





COASTAL Property Guide Living and Building on PEI's Coast







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This Guide is for informational purposes only. It is designed for use by anyone who wishes to understand the risks of coastal development, and the process to subdivide, develop, or live on coastal property on PEI. It is not a substitute for provincial Statutes and Regulations.

Contents

Coastal Property Guide

2

17

- 3 Life on the Coast 5 **Coastal Erosion** 7 Coastal Flooding and Sea Level Rise 8 Saltwater Intrusion in Drinking Water 9 **Reducing Your Risks** If You Want to Build on PEI's Coast 11 12 **Assess Your Property For Risk Subdividing Land** What are Coastal Subdivision Buffers? 13 14 Watercourse and Wetland Protection Rules 15 What are Building Setbacks? 16 Water Wells and Septic Systems
- 18 Other Things to Know
- Beaches are Public Property

 Species at Risk on PEI's Coastline

Wells and Water Quality

- 19 Property InsuranceGovernment Protection
- 20 Additional Resources
- 21 Links to Legislation and Other Resources
- 22 Checklist Before You Subdivide Coastal Land

Septic Systems and Site Suitability Assessments



COASTAL Property Guide

Know the risks of living and building on PEI's coast.

Prince Edward Island's coastal areas are constantly changing as they are shaped by wind, waves, tides, rising seas, and rainfall. With climate change, these natural forces will intensify and continue to alter the coastline, sometimes dramatically.

Whether you are looking to develop your coastal property, or you are thinking about moving to PEI to enjoy life on the coast, this document is for you. It outlines some of the risks, opportunities, and development rules for PEI's coasts. Please note that rules are not all the same across the Island and depend on where your property is located. This Guide is one source of information about risks and rules related to developing along the coast - other resources can be found at the back of this guide.

Coastal properties include both waterfront properties and those located near the shore. Both homes in this image are coastal even though the red home is not located directly on the shore.









LIFE ON THE



PEI's 3000-kilometre coast is made up of many beaches, sand dunes, cliffs, marshes, bays, estuaries, and inlets.

The Island's coastline is constantly changing due to the natural processes of erosion and flooding. These normal processes become hazards when people choose to build homes, roads, or other lasting infrastructure too close to the shore. The risk increases as erosion and flooding events become more intense with climate change.

Flooding during storms can cause damage to buildings and erosion to shorelines, putting your property at risk. Over time, rising sea levels will make flooding and shoreline erosion worse. As well, seasonal, unmaintained or private roads used to access coastal land can create risks to people, cutting them off from help during severe storms.







Twice a day, every day, coastal properties experience a high tide and a low tide. High tides across PEI range from 1.1m on the north shore to as much as 2.8m on the south shore. Storms that take place during high tides can increase the risk of flooding your coastal property.

Low and high tide in Victoria, located on PEI's south shore.







COASTAL EROSION

Coastal erosion is the gradual wearing away and loss of land along the coastline due to natural processes such as wave action, rainfall, and freeze-thaw. Coastal erosion is a natural process that provides a source of sand to create beaches and sand dunes.

Prince Edward Island's coastline is shaped by dynamic coastal processes and is composed of sandy beaches, dunes, cliffs, bluffs, and wetlands. Coastal erosion rates vary across the Island and depend on the local geology, drainage, vegetation cover, and land use. Large storm events, such as Post-Tropical Storm Fiona can lead to abrupt changes along the coast putting infrastructure at risk when it is built too close to the coastline. In 2022, in some areas of PEI Post-Tropical Storm Fiona resulted in up to 12 meters (39.4 feet) of land loss in only one day.

The coast is monitored to understand and document historical change. Coastal change estimates are used to assign a risk rating to properties and determine a safe distance for new builds.

High Risk: Properties with an erosion rate of more than 90 cm/year (35 in/year)

Moderate Risk: Properties with an erosion rate of 30-90 cm/year (12-35 in/year)

Low Risk: Properties with an erosion rate of less than 30 cm/year (12 in/year)

Historical rates of erosion for any coastal property in PEI are provided through Coastal Hazard Assessment by the Province.



