



Notes to Users

1. Please refer to the **Disclaimer** below.
2. Please review the associated project report before referring to the maps: Northwest Hydraulic Consultants Ltd. (NHC), 2023. 'Northwest Vancouver Island Tsunami Risk Assessment (Phase 2)'. Report prepared for Ocean Networks Canada. NHC project number 3006332.
3. Tsunami model results shown correspond to an earthquake with a magnitude of 9.0 from the Cascadia Subduction Zone. Please refer to the project report for additional information on tsunami source.
4. Initial water level for tsunami simulations consists of current-day Higher High Water Mean Tide (HHWMT) which at Winter Harbour and Gold River terminal correspond to an elevation of 1.5 m above the Canadian Geodetic Vertical Datum of 2013 (CGVD2013). HHWMT is defined as the average from all the higher high waters from 19 years of tidal predictions.
5. Spatially varying land subsidence and uplift associated to the Cascadia Subduction Zone earthquake has been applied by adjusting the underlying digital elevation model as per Natural Resources Canada information.
6. Information shown on maximum tsunami-induced current velocity maps corresponds to model results of maximum current velocity encountered during the tsunami. Tsunami simulations were performed for a constant tide level and therefore do not include the influence of tidal currents, on which can be superimposed tsunami-induced currents.
7. No safety factor, or freeboard was applied to the results shown on these maps. Any inundation visible on these maps corresponds to the inundation as estimated by the numerical model without any adjustment and should be considered as indicative only. For inundation extents, refer to maps of tsunami inundation level for emergency planning to which a safety factor is applied.
8. The accuracy of inundation mapping is limited by the accuracy of the available orthoimagery basemap. Horizontal shifts between mapping and the basemap vary approximately from 5 m up to 20 m. Please refer to the project report for a discussion on study limitations.
9. These maps provide results for one possible tsunami scenario with associated earthquake magnitude and subduction zone rupture mechanism. Inundation characteristics and associated effects can vary for different tsunami scenarios that may occur.
10. Service roads and/or resource roads shown on these maps may be decommissioned and overgrown with vegetation inhibiting their use. The status of such roads should be reviewed as part of evacuation planning.
11. The influence stream flow may have on the propagation and inundation of tsunamis in rivers and creeks was not included in the numerical model.
12. Notice to Mariners: Model estimates of flow velocity are only estimates and actual flow velocities may vary. Small areas of low velocity immediately adjacent to high flow should not be considered safe havens in a tsunami event.

Data Sources and References

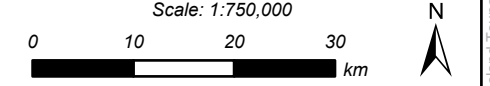
1. Topographic basemaps from Esri Canada, Natural Resources Canada, and Esri Canadian Community Maps contributors.
2. Imagery basemaps from Esri and Maxar.
3. First Nation administrative boundaries based on GeoBC data with adjustments by NHC and should be considered as approximate only.
4. Road locations and classification based on GeoBC Digital Roads Atlas with adjustments by NHC and should be considered approximate only.
5. Ferry route, municipal boundary, and regional district boundary data from GeoBC.

Disclaimer

These maps have been prepared by **Northwest Hydraulic Consultants Ltd.** for the benefit of **Ocean Networks Canada Society and The Lake Family's All One Fund** for specific application to the **Northwest Vancouver Island Tsunami Risk Assessment Phase II** project undertaken to support emergency planning in Nootka Sound and Quatsino Sound, British Columbia. The information and data contained herein represent **Northwest Hydraulic Consultants Ltd.**'s best professional judgement in light of the knowledge and information available to **Northwest Hydraulic Consultants Ltd.** at the time of preparation and was prepared in accordance with generally accepted engineering and geoscience practices. Except as required by law, these maps and the information and data contained herein are for the information of **Ocean Networks Canada Society and The Lake Family's All One Fund**, their officers, and employees. **Northwest Hydraulic Consultants Ltd.** denies any liability whatsoever to other parties who may obtain access to these maps for any injury, loss, or damage suffered by such parties arising from their use of or reliance upon these maps or any of their contents.



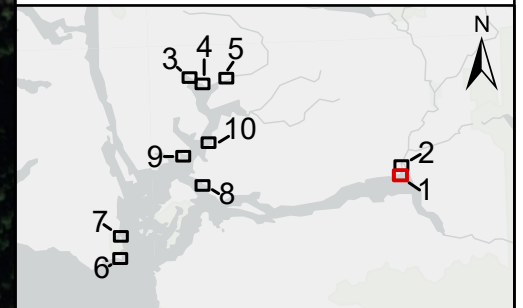
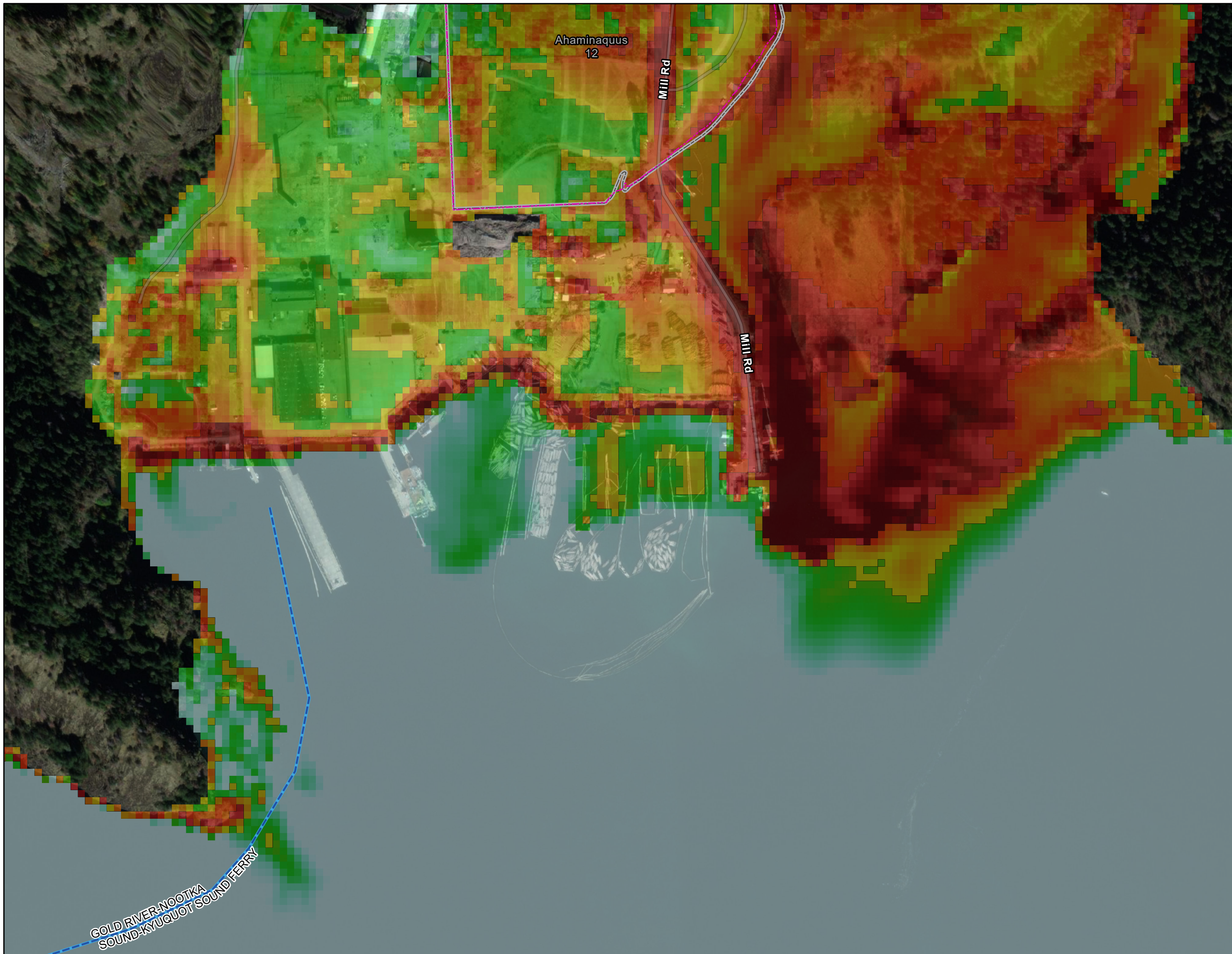
- 1:5,000 MAP SHEET
- REGIONAL DISTRICT BOUNDARY
- FERRY ROUTE



Coordinate System: NAD 1983 CSRS UTM ZONE 9N			
Units: METRES			
Engineer	PSG	GIS	SWM
Reviewer			GFL
Job Number	Date		
3006332	06-JUL-2023		

**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

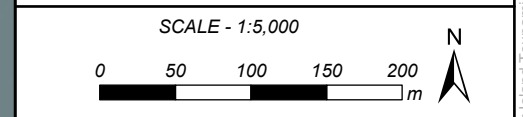
TSUNAMI - INDUCED
CURRENT VELOCITY MAP
LOCAL SCALE
INDEX & NOTES
CASCADIA TSUNAMI



— FERRY ROUTE
— FIRST NATION ADMINISTRATIVE BOUNDARY
— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI
 >9 KNOTS
 6 KNOTS
 3 KNOTS
 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED
 TO THE RESULTS SHOWN. FOR INUNDATION
 EXTENTS, REFER TO MAPS OF TSUNAMI
 INUNDATION LEVEL FOR EMERGENCY PLANNING.



