



AGENDA

**Agenda for the Committee of the Whole Meeting of the Tahsis Village Council
to be held on February 16, 2021 at 2:00 p.m. in the Council Chambers
Municipal Hall, 977 South Maquinna Drive and by electronic means**

Remote access: Join Zoom Meeting
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Dial by your location
+1 647 374 4685 Canada
Meeting ID: 747 359 9558

Find your local number: <https://zoom.us/j/7473599558>

A. Call to Order Mayor Davis will call the meeting to order at 2:00 p.m.

Mayor Davis will acknowledge and respect that we are meeting upon
Mowachaht/Muchalaht territory.

**B. Introduction of
Late Items** None.

**C. Approval of the
Agenda**

K. Bylaws 1 Draft Village of Tahsis Floodplain Bylaw No. 635, 2020

M. New Business 1 Report to Council Re: BC Hydro Street Light Replacement Project

P. Adjournment

A BYLAW TO ESTABLISH FLOODPLAINS, CONSTRUCTION LEVELS IN FLOODPLAINS, AND SETBACKS FOR LANDFILL AND STRUCTURES IN FLOODPLAINS

WHEREAS Section 524 of the *Local Government Act* allows a local government to designate land as a floodplain; specify the flood level for that floodplain; and specify setbacks for landfill or structural supports within the floodplain;

AND WHEREAS the Village of Tahsis has considered the Provincial Guidelines;

NOW THEREFORE, the Council of the Village of Tahsis, in open meeting assembled, enacts the following:

Short Title

1. This bylaw may be cited for all purposes as the “Village of Tahsis Floodplain Management Bylaw No. 635, 2020”.

Application

2. This Bylaw applies only to those areas of the Village to which a bylaw adopted under Section 524 (3) of the *Local Government Act* applies.

Interpretation

4. For the purpose of this bylaw:

Bylaw Enforcement Officer means persons employed or appointed under s. 36 of the Police Act (RSBC 1996, Ch. 367) from time to time by the Council.

Designated Flood means a flood, which may occur in any given year, of such magnitude as to equal a flood having a 200-year recurrence interval, based on a frequency analysis of unregulated historic flood records or by regional analysis where there is inadequate streamflow data available.

Designated Flood Level means the observed or calculated elevation for the Designated Flood and is used in the calculation of the Flood Construction Level.

Flood Construction Level means the Designated Flood Level plus the allowance for Freeboard and is used to establish the elevation of the underside of a wooden floor system or top of a concrete slab for any Habitable Area as measured from the natural boundary of a watercourse or the sea. In the case of a Mobile Home the Designated Flood Level is the Flood Construction Level for the top of the Pad.

Freeboard means a vertical distance added to the Designated Flood Level and is used to establish the Flood Construction Level.

Habitable Area means any room or space within a building or structure, which can be used for human occupancy, commercial sales, or storage of goods, possessions, or equipment (including furnaces) that would be subject to damage if flooded.

Landfill means the placement of sand, gravel, earth, rock or any combination thereof placed or deposited by persons to raise the level of the ground but does not include building or

construction debris.

Mobile Home means any structure, whether or not ordinarily equipped with wheels, that is designated, constructed or manufactured to be moved from one place to another by being towed or carried, and to provide a dwelling, house, or premises, that is registered or capable of being registered in the Manufactured Home Registry established under the *Manufactured Home Act*, and complies with the specifications for manufactured homes set out in the Manufactured Home Regulation B.C. Regulation 441/2003.

Natural Boundary means the visible high water mark of any lake, river, stream, the sea or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river, stream, the sea or other body of water a character distinct from that of the banks thereof, in respect of vegetation, as well as in respect to the nature of the soil itself. In addition, the Natural Boundary includes the best estimate of the edge of dormant or old side channels and marsh areas as confirmed by a BCLS.

Pad means a surface on which blocks, posts, runners or strip footings are placed for the purpose of supporting a Mobile Home, or other Habitable Area.

Professional Engineer means a person who is registered or licensed under the provisions of the Engineers and Geoscientists Act.

Village means the Village of Tahsis.

Sea means the Tahsis Inlet.