EXAMPLES OF COASTAL EROSION

Erosion can be caused by more than just wave action.



◄ Frost wedging:

the seeping of water into cracks, which then freezes, expands, and breaks up rocks over time

Frost Wedging at East Point (H. Parnham, 2023)

Cliff undercutting: ▶

the slow, gradual removal of debris from the base of a sandstone cliff due to wave action, leading to eventual collapse during extreme weather events

Cliff undercutting at Lower Darnley (H. Parnham, 2023)



Soil slumping:

the failure of a bank to support the weight of the soil, structures, and vegetation above due to instability or over-saturation of soil

Soil slumping at Victoria Provincial Park (H. Parnham, 2023)

End-scouring: ▶

the loss of soil and sand at the bottom and sides of armouring material, caused by wave action

End-scouring on Langley Sea Wall at West Point (D. Jardine, 2019)





■ Overtopping:

the erosion of soil and flattening of land and vegetation from waves driven over dunes, coastal armouring, and other features by intense storm winds

Sea wall overtopping at North Rustico (H. Parnham, 2023)



the erosion caused by stormwater runoff during heavy rain or snowmelt conditions, where stormwater is not able to be absorbed by the ground or slowed by vegetation at the edge of a bank

Stormwater gully on cliff at West Point (H. Parnham, 2023)





■ Human activity:

the removal of soil and stablizing vegetation due to construction of buildings, excavation, and installation of shoreline armouring

Coastal settlement at Johnston River (H. Parnham, 2023)

COASTAL FLOODING AND SEA LEVEL RISE

During storms with high wind and rain, flooding can occur on low-lying coastal properties. Coastal flooding and property damage are caused by a combination of storm surge (a temporary rise in water level) and strong winds pushing the water onshore.

On low-lying properties – and for homes and infrastructure that are located at lower elevations - coastal flood risk is likely to be higher. Even homes and infrastructure that are not on the waterfront, but are at a low elevation, might still have a high risk of coastal flooding. The <u>CHRIS website</u> can be used to view this information.



Sea Level Rise

Sea levels increase over time due to melting glaciers, warming oceans, and sinking land. By 2100, PEI should be prepared for 1 meter (3.3 feet) of sea level rise above 2006 levels.* This will permanently flood low-lying coastal land and move saltmarshes farther inland. Although this will be a gradual process, sea level rise combined with more frequent, intense storms means that more coastal areas on PEI will be at risk of flooding over time and that level of risk will continue to increase.

^{*} Relative sea level rise varies by location. To view the most recent sea level rise projections for PEI visit: https://climatedata.ca/explore/variable/slr/

