

Legend

Electoral Area Boundary

Building Footprint (Approximate)

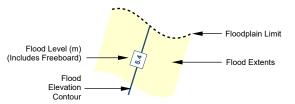
,~, Watercourse

Parks (RDN)

Normal Water Surface

Englishman River Delta

Undefined Coastal Flood Hazard Area



Notes and Limitation

This floodplain map is an administrative tool which depicts the estimated flood levels and floodplain limits for the d event within the map area. Flooding may occur to levels above the estimated flood levels, and outside the estimated The Regional District of Nanaimo does not assume any liability for the accuracy of the estimated flood levels and shown on this map.

2. The flood levels and f flood level that were der Floodplain limits are not master drainage plans. vels for a giver

3. The designated floor event having a statistical annual exceedance probability (probability of a flood event of given year) of approximately 0.5%. The river flow has been increased by 25% over the c climate chance impacts. A freeboard allowance of 0.6 m has been added to account A freedoard anowance in draulic effects such as waves and sur not account for significant changes in

tides, a 200-year return

5. The area designated as "Undefined Coasta

6. This map shows a delineation of the Englishman River delta. This area may be subje This map does not provide information on the potential for site-specific flood-related debris accumulation and sudden shifts in river channel alignment.

Users should note the dates of base mapping, aerial photography, and ground or ba publication. Subsequent development or geomorphic changes may render map informal

Description: De

10. When adopted by bylaw, the Regional District of Nanaimo is responsible for land use regulation within the floor depicted on this map. Information on floodplain management can be found in the BC Flood Hazard Area Land Use M

Notes on Map Data, Data Sources and Dates

1 1

Cadastral information supplied by ParcelMap BC / Land Title and Survey Authority of British Columbia (

2020) Property addressing, building footprints, and landmarks supplied by Regional District of Nanaimo (accessed January 06, 2021) Hydrology features supplied by National Hydrology Network (accessed June 29, 2017) - Parks, Ecologian Reserves and Protected areas supplied by DataBC and Regional District of Nanaimo (accessed January

Road features supplied by Digital Road Atlas (accessed March 4, 2020) Topography was collected by LiDAR. Sources and dates as follows: GeoBC (2019)