Setback means the required minimum distance, measured horizontally, that a structural support or landfill, required to elevate a floor system or Pad above the Designated Flood Level, must be separated from the Natural Boundary to maintain a floodway and to allow for potential erosion.

Stream means:

- (a) a natural watercourse, including a natural glacier course, or a natural body of water, whether or not the stream channel of the stream has been modified, or
- (b) a natural source of water supply,

including, without limitation, a lake, pond, river, creek, spring, ravine, gulch, wetland or glacier, whether or not usually containing water, including ice, but does not include an aquifer.

Severability

5. If any Section, subsection, sentence, clause or phrase of this Bylaw is for any reason held to be invalid by the decision of any court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid, shall not affect the validity of the remaining portions of the Bylaw.

Enforcement

Every person who violates any provision of this Bylaw; causes or permits an act or thing to be done in violation to any provision of this Bylaw; neglects or omits to do anything required by

this Bylaw; or fails to comply with an order, direction or notice made or delivered under this Bylaw commits an offence and is liable, upon conviction, to the penalties prescribed under this Bylaw and the *Offence Act*.

6. The Bylaw Enforcement Officer may enter, at all reasonable times, upon any premises to inspect and determine whether all regulations, prohibitions and requirements are being met, in accordance with Section 16 of the **Community Charter**.
7. Any person who violates any provision of this bylaw shall, upon summary conviction, be liable to a penalty of up to \$5,000.00 per offence.
8. Each day that an offence occurs constitutes a separate offence.

No Representations

9. By the enactment, administration or enforcement of this Bylaw, or the granting of a site-specific exemption, the Village does not represent to any person that any building or structure, including a Mobile Home, located, constructed, or used in accordance with the regulations of this Bylaw or in accordance with any advice, information, direction, or guidance provided by the Village in the course of administration of this Bylaw will not be damaged by flooding.

General Prohibitions

10. No person shall construct, build, erect, or place, or allow to be built, erected, or placed any building or structure contrary to the provisions of this bylaw.

Floodplain Designations

11. The following lands are designated as flood plain.
 - a. Land identified as floodplain on Schedule "A" the Tahsis and Leiner River 2100 Floodplain Map (prepared in 2019), forming part of this bylaw.
 - b. Land within the floodplain Setbacks specified in Section 12 of this Bylaw.
 - c. Land lower than the Flood Construction Levels specified in Section 13 of this bylaw.

Setback Requirements

12. Unless specified elsewhere in this Bylaw, and subject to Section 524 (6) of the **Local Government Act**, no landfill or portion of a landfill slope, or structural support required to support a floor system or Pad above the Designated Flood Level, shall be constructed, reconstructed, moved, extended or located:
 - a. within thirty (30) metres from the Natural Boundary of the Tahsis and Leiner Rivers
 - b. within fifteen (15) metres from the Natural Boundary of McKelvie, Ubedam and Extravagant Creeks, or any other Watercourse including a lake, marsh, or pond;
 - c. within thirty (30) metres from the Natural Boundary of the sea.

Flood Construction Level

13. Subject to Section 524 (6) of the **Local Government Act**, no building, structure (including a

Mobile Home), or any part thereof, shall be constructed, reconstructed, moved, extended, or located, where the underside of any wooden floor system or top of a slab or Pad of any Habitable Area is located below:

- a. the Flood Construction Level for a specific parcel, as determined by interpolation from those flood construction levels shown for land identified as floodplain on:
 - i. The “1:200 Year Storm Event” as outlined on the Tahsis and Leiner Rivers 2100 Floodplain Map Schedule “A” attached to and forming part of this Bylaw;

or where such mapping is not available, the maximum elevation of;

- b. three (3) metres above the Natural Boundary of the Tahsis and Leiner Rivers, where that land is within a distance of 200 metres of that Watercourse; and,
 - c. one and one half (1.5) metres above the Natural Boundary of McKelvie, Ubedam or Extravagant Creeks, or any other Watercourse, as well as a lake, a marsh or a swamp where that land is within a distance of 100 metres of that Watercourse, a lake, a marsh or a swamp.
 - d. An elevation of five and one third (5.3) metres geodetic.
14. Subject to Section 13 of this Bylaw the required elevation may be achieved by structural elevation of the said Habitable Area, and/or by the placement of compacted landfill on which any building or structure is to be located. Any structural support or compacted landfill shall be protected from scour and erosion, and an engineer must certify the suitability of the landfill or structure as safe for the intended use.