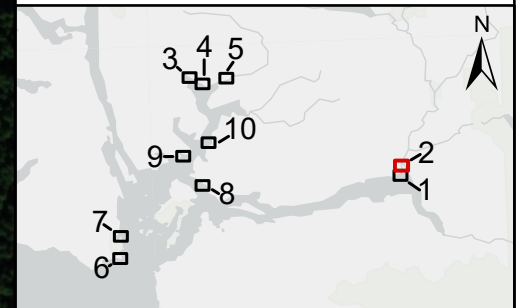
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 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**
**GOLD RIVER WATERFRONT
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

Warning: High velocity flows in river could cause rapid bank erosion as an additional hazard. Shoreline and bank erosion potential has not been assessed in this study.



— FERRY ROUTE

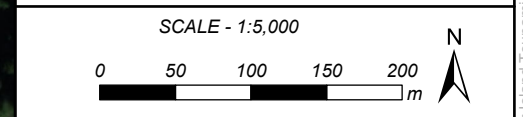
— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
- 0 KNOTS

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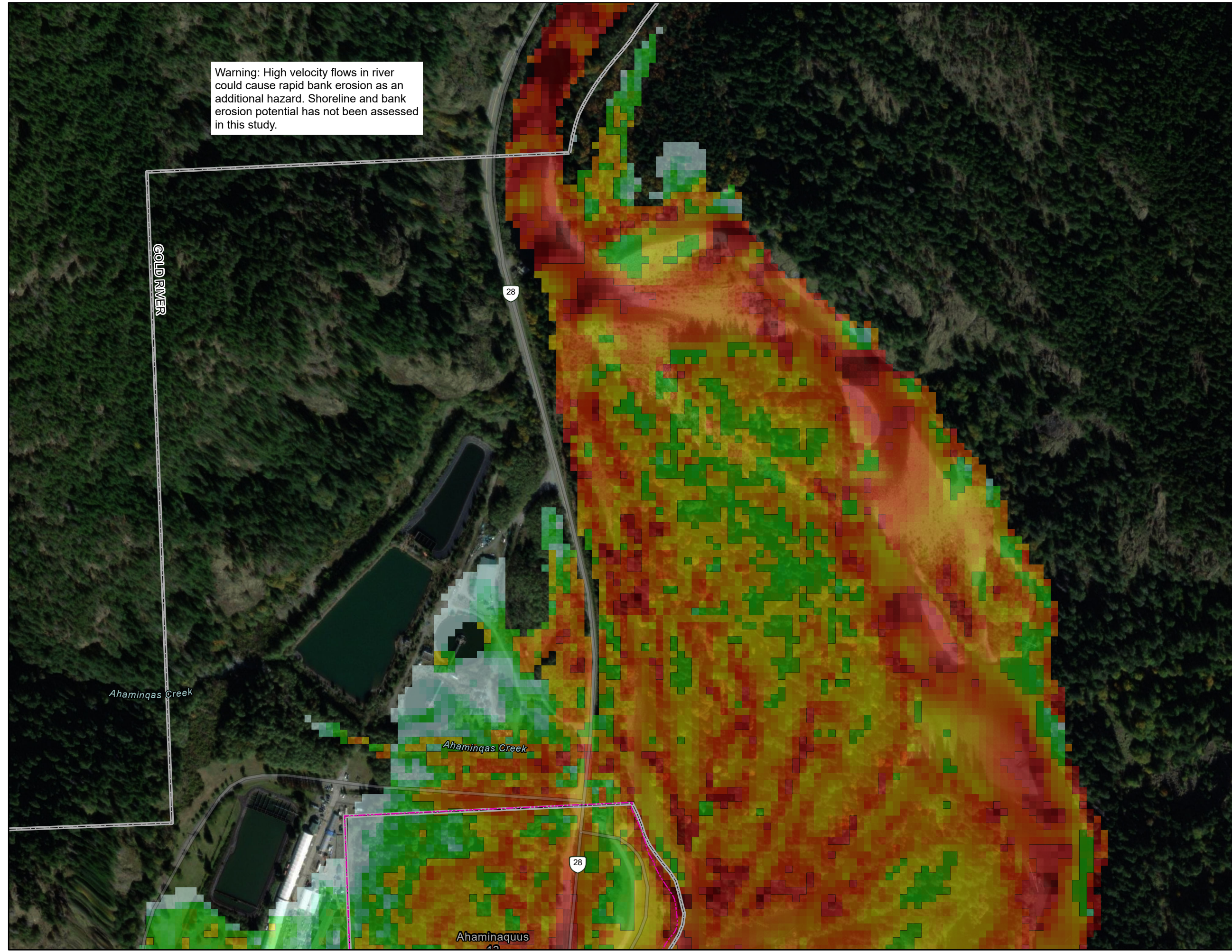
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Engineer	PSG	GIS	SWM	Reviewer	GFL
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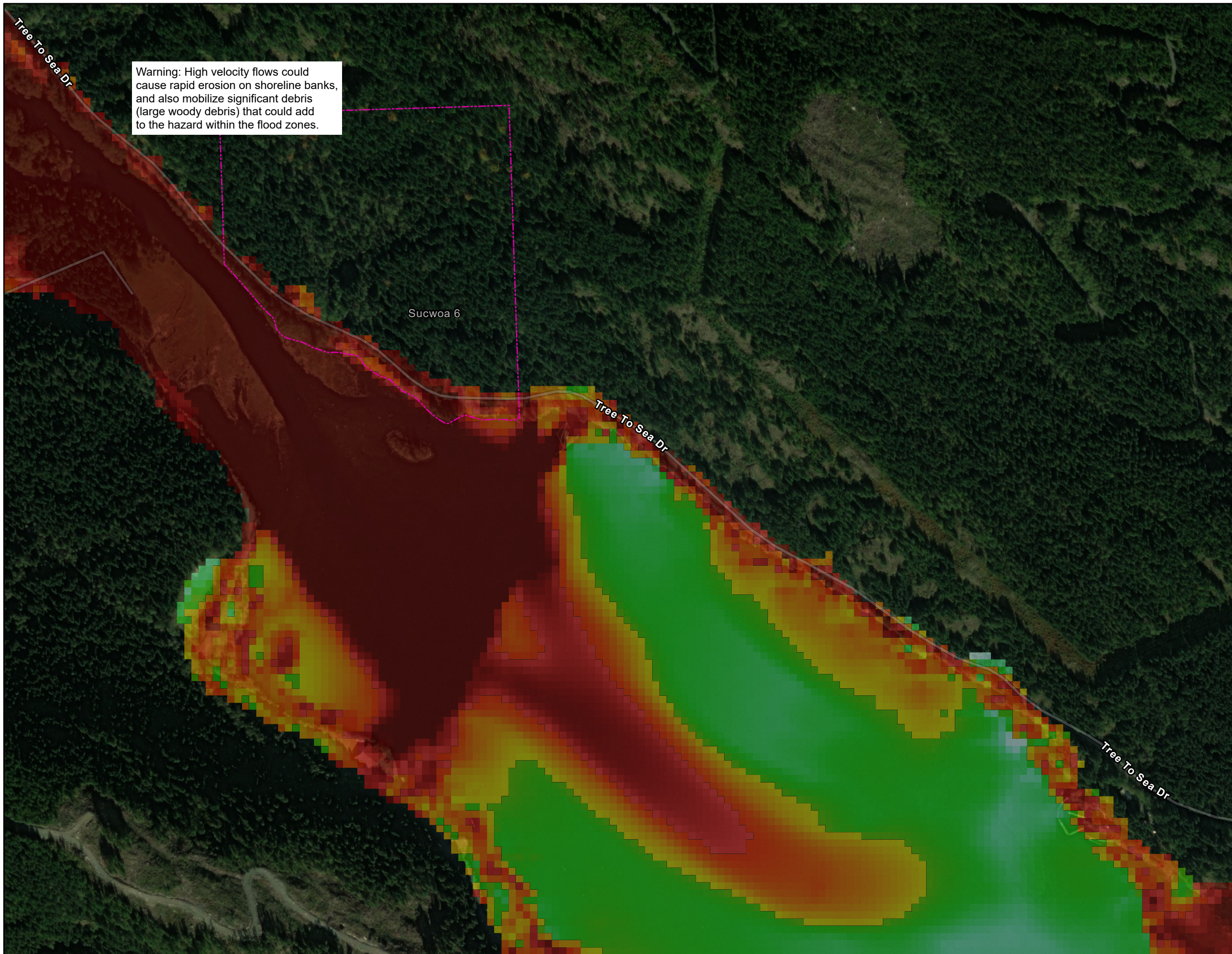
Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

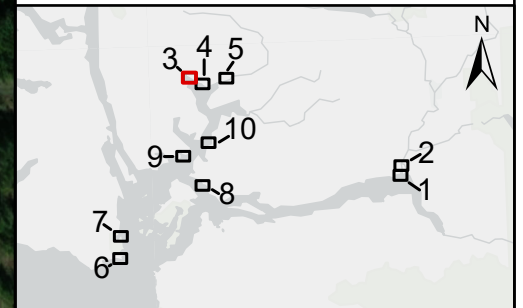
**GOLD RIVER HWY
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**



SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



Warning: High velocity flows could cause rapid erosion on shoreline banks, and also mobilize significant debris (large woody debris) that could add to the hazard within the flood zones.