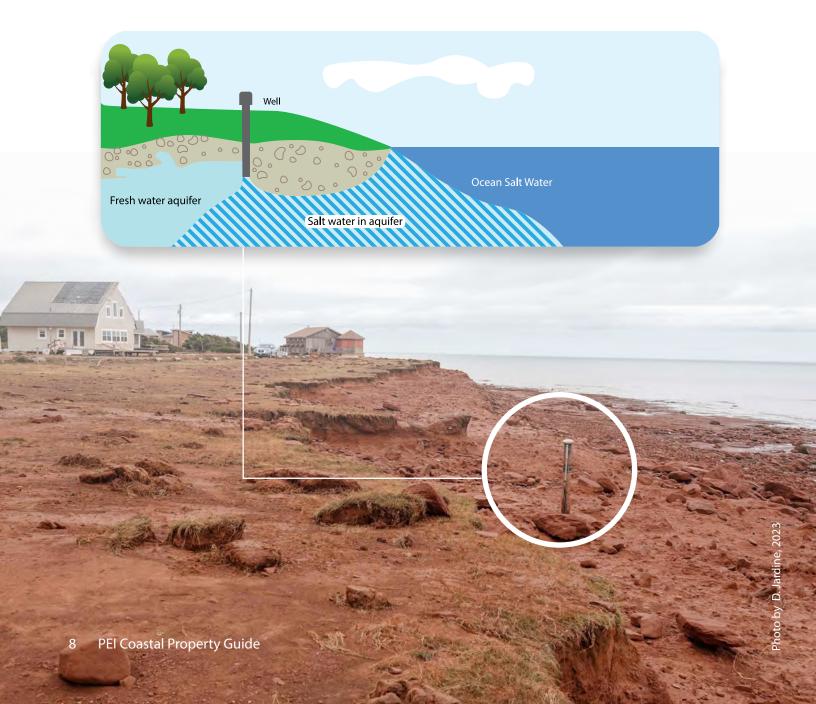


Please note: Many planning authorities may use the year 2100 for flood projections in long-term planning.

SALTWATER INTRUSION IN DRINKING WATER

All drinking water in PEI comes from groundwater pumped from underground sources. Wells that depend on groundwater can be contaminated when salty ocean water mixes with fresh groundwater. Once groundwater is contaminated with too much saltwater, the well can no longer be used.

In the future, as continued coastal development increases demand for fresh water and as sea levels continue to rise, saltwater contamination may become more common, putting more and more wells at risk.



REDUCING YOUR











In the past, development along the shoreline has not always considered the dramatically changing coastline and the risks that come with it. As a result, many coastal property owners are now faced with limited options:

1) Retreat and Avoidance

Retreat is the physical relocation of buildings, assets or even communities away from the coastal hazard.

Before deciding on which of these adaptation strategies is best, it is important to understand the potential impacts of that decision. Please see Additional Resources at the end of the Guide.

Avoidance is the use of preventative measures, such as land use rules, to restrict or stop development in coastal hazard areas.

2) Accommodation

By changing how you build or what activities you undertake by the coast, you can reduce your risk of coastal flooding through changes to landscape or building design. Common strategies include raising your structure above projected flood elevations on stilts or a higher foundation, elevating your property through infill, or moving key equipment such as heating, electrical, and valuables above flood levels. Accommodation can reduce risk over the short- and mid-term, but tends to have limited long-term effectiveness as sea level continues to rise and extreme weather events continue to occur more frequently.

3) Do nothing

This means letting nature take its course which likely means a loss or damage to structures within the coastal hazard area. It can also mean long-term protection if a structure was placed outside the coastal hazard area to begin with.

4) Resistance

Resistance measures alter the environment to protect existing activities, property and infrastructure from a coastal hazard. There are two types of resistance measures:

- 1. Establishing physical barriers to divert water or prevent erosion by hardening the shoreline with seawalls, bulkheads, dykes, and coastal armouring.
- 2. Using nature-based solutions that enhance natural adaptive capacity of the coastline such as coastal wetland restoration, beach nourishment or living shorelines.

The Province of Prince Edward Island currently prohibits new development in the buffer zone and any associated coastal armoring activities. Certain exemptions may apply, so please contact the Province to learn more about what restrictions could affect your property.

IF YOU WANT TO











ON PEI's COAST

This section of the Guide helps you figure out what your development options are.

Planning Jurisdiction

The rules for developing land in a coastal area will differ across the Island. Some rules apply to all coastal properties, while other rules will depend on where the property is.

If the property is in a municipality that has planning authority, some rules will apply only to that area. If the property is located anywhere else on the island, the Province has some standards that only apply to those areas.

Setting land use rules and making decisions on development permits and subdivisions is the responsibility of the Planning Authority.

Municipal Planning Authority is a municipality where an official plan and land use bylaw are in place.

Provincial Planning Authority includes all areas of the province where there is no municipal council, and any municipalities where there is no official plan and land use bylaw in place.

An updated map of municipalities that manage subdivisions and development permits can be found here: www.PrinceEdwardIsland.ca/MunicipalityMap.