General Flood Construction Level Exemptions

15. Section 524 (6) (a) of the **Local Government Act** and Section 13 of this Bylaw do not apply to:
- a. a renovation of an existing building or structure that does not involve an addition or expansion of habitable space under the flood construction level;
 - b. an addition to a building or structure, at the original non-conforming floor elevation, that would increase the size of the building or structure by less than 25 % of the ground floor area that was existing on February XX, 2021;
 - c. a building or that portion of a building to be used as a garage, carport, or storage building not used for the storage of goods damageable by flood waters, toxic materials, or materials that may contaminate the environment;
 - d. on-loading and off-loading facilities associated with water-oriented industry and portable sawmills provided the main electrical switchgear is placed above the Flood Construction Level;
 - e. that portion of a building used as crawl space (not exceeding 1.5 metres in height);
 - f. recreation shelters, stands, campsite washrooms and washhouses, and other outdoor recreation facilities not susceptible to flood damage;
 - g. farm buildings other than dwelling units and closed sided livestock housing;

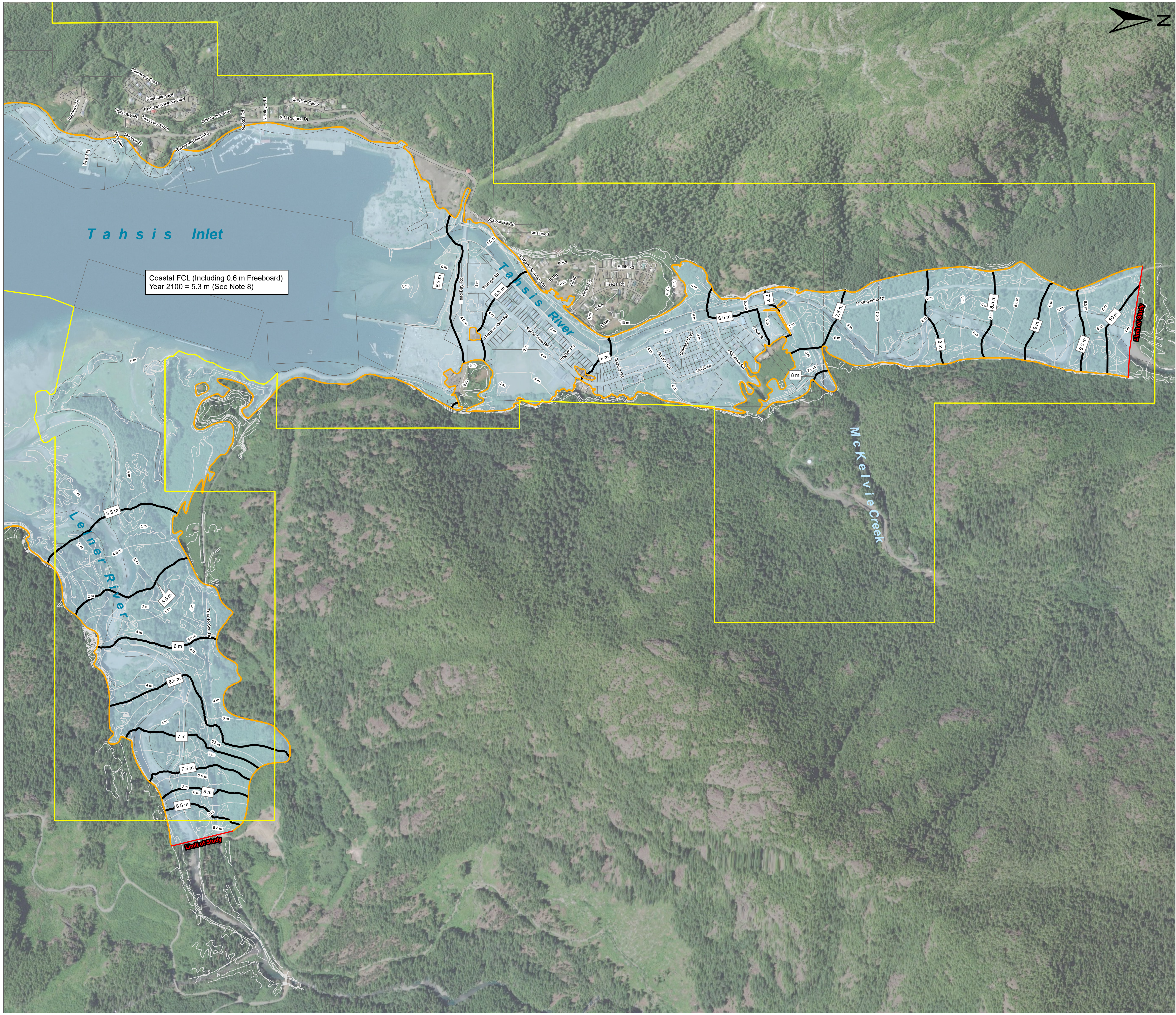
Commented [KB1]: To be dated the anticipated date of approval