— FERRY ROUTE

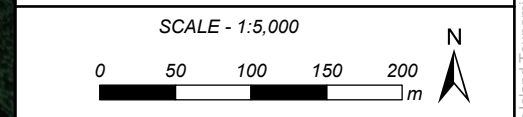
— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
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Coordinate System: NAD 1983 CSRS UTM ZONE 9N
Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
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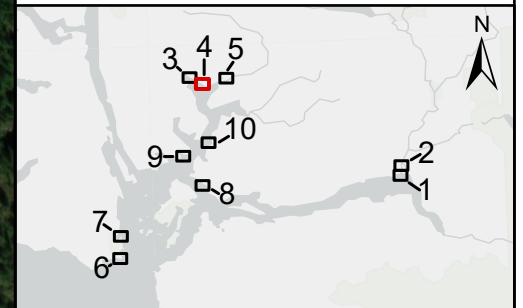
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**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**HEAD BAY
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

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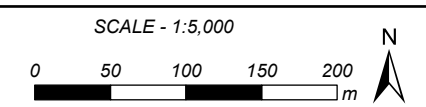


— FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 □ MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
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REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



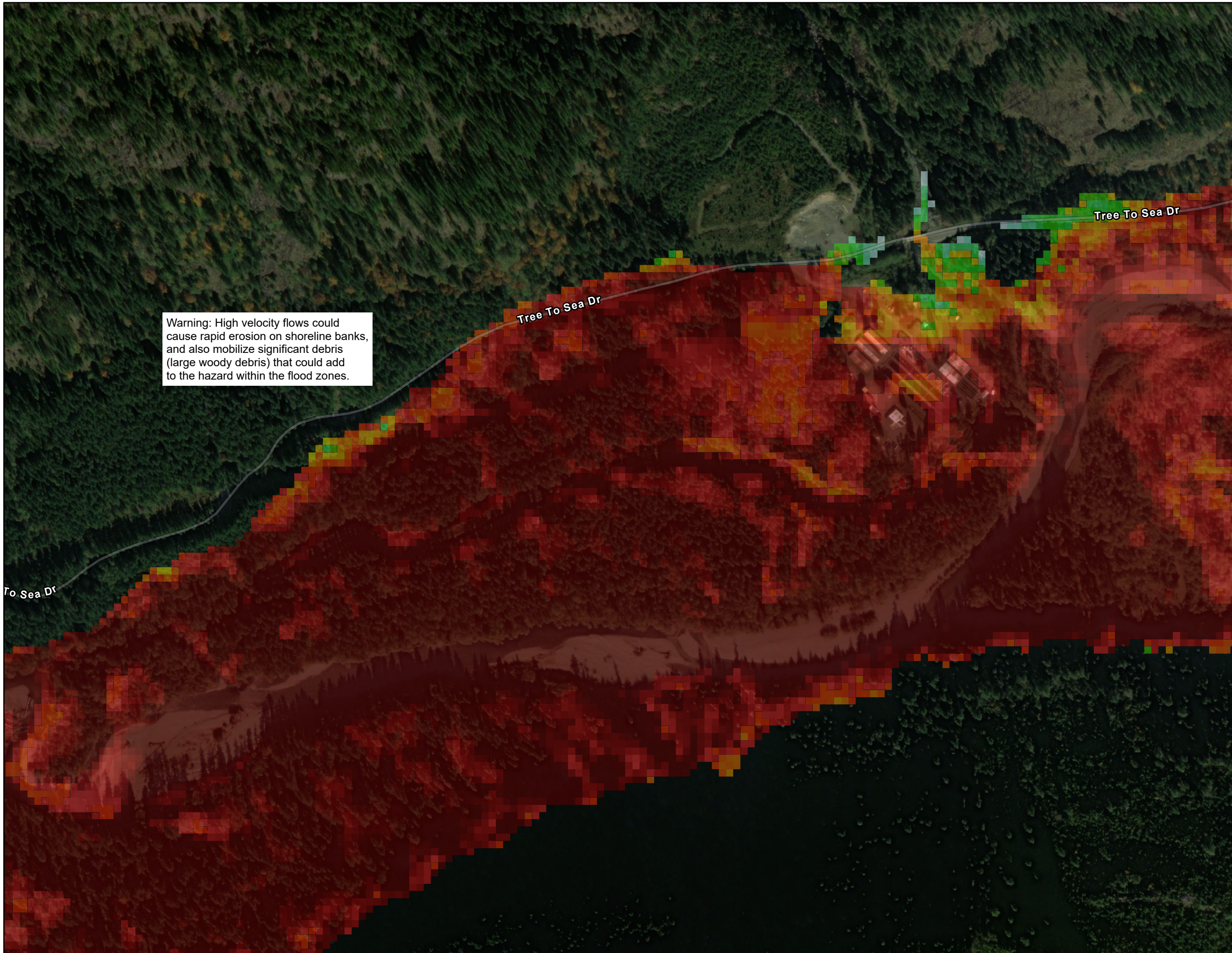
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Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

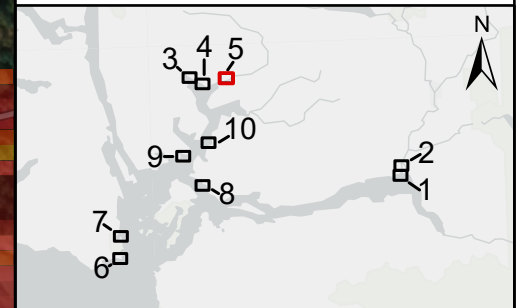
**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**CANTON CREEK
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

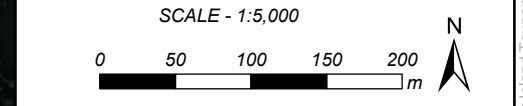


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- FERRY ROUTE
 - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