Assess Your Property for Risk











Coastal Hazard Assesment

Prepared by the province, a Coastal Hazard Assessment (CHA) provides information for current and prospective property owners who want to be aware of the potential impacts of coastal hazards as they buy, sell, develop, and/or maintain a property. It includes a plain language explanation of the property's historic erosion rate, its vulnerability to coastal flooding and a map of the property. Careful consideration should be given regarding a coastal property's suitability for long-term development. It is strongly recommended that you get a CHA before you start planning to build or subdivide a property to ensure it is done safely and in a way that reduces the risk of coastal hazards. Anyone can request a free CHA for any coastal property by completing the online application by visiting www.PrinceEdwardIsland.ca/CoastalHazards. For additional information please contacting the Province at coastalproperty@gov.pe.ca. When requesting a CHA, you will be asked to provide your contact information, the property ID for the parcel(s) being assessed, and the reason for your request.



Coastal Adaptation Toolkit

CLIMAtlantic is a non-profit climate services organization that helps facilitate access to data and information that supports adaptation to climate change in Atlantic Canada through collaboration, networking, and partnerships. CLIMAtlantic was created in partnership with the Canadian Centre for Climate Services (CCCS) and all four of Atlantic Canada's Provincial governments. The Coastal Adaptation Toolkit is a free online resource for Atlantic rural communities and property owners looking to plan for the effects of climate change in their coastal environment. It includes two online tools – one for communities and one for property owners along with guidance documents. It can be accessed by visiting www.climatlantic.ca/coastal-adaptation

For communities, the toolkit uses a series of questions related to flooding and erosion issues to identify suitable options including land use planning tools, coastal interventions, and engineering tools. The toolkit for property owners prompts users to answer a series of questions about their property to receive adaptation advice tailored to their needs. The adaptation advice informs users of all available options and highlights the ones that may work best based on how the questions were answered. The options range from low to high cost and include nature-based and hard engineering solutions.

It's important to know: many coastal properties can be accessed from private or seasonal roads. These roads are usually not open year-round and are not built for emergency vehicles. Other services such as garbage collection, snow clearing, or school bussing may be limited or not provided. It is your responsibility to arrange for access if your property is located on a private road. Maintenance and road repairs are also the responsibility of the property owner(s).

Subdividing Lands

You will need to apply for a subdivision approval if you want to:

- divide a parcel of land to create one or more new parcels;
- join (or consolidate) two or more parcels into one parcel; or
- move the boundary of two or more parcels.

To be approved, subdivision applications should include details on:

- road access
- drinking water quality
- sewage disposal
- stormwater management and
- environmental conditions that affect the area and the property.

Minimum lot sizes are determined through provincial minimum lot size standards and the provincial sewage disposal systems standards.

Coastal subdivisions are managed either by the municipal planning authority or the Province.

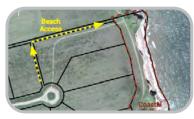
For municipal planning authorities, local rules such as minimum lot sizes apply on top of provincial rules and it is recommended that you check the local bylaw or contact the municipality directly.

What are Coastal Subdivision Buffers?

There are two types of coastal subdivision buffers in areas under provincial authority:



 A buffer may be included within the residential lots of the subdivision. However, each lot must have enough depth and size for development outside of the buffer area:



OR

2) A buffer may be subdivided as a separate property that is held in common ownership by the owners of the lots of the subdivision. This option can help to protect habitat for species at risk along coastlines.

Municipal planning authorities may use different rules to establish coastal buffers. You should check the local rules before applying to subdivide a coastal property.

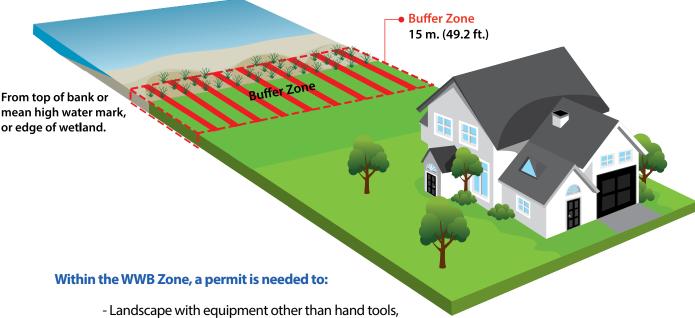
If you are thinking about subdividing coastal land, here are some ways to reduce your flood risk:

- Request a **Coastal Hazard Assessment** prior to subdivision design.
- Make your lot as deep as possible to account for future erosion.
- Ensure the lot has a buildable area at a high enough elevation to protect it from flooding (please refer to CHRIS).
- Ensure that road access is built high enough to protect it from flooding.