Site Specific Exemption Applications

16. Pursuant to Section 524 (7) of the **Local Government Act** a person may make application to Council to exempt a specific parcel of land or a use, building or other structure on that parcel of land, from Section 524 (6) of the **Local Government Act** and this bylaw provided that a complete application is made to the Bylaw Enforcement Officer on the application form prescribed by the Bylaw Enforcement Officer.
17. The Council of the Village of Tahsis may exempt a person from the application of Section 524 (6) of the **Local Government Act** or this Bylaw, in relation to a specific parcel of land or a use, building or other structure on the parcel of land where:
 - a. the Council considers the proposed exemption advisable;
 - b. a Professional engineer or geoscientist with experience in geotechnical engineering certifies that the property can be safely used for the intended use and, if applicable, that can reasonably be protected from a 1 in 200-year flood can be achieved; or,
 - c. the professional engineer or geoscientist providing the certification required under Section 18.b. of this Bylaw, provides a Flood Hazard and Risk Assurance Statement and information identified in EGBC Appendix I - Legislated Flood Assessments in a Changing Climate in BC, as amended from time to time; and
 - d. the owner grants a restrictive covenant under Section 219 of the Land Title Act respecting the use and development of the land which includes an indemnity in favour of the Village to indemnify and save harmless the Village against any loss or damage with respect to the flooding to the property, or flood damage to the land, structures, and contents thereof, or any injury (including death) to any person or animal arising from the flooding of the property or flood damage to the land.

Commented [MT2]: Note for Council: There are implications with this provision which will be canvassed by staff and Kevin Brooks (McElhanney) at the committee of the whole meeting

***Schedule “A” - Tahsis and Leiner Rivers 2100 Floodplain Map
(prepared in 2019)***



Legend

- River Flood Isolines and FCL (0.3m Freeboard)
- Contours
- 1:200 Year Storm Event (Year 2100)
- Municipal Boundary
- Parcels

Use and Limitations of Floodplain Map:

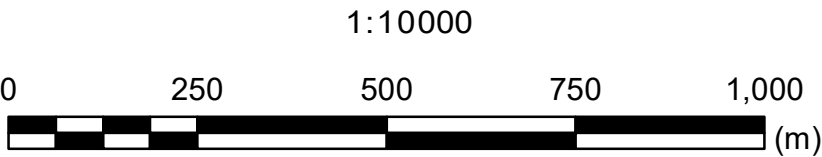
- Under the provisions of the Flood Hazard Statutes Amendment Act, 2003 (Bill 56), local governments have the role and responsibility for making decisions about local floodplain development practices, including decisions about floodplain bylaws within their communities. Information on floodplain management guidelines can be found in the BC Flood Hazard Area Land Use Management Guidelines.
- Users must note the dates of base mapping, aerial photography, ground or bathymetric surveys and issue of mapping relevant to dates of development in the map area. Subsequent developments or changes within the floodplain or channel will affect flood levels and render site-specific map information obsolete.
- The accuracy of the location of a floodplain boundary as shown on this map is limited by the base topography.
- The floodplain limits are not established on the ground by legal survey. A site survey is required to reconcile property location, ground elevations and designated flood level information. Building and floodproofing elevations should be based on field survey and established benchmarks.
- Flooding may still occur outside the defined floodplain boundary and the local government does not assume any liability by reason of the failure to delineate flood areas on this map.
- The required or recommended setback of buildings from the natural boundaries of watercourses to allow for the passage of floodwaters and possible bank erosion is not shown. This information is available from the local government. In addition, site-specific setbacks from the floodplain limit must be considered.
- Flood construction level is based on a global sea level rise of 1 m by the year 2100. May need to be revised in the future – see accompanying report dated June 30, 2019.
- All development along the coast of the Tahsis Inlet and within the municipal boundary shall build to the recommended Flood Construction Level (FCL) per the requirements of the Climate Change Adaptation Guidelines for Sea Dikes and Coastal Flood Hazard Land Use Guidelines for Management of Coastal Flood Hazard Land Use, Ausenco Sandwell, 2011.