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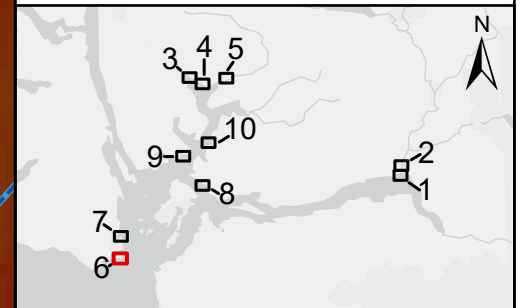
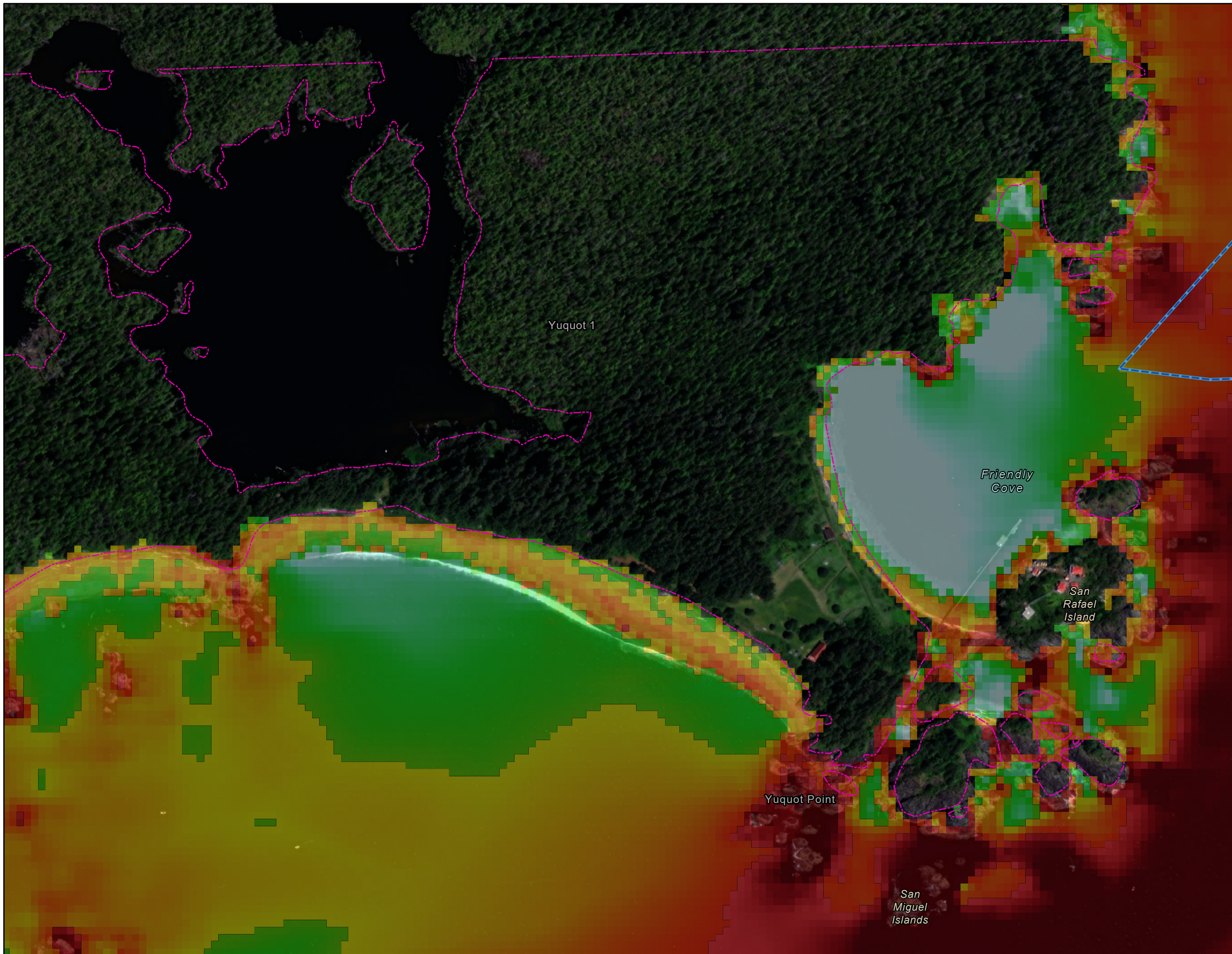
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Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**CONUMA RIVER
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



— FERRY ROUTE

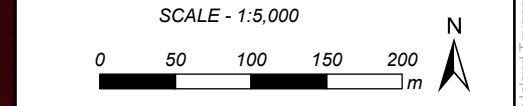
— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
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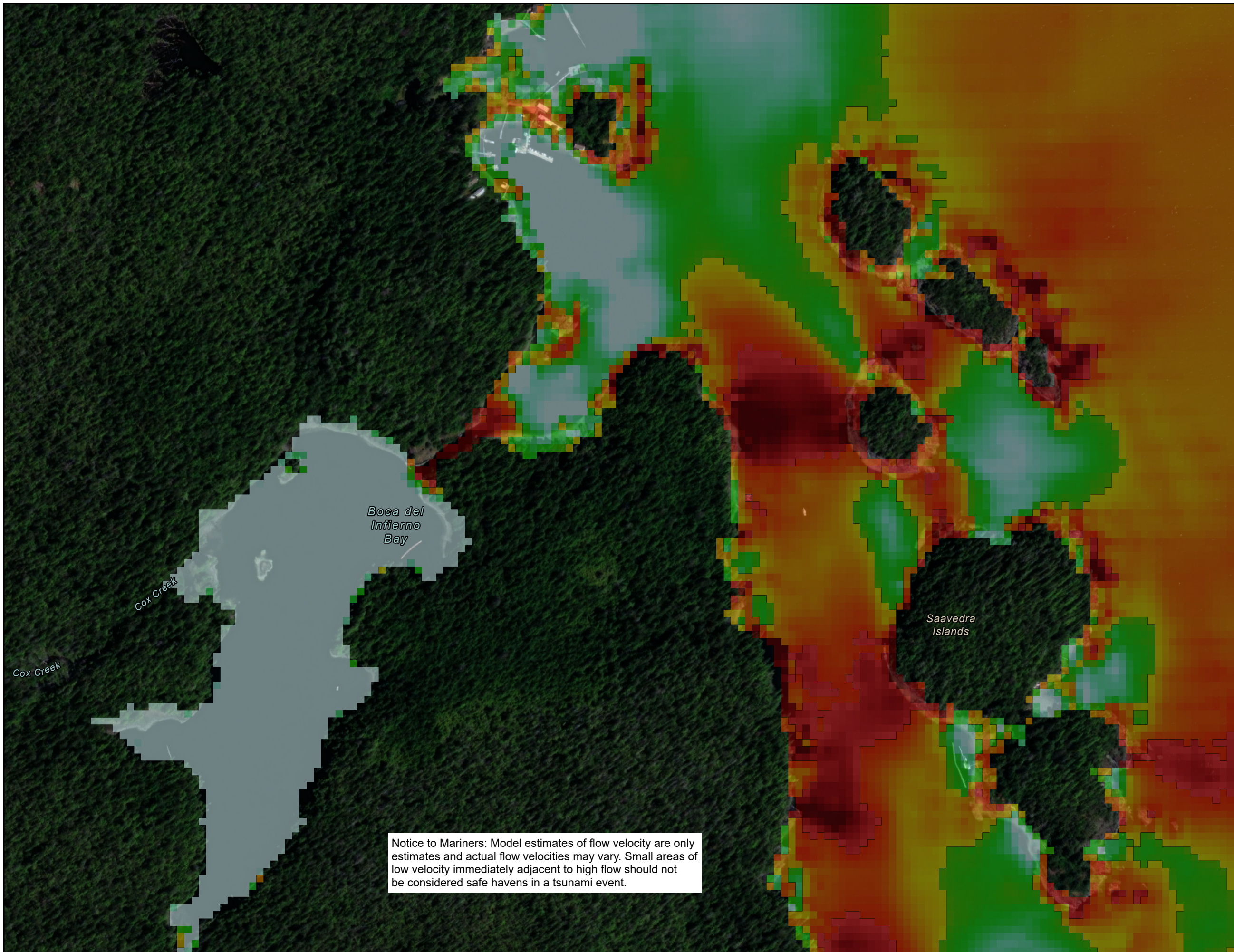
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Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

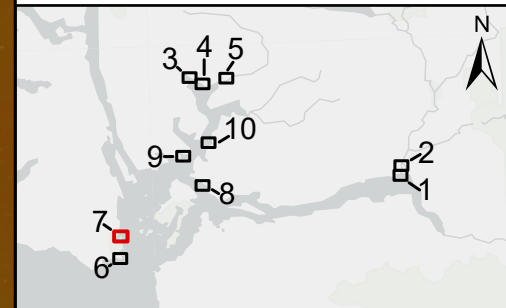
**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**YUQUOT
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



