Visitor Centre (PRNP)
- Ucluelet's Wild Pacific Trail
- Viewing deck at Florencia Bay
- Tofino's Tonquin Trail
- Oceanfront resorts & restaurants

Download the **Coast Smart App** for tides, sunrise, sunset and more.

2021 TIDES
ARE AVAILABLE AT THESE LINKS:

COASTSMART.CA

<https://coastsmart.ca/hazards/tides/>

FISHERIES & OCEANS CANADA

<https://www.waterlevels.gc.ca/eng/station?sid=8615>

The popular Tide Guide Booklet is planned to be relaunched after Covid-19 restrictions are lifted.



SAVE BC'S WILD ABALONE

Abalone has been declared an endangered species despite a total closure since 1990. Stocks have not recovered due to poaching. You can help by not purchasing illegal BC abalone. If you witness poaching or suspicious activity call ORR.

OBSERVE, RECORD, REPORT: 1.800.465.4336

Reporting fisheries violations will help preserve our resource



- Date, time and location of violation
- Description of boats, vehicles and people
- Photos can be useful but do not endanger yourself
- Timely reporting is critical, you can remain anonymous.

PARALYTIC SHELLFISH POISONING

PSP or red tide is caused by an algal bloom that produces toxins that are stored by clams, oyster, mussels and scallops. This condition is not always visible in the water. Eating contaminated shellfish can be fatal. PSP or other toxins can contaminate shellfish any time of year, but is most common in warmer months, June to October. Shrimp and fish are not affected. Prior to harvesting shellfish, check ALL contamination closures including Paralytic (PSP), Amnesic (ASP), and Diarrhetic (DSP) Shellfish Poisoning, and Sanitary (emergency, annual, seasonal) closures. Call **1.866.431.3474** or check DFO website (area 23 or 24).



**Cooking does NOT
destroy toxins**

ORR 1-800-465-4336

24 Hour Hotline Fisheries and Oceans Canada (DFO)