Englishman River Regulatory River Floodplain Map

KWL Project N	lo. 536.020
Date	June 4 2021

Scale 0 50 100 200 (m) 1:10,000 1



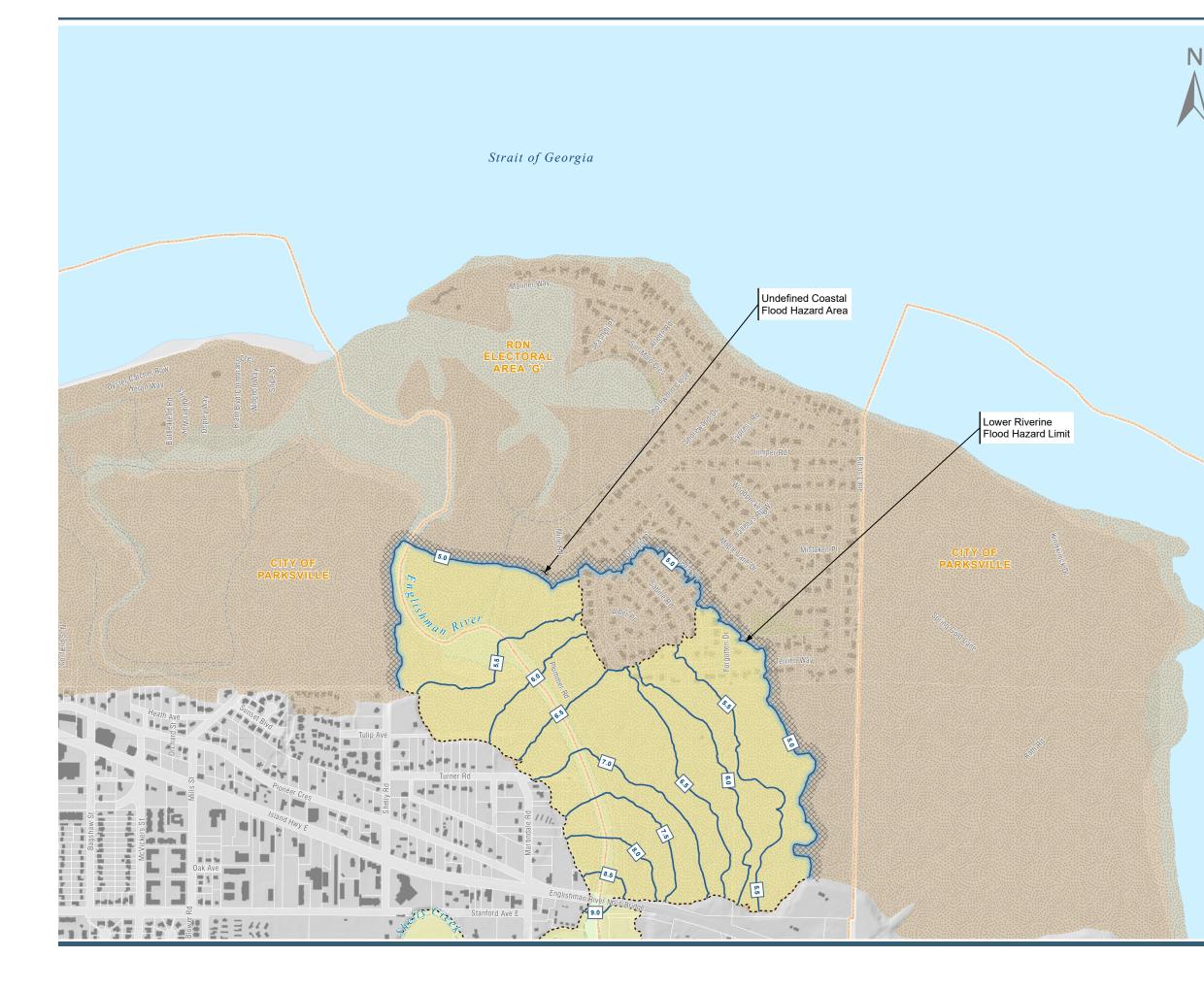
Figure A-1

Coordinate System: NAD 1983 UTM Zone 10

Vertical Datum: Canadian Geodetic Vertical Datum

بر Notice: Thesis با Leidal Associates Ltd. با Nanaimo is permitted to re-archiving and for distribution required to conduct busin Englishman River Fir other use of thes-of KWL is pro-

Prepared By: JL Checked By: JTM



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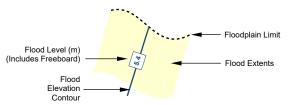
,~, Watercourse

Parks (RDN)

Normal Water Surface

Englishman River Delta

Undefined Coastal Flood Hazard Area



Notes and Limitations

This floodplain map is an administrative tool which depicts the estimated flood levels and floodplain limits for the designated flood event within the map area. Flooding may occur to levels above the estimated flood levels, and outside the estimated floodplain limits. The Regional District of Nanaimo does not assume any liability for the accuracy of the estimated flood levels and floodplain limits shown on this map.

2. The flood levels and floodplain limits depicted on this map represent a combination of the river flood level and ti flood level that were derived from independently modelled flood scenarios. The highest flood levels for a given loc Floodplain limits are not delineated for tributary creeks. This map should be considered together with complement master drainage plans.

3. The designated flood event for the Englishman River depicted on this map is a 200-year return period peak instantaneous flood event having a statistical annual exceedance probability (probability of a flood event of equal or greater magnitude occurring in a given vear) of approximately (DSS. The viere flow has been increased by 25% over the current (220) value to accurnt for projected climate change impacts. A freeboard allowance of 0.6 m has been added to account for (1) hydrologic and hydraulic modelling uncertainties (2) local hydraulic effects such as waves and surges, and (3) some degree of river and defa processes. However, the freeboard allowance does not account for significant changes in channel shape or location.

4. The downstream coastal flood level reflects astronomical tides, a 200-year return period storm surge, and a fr 0.6 m, but does not include an allowance for wave effects. The coastal flood level has been increased by 1.0 effects of relative sea level rise to Year 2100.

5. The area designated as "Undefined Coastal Flood Hazard Area" refers to coastal floodplain limits beyond the river that have not been defined as part of this work.

6. This map shows a delineation of the Englishman River delta. This area may be subject to additional proce This map does not provide information on the potential for site-specific flood-related hazards such as bank erosion, aggra debris accumulation and sudden shifts in river channel alignment.

Users should note the dates of base mapping, aerial photography, and ground or bathymetric surveys, as well as the date of map
publication. Subsequent development or geomorphic changes may render map information obsolete.

Topography used in the mapping is based on LIDAR data that may not accurately reflect the current ground elevation. For site-specific application, the flood level can be related to the ground elevation by topographic survey.

10. When adopted by bylaw, the Regional District of Nanatmo is responsible for land use regulation within the floodplain limit depicted on this map. Information on floodplain management can be found in the BC Flood Hazard Area Land Use Management Guidelines.

Notes on Map Data, Data Sources and Dates:

· Cadastral information supplied by ParcelMap BC / Land Title and Survey Authority of British Columbia (accessed September 3)

2020) Property addressing, building footprints, and landmarks supplied by Regional District of Nanaimo (accessed January 06, 2021) Hydriodyr Heuris supplied by National Hydrodyn Wetwick (accessed June 29, 2017) • Parks, Ecological Reserves and Protected areas supplied by DataBC and Regional District of Nanaimo (accessed January 00, 2011)

¹⁰²¹ Road features supplied by Digital Road Atlas (accessed March 4, 2020) Topography was collected by LIDAR. Sources and dates as follows: GeoBC (2019)



Englishman River Regulatory River Floodplain Map

KWL Project No. 536.020

Date June 4 2021

Scale 0 50 100 200 (m) 1:10,000 1



Figure A-2

Coordinate System: NAD 1983 UTM Zone 10N

Vertical Datum: Canadian Geodetic Vertical Datum of 2013 (CGVD2013)

Scale Disclaimer: The map scale of 1:10,000 is only valid on a 11"x17" print.

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Prepared By: JL Checked By: JTM