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— FERRY ROUTE

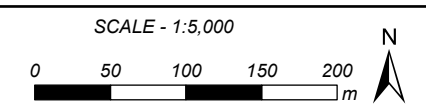
— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
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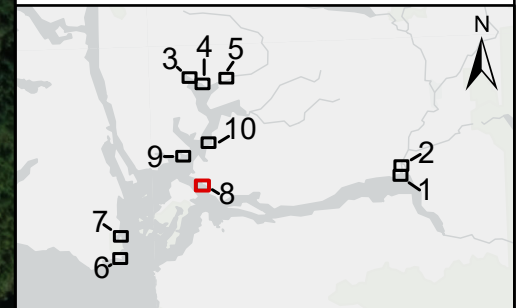
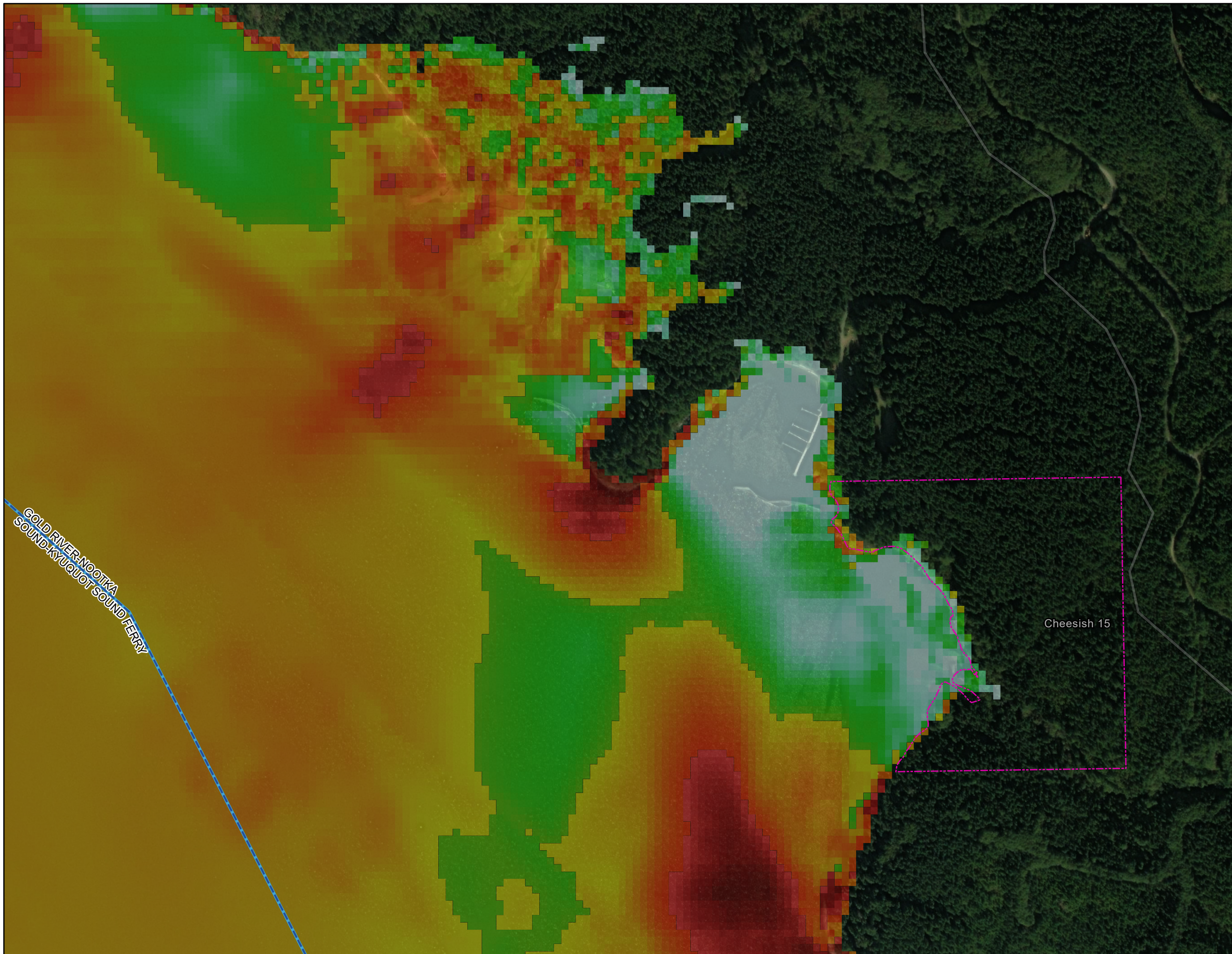
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

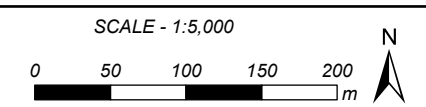
**MCKAY PASSAGE
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

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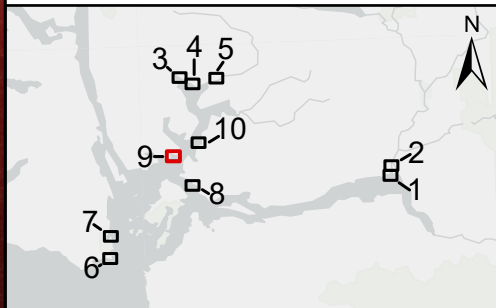
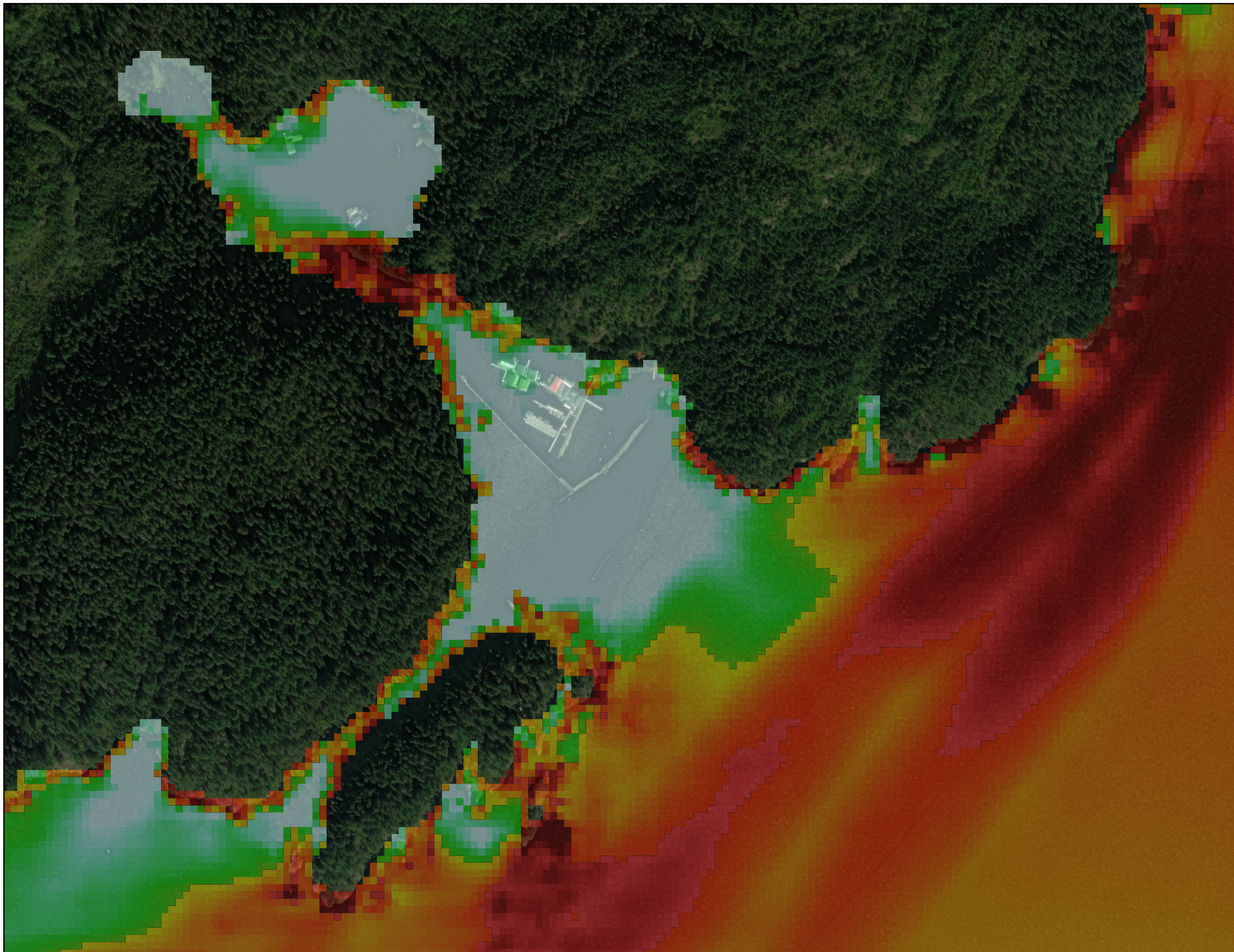
Engineer	PSG	GIS	SWM	Reviewer	GFL
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NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT

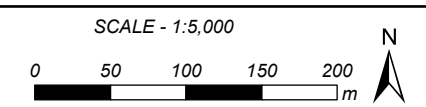
CHEESISH
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
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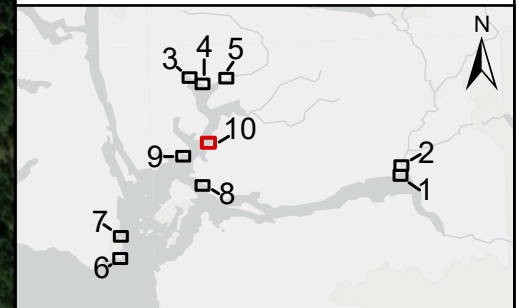
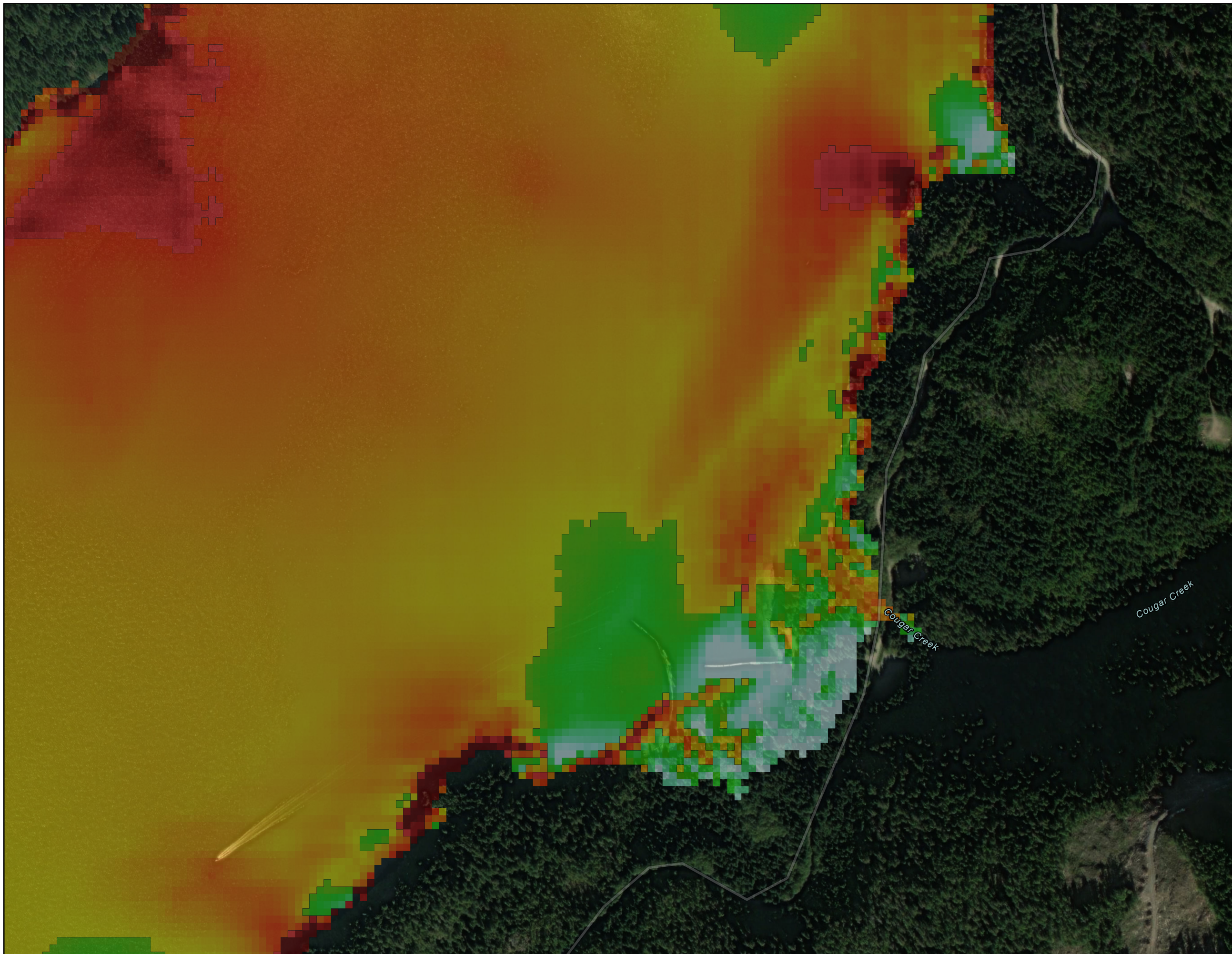
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

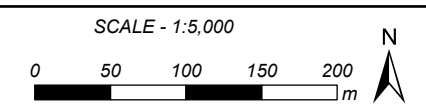
**CRITTER COVE
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



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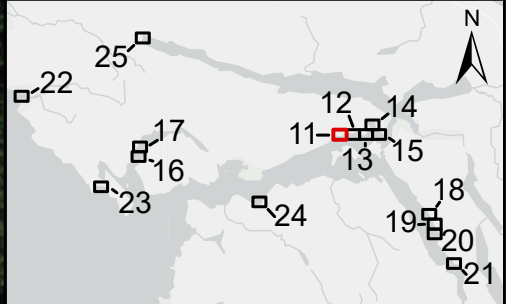
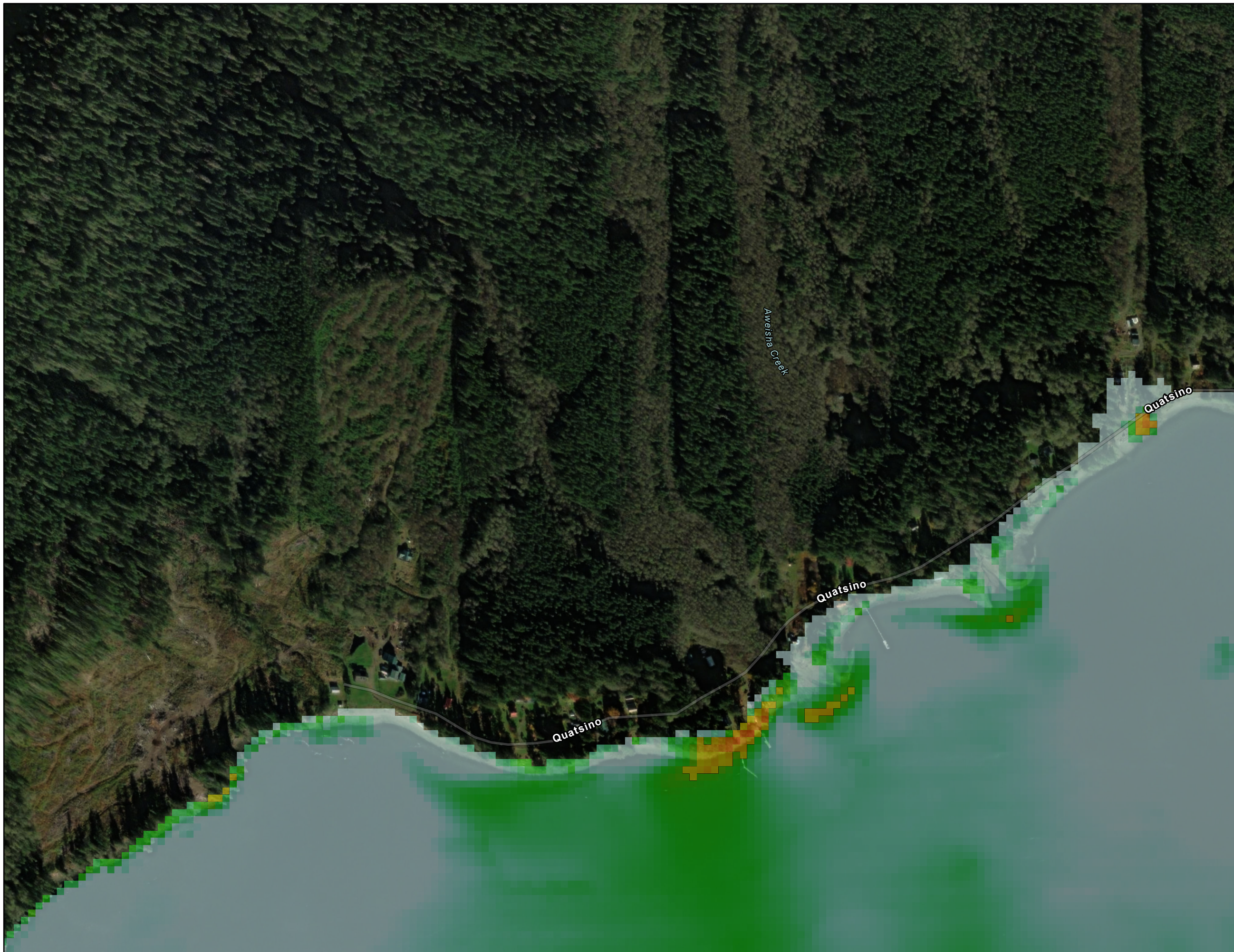
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