Watercourse and Wetland Protection Rules

The watercourse and wetland buffer (WWB) zone is a 15 metre (49.2 feet) strip of protected land along any stream, creek, pond, river, bay, wetland, or coastal water body. The purpose of the WWB Zone is to separate the developable part of a property from environmentally sensitive areas.

You need a permit to do any type of work within a watercourse, wetland, or the 15-metre buffer zone on your property. These rules apply province-wide.



- Landscape with equipment other than hand tools, or to remove soil and / or rock;
- Cut trees for a view, for a safety issue (where there is a risk of the tree falling on people/ property) or to save a portion of the bank where the tree is expected to pull the bank away when it falls;
- Dump material of any kind;
- Remove seaweed using heavy equipment;
- Build, repair, or remove structures;
- Stabilize shorelines; or
- Operate vehicles and large equipment (including cars, trucks, RVs and heavy equipment).

Within the WWB Zone, you do not need a permit to prune trees and shrubs; plant grass, trees, and shrubs using hand tools; mow an existing lawn; or remove or cut down a dead tree.

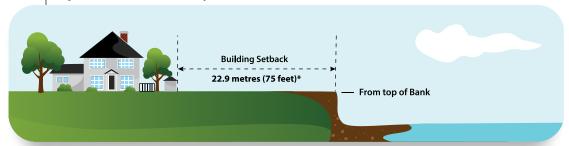
It's important to know: if you undertake work in a wetland, watercourse, or its buffer without a permit, you could damage the environment, water quality, and infrastructure AND you can be fined up to \$50,000.

What are Building Setbacks?

All properties are subject to setbacks for development.

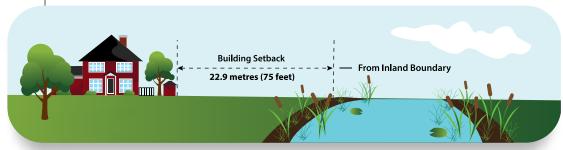
A building setback is the minimum required distance between a proposed building and a designated boundary (e.g., property boundaries, the road, the coast, or wetland). The minimum depth of setbacks will depend on where the property is located. A building setback from the coastline (or from the edge of a watercourse and wetland buffer) may also be required. Check with your Municipal Planning Authority for rules. For land under the Provincial Planning Authority, the setbacks are measured from:

┌ **Top of the bank**, when adjacent to a beach; or,

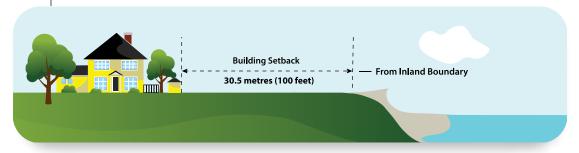


* Or, 60 times the annual rate of erosion, whichever is greater

 $_{\Gamma}$ from **Inland Boundary** of a wetland or watercourse



r from **Inland Boundary** of Sand Dune



Water Wells and Septic Systems

When you subdivide your property, you need to determine if it will require its own well and septic or if it will connect to a central water or sewer service. If you are not sure of what services are available for a property, please contact your planning authority.

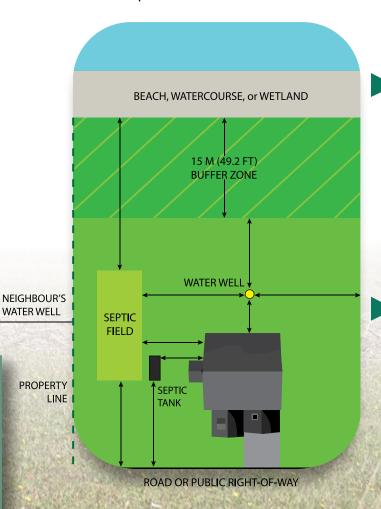
Wells and septic systems on coastal properties can be subject to coastal risks. You will need to test the quality of the groundwater for drinking and the suitability of the soil for an on-site septic system prior to development. Contact the Province to see if these tests have been completed.