Notes on Map Data:

A – ESRI Imagery Basemap, July 2013

B – 1 m contours derived from LIDAR collected by McElhanney (December 2018)

Key Map



Project No.	Date	Drawn By
2221-49140-2010	January 12, 2021	CF

Village of Tahsis
Tahsis and Leiner River
2100 Floodplain Map

VILLAGE OF TAHSIS

Report to Council

To: Mayor and Council

From: Mark Tatchell, CAO

Date: February 4, 2021

Re: BC Hydro Street Light Replacement Project

PURPOSE OF REPORT:

To provide background information on the street light replacement project to support Council in selecting new street lights for the Village of Tahsis.

OPTIONS/ALTERNATIVES

1. Select 3000K LED lights for all Village street lights
2. Select 4000K LED lights for all Village street lights
3. Select a combination of 3000K and 4000k for Village street lights

BACKGROUND AND DISCUSSION:

Beginning in 2020, BC Hydro is replacing 90,000 street lights province-wide with energy-efficient LEDs to meet federal regulations that require that all light ballasts with PCBs be removed by the end of 2025.

Colour temperature is used to describe the light given off by a light bulb. The colour temperature is measured in degrees Kelvin (K) on a scale from 1,000 to 10,000. The higher the Kelvin rating, the more yellow the light.

BC Hydro is making available two colour options: 3000K (warm white) and 4000K (cool white). 3000K is recommended for residential neighbourhoods and environmentally sensitive areas. 4000K is recommended for commercial and industrial areas and non-residential roadways and intersections. Both options give off a whiter light than the current HPS street lights, which are about 2300K and appear more orange (see attachments 1 and 2).

The Village can select the colour temperature for each individual light, or the same colour temperature for all lights.

BC Hydro does not provide consulting advice to assist local governments with selecting lights or with lighting design.

BC Hydro is replacing street lights in Campbell River currently. The replacement project could begin in Tahsis by mid-late March if the Village submits its detailed selection by February 25th. If a decision cannot be reached by then, implementation may not occur until 2022.

In September 2020, BC Hydro required the Village's preliminary selection. Based on BC Hydro's guidance, 3000K was selected on a preliminary basis for all street lights. The Village is now required to make detailed final selection for each street light (see attached 3).

POLICY/LEGISLATIVE REQUIREMENTS:

1. N/A

FINANCIAL IMPLICATIONS:

Even though LED lights are more energy efficient, BC Hydro has applied to the BC Utilities Commission for a rate hike to cover the implementation costs for this province-wide project. If the rate hike is approved, the Village's BC Hydro costs will increase.

STRATEGIC PRIORITY:

N/A

RECOMMENDATION:

No recommendation

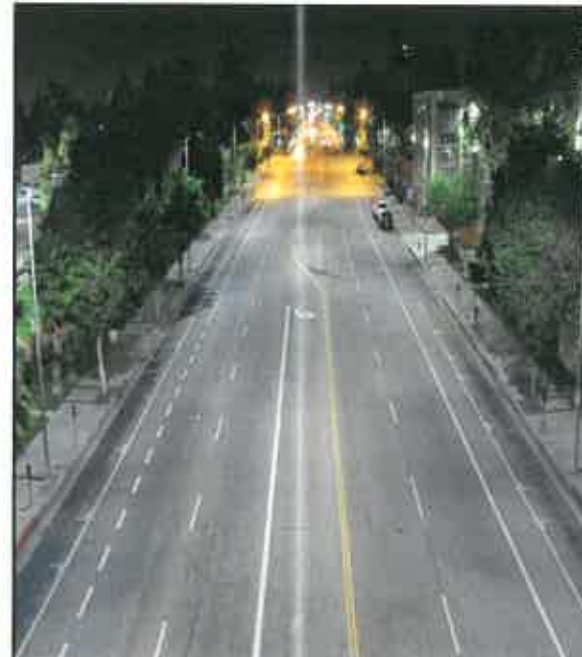
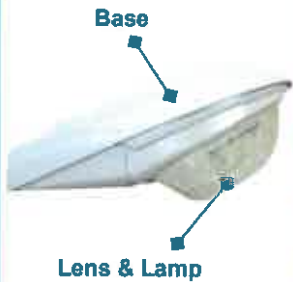
Respectfully submitted:



Mark Tatchell, CAO

HPS v LED street lights

LEDs improve light quality, use less energy, and require less maintenance



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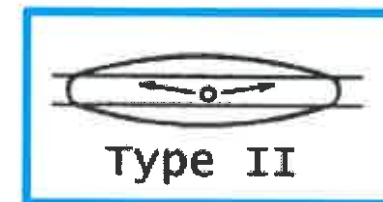


LED street light specifications









Manufacturer: LED Roadway Lighting

Model	LED Wattage	Equivalent Wattage HPS	Colour Temperature (CCT)	Light Distribution	Lumen Output
Lite-S	39W	100W Flat	3000K 4000K	Type II Max Throw	5,150 5,250
	75W	100W Drop	3000K 4000K	Type II Max Throw	7,700 8,500
Lite-M	114W	150W	3000K 4000K	Type II Max Throw	12,700 14,050
	162W	200W	3000K 4000K	Type II Max Throw	16,900 18,650

- .ies files are available for each light option



What is colour temperature?

HPS 2300K	LED 3000K Warm	LED 4000K Cool
 	  	  

Customer lighting design considerations

Customers are responsible for their lighting design

- Street light levels and uniformity requirements differ from municipality to municipality
- BC Hydro offers street light service to customers only on existing poles that make up a part of our distribution system backbone
- Pole spacing may vary and may not be optimal for street lighting as such achieving light levels and uniformities may not be possible with street lights on BC Hydro poles alone

Before installation

- Installation will start only after customer detailed LED selections are received
- Planned installation dates will be communicated in advance
- Traffic Control will be arranged
- Highway Use Permit will be obtained where required
- Field crew will be fully trained
- First Nation considerations identified

Installation process

- The crew will have 2-3 workers, including qualified electrical resources, bucket truck and supporting vehicles for materials and traffic management
- The traffic control -- per Ministry of Transportation, Highway and local regulations -- to ensure safety of public and installation crews
- The crews will be moving from pole to pole to convert lights to LED
- Each light will takes about 20-30 minutes to complete
- Crew will complete ~10-20 streetlights per day
- Installation will be coordinated around events & road closures
- Management of installation exceptions

After installation

- Removed material will be recycled / properly disposed of
- Customers will receive letters confirming installations are complete

Support for customers

- Media kits for communicating with general public?
- Handling and supporting general public inquiries?
- Anything missing or additional considerations?



Street light replacement project

BC Hydro owns and maintains over 90,000 street lights attached to our poles located across the province. Over the next two to three years, we'll be replacing these with energy-efficient LEDs to ensure compliance with new federal regulations that require all light ballasts containing Poly-Chlorinated Biphenyls (PCBs) be removed by the end of 2025.

These new street lights will help improve public safety in your community by increasing the visibility of sidewalks and roads at night, as well as help reduce light pollution. LEDs also last longer and require less maintenance.

New street light rate

We've submitted our [application](#) to the BC Utilities Commission (BCUC) to update our overhead streetlight rate (Rate Schedule 1701).

Read the [BCUC's Order](#) on our application and [see the latest on the regulatory proceeding](#).

If you'd like to get involved in the proceeding, you can register as an intervener or submit a letter of comment to the BCUC by Tuesday, December 22. [Learn more](#) about getting involved.