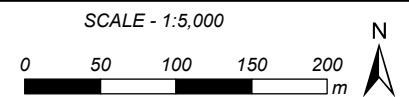
**COUGAR CREEK
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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- FERRY ROUTE
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 - MUNICIPAL BOUNDARY
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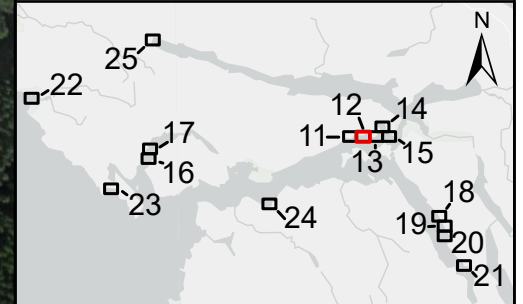
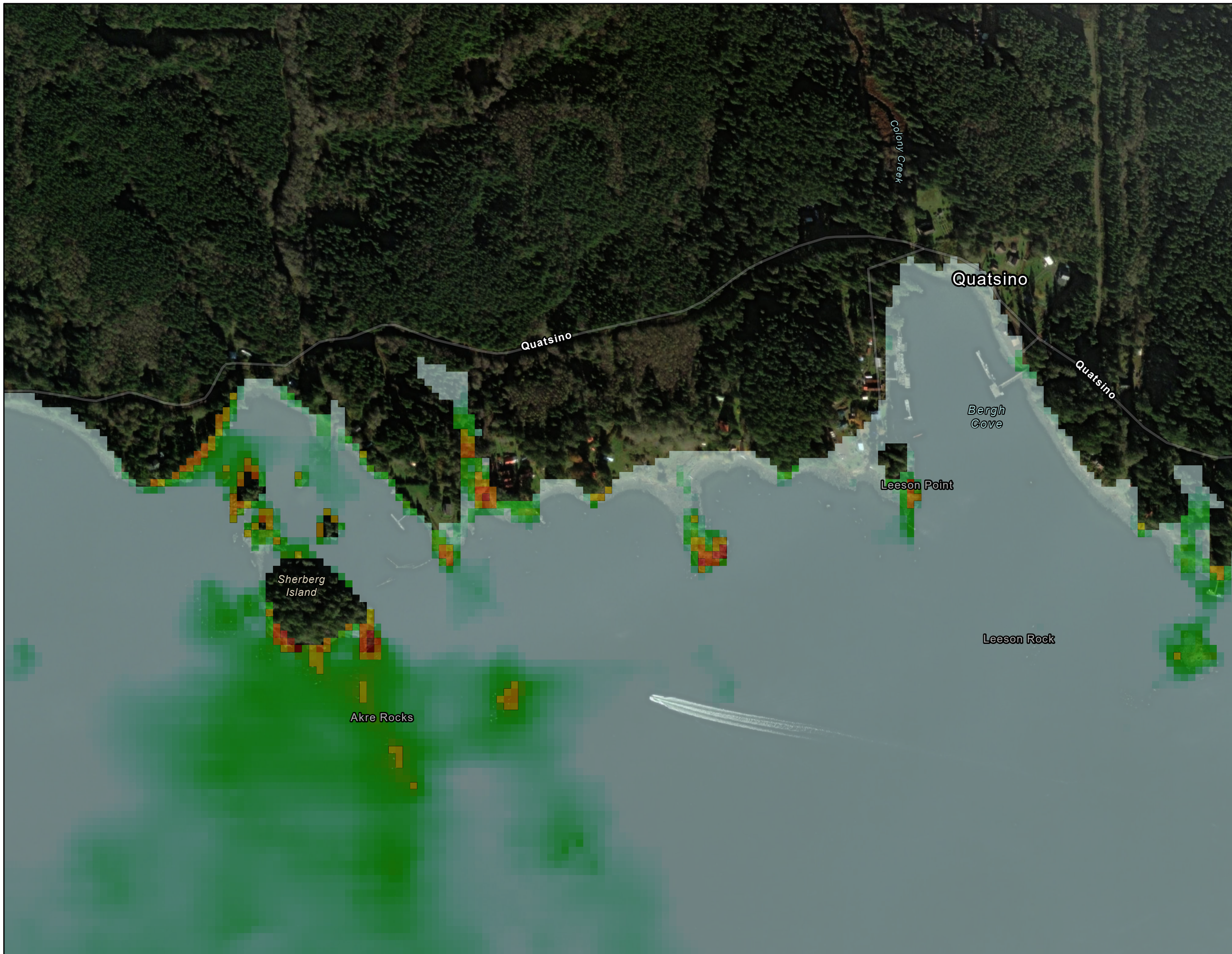
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	Date
3006332	07-JUL-2023

**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**QUATSINO WEST
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



— FERRY ROUTE

— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

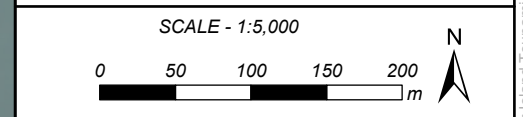
>9 KNOTS

6 KNOTS

3 KNOTS

0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

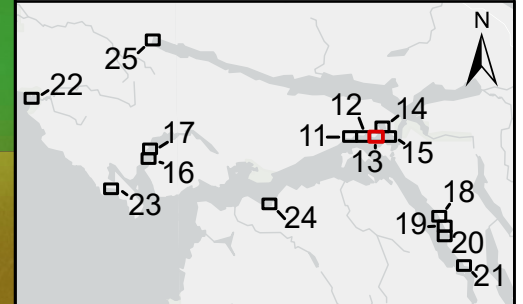
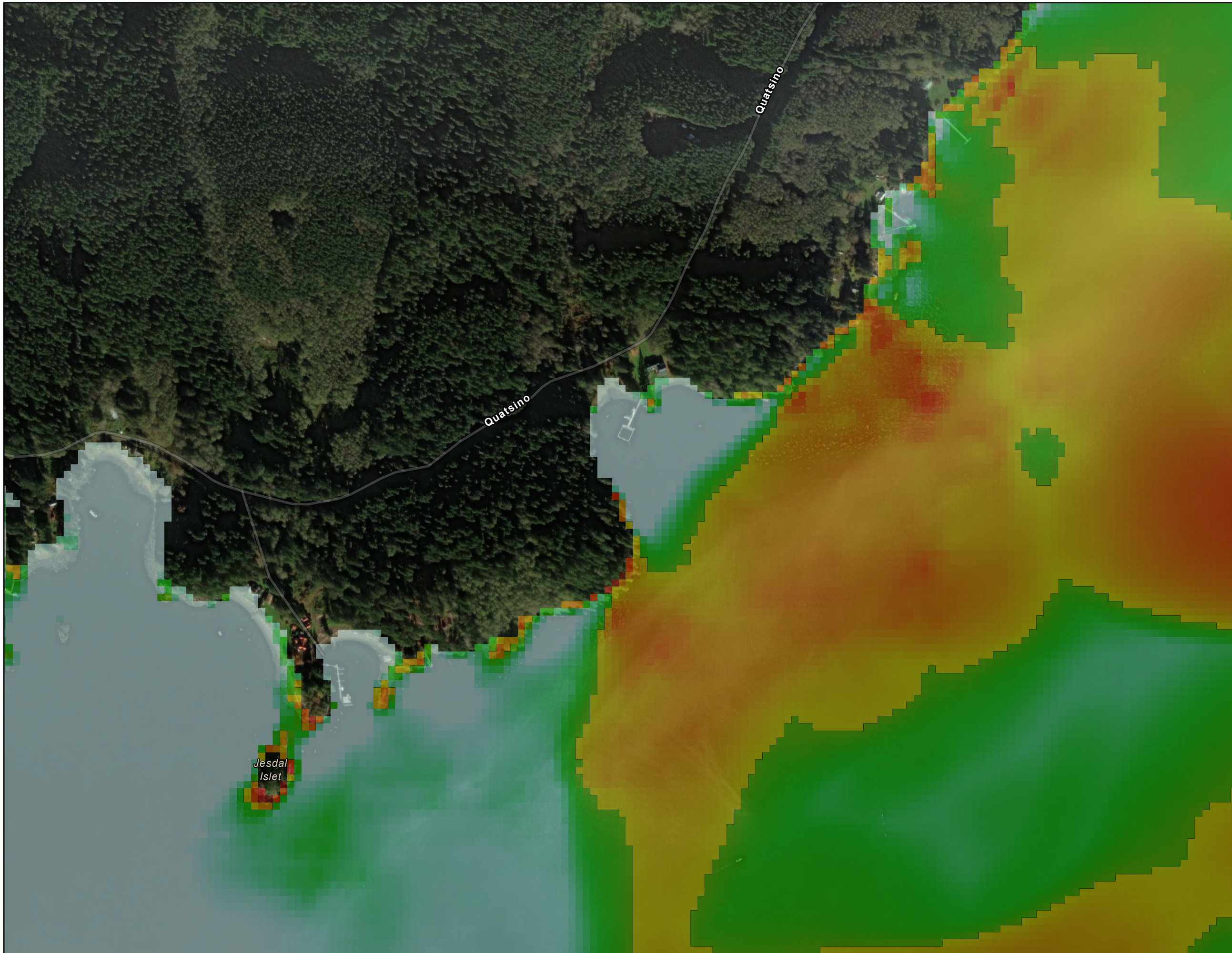
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

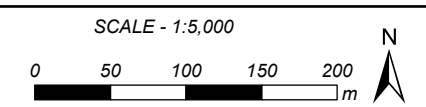
**QUATSINO CENTRE
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