Wells and Water Quality

While private wells do not require permits, the Department of Environment, Energy and Climate Action does provide advice regarding drinking water supply for most new subdivisions upon request.

It's important to know that for new developments a well should be located:

- Inland as far as possible and with a limited well depth;
- At a higher elevation than nearby septic systems; and
- At an appropriate distance from other site features (e.g., driveway, trees, etc.)



Septic Systems and Site Suitability Assessments

Before developing, subdividing or installing a septic system, a site suitability assessment (SSA) is undertaken to determine the soil's ability to dispose of septic waste on-site. The SSA is undertaken through test pit inspections and soil permeability tests. Licensed Site Assessors can complete a SSA for subdivisions of fewer than six lots. Engineers must complete the assessment for subdivisions with six or more lots.

Please contact the Province to find a Licensed Site Assessor. https://www.princeedwardisland.ca/en/publication/licensed-site-assessors

Minimum Setbacks for On-site Systems

Wells, septic tanks, and on-site septic disposal fields have required setbacks from the coast, a watercourse or wetland, property lines, buildings, and each other.

Minimum Distance Between	Property Lines	Top of Coastal Bank	Existing or Abandoned Wells	Buildings or Structures
WATER WELL	1.5 metres (5 feet)	15 metres (49.2 feet)	6 metres (20 feet)	3 metres (10 feet)

Minimum Distance Between	Septic Tank	Septic Disposal Field	Sewer Line
WATER WELL	15.2 metres (50 feet)	15.2 metres (50 feet)	3.0 metres (10 feet)
WATER LINE	3.0 metres (10 feet)	3.0 metres (10 feet)	0.45 metres (1.5 feet)
PROPERTY BOUNDARY	3.0 metres (10 feet)	3.0 metres (10 feet)	_
ROAD or PUBLIC RIGHT-OF-WAY	3.0 metres (10 feet)	3.0 metres (10 feet)	3.0 metres (10 feet)
BUILDING, with FOUNDATION	4.6 metres (15 feet)	6.1 metres (20 feet)	_
BUILDING, with NO FOUNDATION	_	4.6 metres (15 feet)	_
COASTLINE	22.9 metres (75 feet)*	22.9 metres (75 feet)*	_
NATURAL BOUNDARY of a BODY of WATER	15.2 metres (50 feet)	15.2 metres (50 feet)	

^{*} Or, 60 times the annual rate of erosion, whichever is greater; except for lots existing prior to 1993 where there is a 15.2-metre (50 feet) setback from the bank or 2X the erosion rate for the area.



Other Things to Know

Beaches are public property

Generally, the boundary of a coastal property is the ordinary high water mark. In most cases, a beach on the water side of the high water mark is provincially owned and the public has a right to use it. **Public use of the beach cannot be blocked as part of any development.**



PEI's coastline is home to several Species at Risk

Several species at risk breed on PEI's coastlines including the Piping Plover and the Bank Swallow. These birds are at risk of disappearing from Canada. The public can help protect the Piping Plover by staying away from known breeding areas (usually posted on the beach). Even a simple activity such as walking a pet can harm breeding pairs and their nesting area.

The Bank Swallow nests in colonies in the sandstone cliffs and high dunes. Development, and shoreline stabilization such as armour stone, may threaten the nesting of these birds.



Property Insurance

There is limited availability for insurance products specifically focused on coastal risks, such as coastal flooding. Insurance products covering erosion are not available.

Although insurance may be available for damages that result from an extreme storm event (such as sewer backup or other forms of overland flooding), coverage may vary and may not be included in all policies. It is important to review insurance coverage to clarify what the existing policy may cover and what additional coverage might be relevant and available. Contact your insurance provider to determine which coastal impacts - if any - are included or excluded from your insurance coverage.