Where we're at

We're working to develop our installation schedule and expect to begin replacing lights in the first communities early next year.

If you have questions about the street light replacement project, please see our [FAQs](#) or contact the project team by [email](#) or call 1 833 828 2224 between 8 a.m. and 4 p.m. Monday to Friday.

Selecting your new LED lights

We'll be reaching out to each of our customers to select the LED wattage and colour temperature to replace each of your current street lights. The information below is to help guide you through your selections.

If you were unable to attend or want to review the materials from our virtual information session held in September, please [see the session slides](#) (PDF, 833 KB).

Colour temperature

Colour temperature is a way to describe the light given off by a light bulb. It is measured in degrees of Kelvin (K) on a scale from 1,000 to 10,000. The higher the Kelvin rating, the whiter the light; the lower the Kelvin rating the more yellow the light.

There are two colour temperature options for you to select from for your new LED street lights – 3000K (warm white) and 4000K (cool white). The two options can be used for different areas in your community, depending on their purpose. Both will give off a whiter light than your current HPS street lights, which are around 2300K and appear more orange.

Both options are used broadly in industry. Some municipalities have used a mix of 3000K and 4000K for different areas, others have selected one or the other. Street light customers can select which colour temperature you would like for each individual light, or you can choose the same colour temperature for all.

The table below shows the approximate difference between the two colour temperatures to help you make your lighting selections.

STREET LIGHTING SERVICES

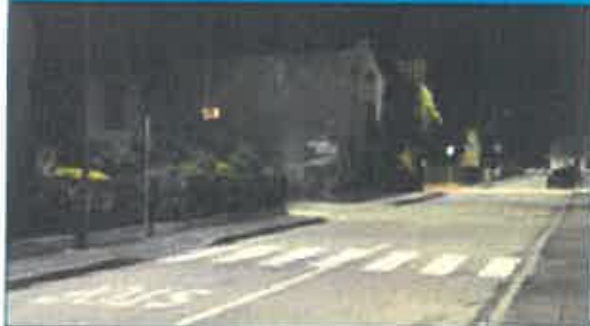

Street light replacement project

Request for a street light repair

Reach the project team

Questions about the street light replacement project?

Email the team →

	Kelvin	Color tone	Typical uses
	3000K	Warmer (or softer) white light	<ul style="list-style-type: none">Residential neighbourhoodsEnvironmentally sensitive areas
	4000K	Cooler (or neutral) white light	<ul style="list-style-type: none">Commercial and industrial areasNon-residential roadways and intersections

Technical lighting specs

To help you with selecting your lights, [see our comparison chart](#) [PDF, 221 KB] of the LED options available to you.





If you're using a lighting design software program, the [IES files can be downloaded here](#) [ZIP, 220 KB]

If you need help with your lighting design, we encourage you to hire a lighting design consultant as BC Hydro does not provide this service. [BC Hydro's Alliance of Energy Professionals](#) can provide you with referral to qualified lighting consultants.

Frequently asked questions: installation and light selection

- When will you get to my community? 
- Can I add, remove or change existing BC Hydro street lights? 
- What can I expect between now and the start of installation? 
- Will BC Hydro help me with new lighting design? 
- Is there anything I can do now? 
- Can I opt out of the street light replacement project? 

Frequently asked questions: street light rate

- Why are you changing the street light rate? 
- What is the new rate? 
- Why is the street light rate increasing if LEDs are more energy-efficient? 
- When will the new rate come into effect? 

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We look for exceptional people to bring new ideas and fresh thinking to BC Hydro

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Contact us



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CUSTOMER:

VILLAGE OF TAHSIS

High Pressure Sodium (HPS) to LED equivalent		
Current High Pressure Sodium Street Light Wattage	Your Requested LED Wattage	Your Requested Colour Temperature
100	75	Warm (3000K)
150	114	Warm (3000K)
200	162	Warm (3000K)

1.4x3000K 100-200W

Mercury Vapour (MV) to LED equivalent		
Current Mercury Vapour Street Light Wattage	Your Requested LED Wattage	Your Requested Colour Temperature
175	75	Warm (3000K)
250	114	Warm (3000K)
400	162	Warm (3000K)

1.4x3000K 100-200W