Government Protection

Currently, the Provincial Disaster Financial Assistance Program is available to help individuals and families with costs to repair or replace uninsurable, essential basic property loss due to disasters. The federal government's Disaster Financial Assistance Arrangements (DFAA) program funds recovery and disaster reconstruction costs to provinces and territories after major events. However, localized events rarely trigger financial assistance under this program. On Prince Edward Island, only two extreme weather events (Hurricane Juan, 2003, and Post Tropical Storm Fiona, 2022) caused enough widespread damage to warrant public compensation through the DFAA program.

It's important to know: Property owners should be aware that even when DFAA is triggered, not all losses will be covered by the program. Even for covered losses, the program will only apply to primary residences. Damage to a cottage, seasonal residence, and recreational equipment such as a camping trailer or boat will not qualify and the federal government is becoming more restrictive for developments in known hazard areas. Please go to www.PrinceEdwardIsland.ca/CHRIS to view flood hazard areas in the province.

ADDITIONAL RESOURCES

CLIMAtlantic's Coastal Adaptation Toolkit

For Atlantic rural communities and property owners looking to plan for the effects of climate change in their coastal environment.





Coastal Hazard Assessments & Watershed Reports

To request a Coastal Hazard Assessment and learn more about your property's erosion and coastal flood risks.

Coastal Hazards Information Platform (CHIP)

An interactive map that allows you to visualize the coastal hazards that affect PEI's communities and properties.





<u>Costal Hazard & Risk Information System (CHRIS)</u>

An interactive map portal that you can browse and download climate data for PEI's communities and properties.

Department of Environment, Energy and Climate Action

To learn more about the provincial government's response to climate change and protecting our environment





Federal Disaster Financial Assistance Program



Department of Housing, Communities and Land

To learn more about the provincial planning authority, inspection services, land use planning and Municipal Affairs.

Municipal Directory

To search for municipal contact information, elected officials, services, and bylaws.





Municipal planning authorities

To learn more about municipal land use planning, building and development, and subdivision processes.

PEI Disaster Financial Assistance Program (PDFAP)

To learn more about PDFAP guidelines and processes.





Shoreline Stabilization

To learn more about shoreline stabilization and what is permitted.

Department of Transportation and Infrastructure

To learn more about entrance way permits and culvert permits





Watercourse, Wetland and Buffer Zone Activity Permits

To request an activity permit required to conduct work in a watercourse, wetland, or 15m buffer zone on or near your property.

Checklist before you subdivide coastal land

If you want to subdivide a parcel of land, complete the following steps (in order):

1. Obtain a Coastal Hazard Assessment from the Province
2. Reach out to your local planning authority (Province or municipality) to determine the subdivision requirements in your area.
3. Complete a subdivision application form (available from your local planning authority)
 Complete a property map/sketch or plan of subdivision for the proposed subdivision, as required by your local planning authority.
Bring the application form, property map/sketch, and all required fees to your planning authority for processing.
6. Upon request from the planning authority, make any necessary changes (e.g., increase lot size, install culvert, etc.) to the proposed subdivision.
7. Upon request from the planning authority, obtain a water test for your property.
8. Once so advised by the planning authority, hire a licensed site assessor to complete a Site Suitability Assessment of your property.
9. Submit the completed Site Suitability Assessment to the planning authority.
 Upon request from the planning authority, make any additional necessary changes (e.g., increase lot size) based on the site suitability assessment.
11. Once so advised by the planning authority, obtain a survey of the proposed subdivision and submit it to the planning authority.

This checklist is a general guide only and the exact process may differ by planning authority. If your property is located in a municipality with an official plan and bylaws, please contact your local municipal office.

For subdivisions of six (6) lots or more, the Site Suitability Assessment must be completed by a consulting engineer who specializes in on-site sewage disposal systems.



As the climate continues to change, the risks associated with living near the coast will increase.

- Know the risks associated with living along the coast.
- Learn how to limit the risks to your property and personal safety.
- Don't make assumptions about services and resources that may be available.
- Become familiar with the land use rules in your planning area.

Building our resilience to climate change – part of PEI's Climate Adaptation Plan

Cymbria