S:\NW\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



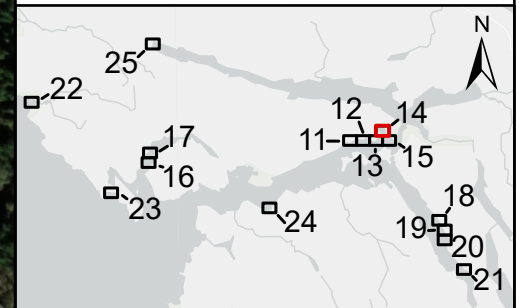
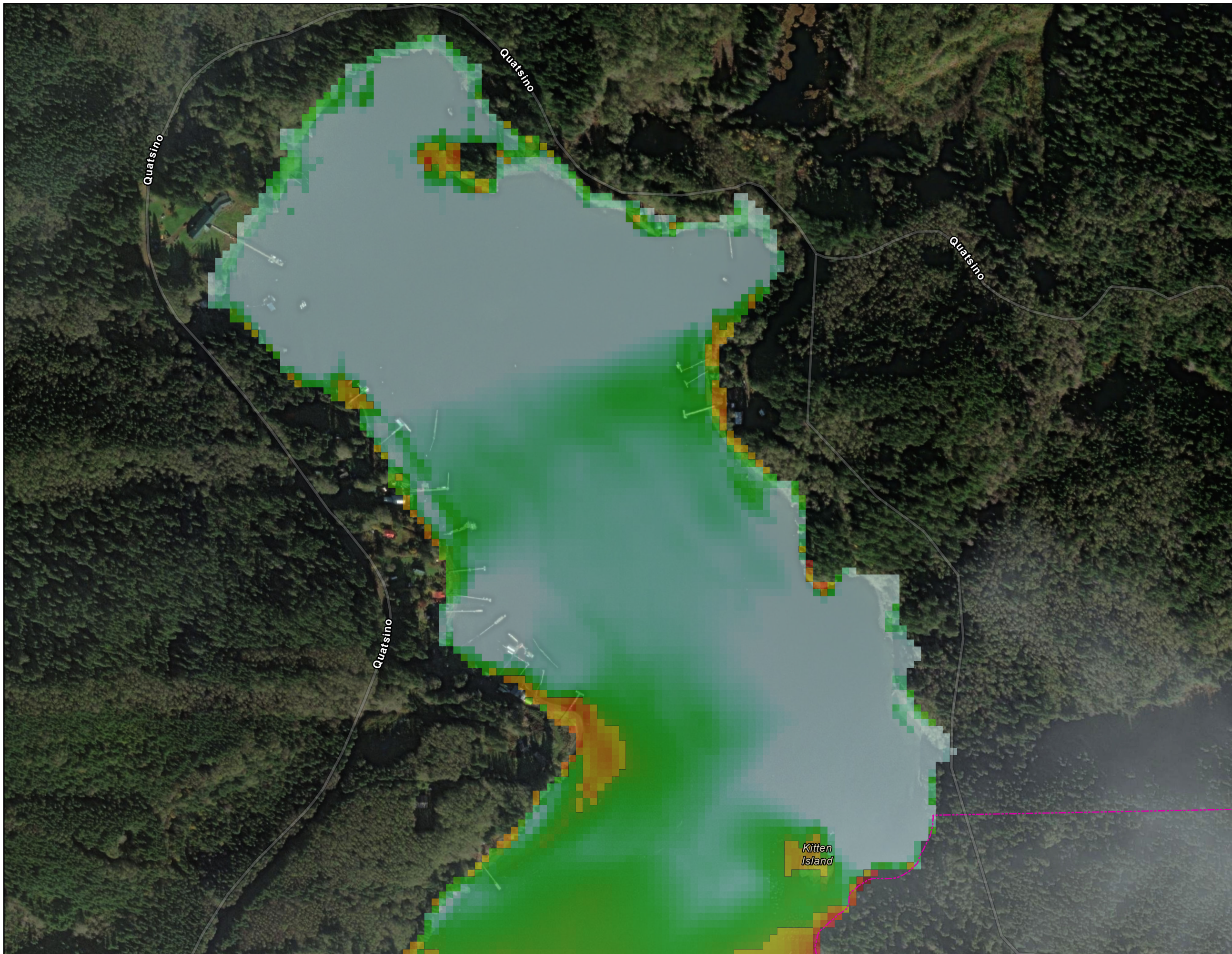
Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

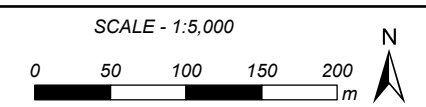
**QUATSINO EAST
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
 - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI**
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



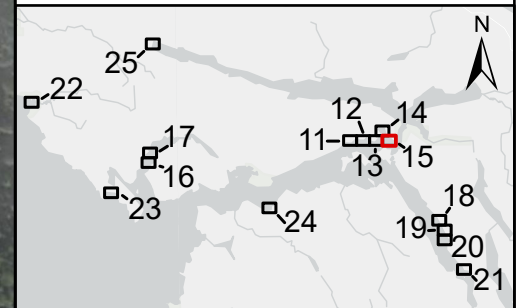
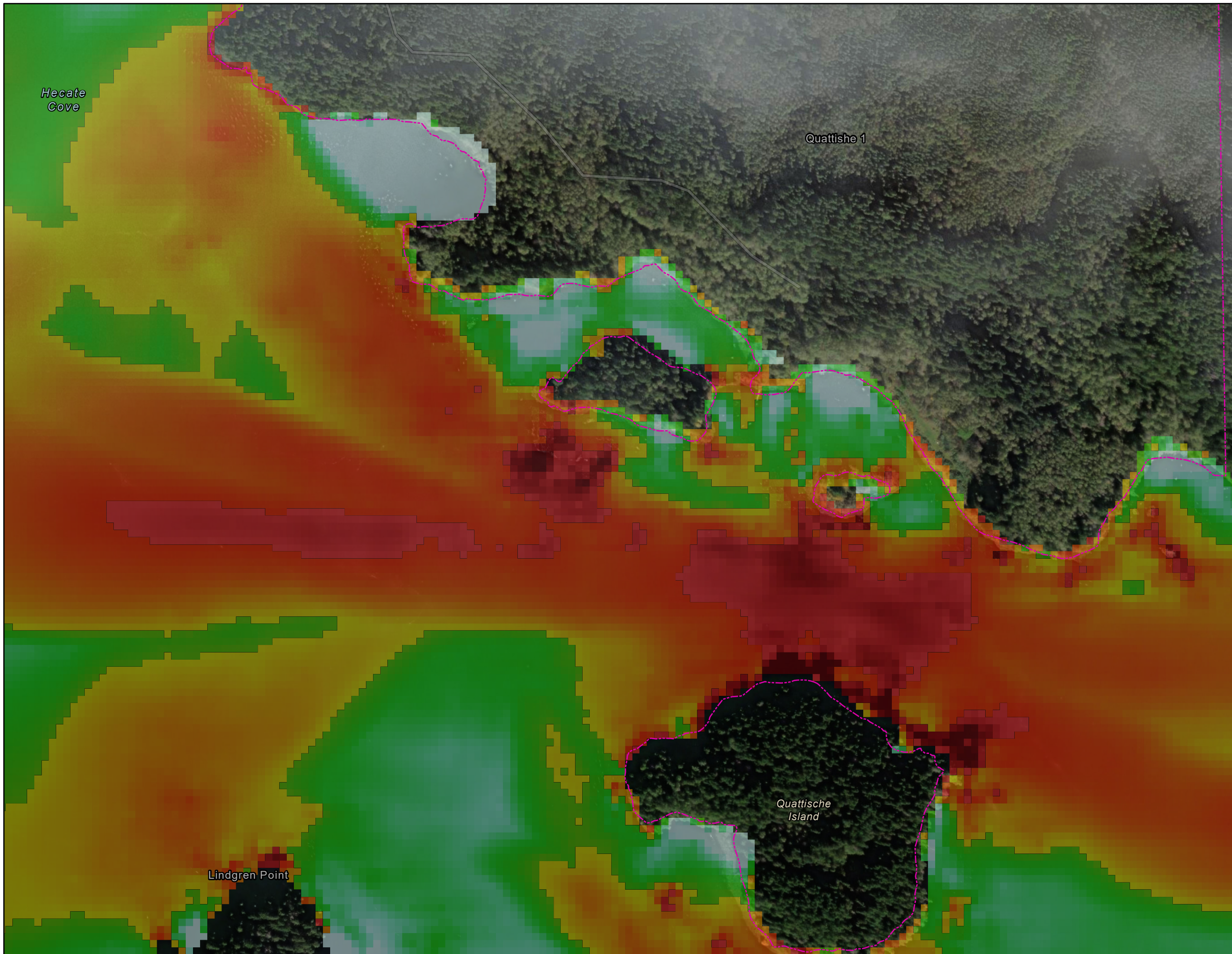
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 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**HECATE COVE
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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— FERRY ROUTE

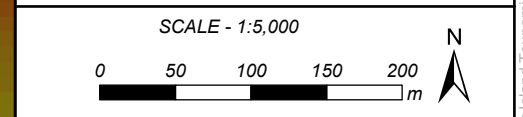
— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
- 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
Units: METRES; Vertical Datum: CGVD2013

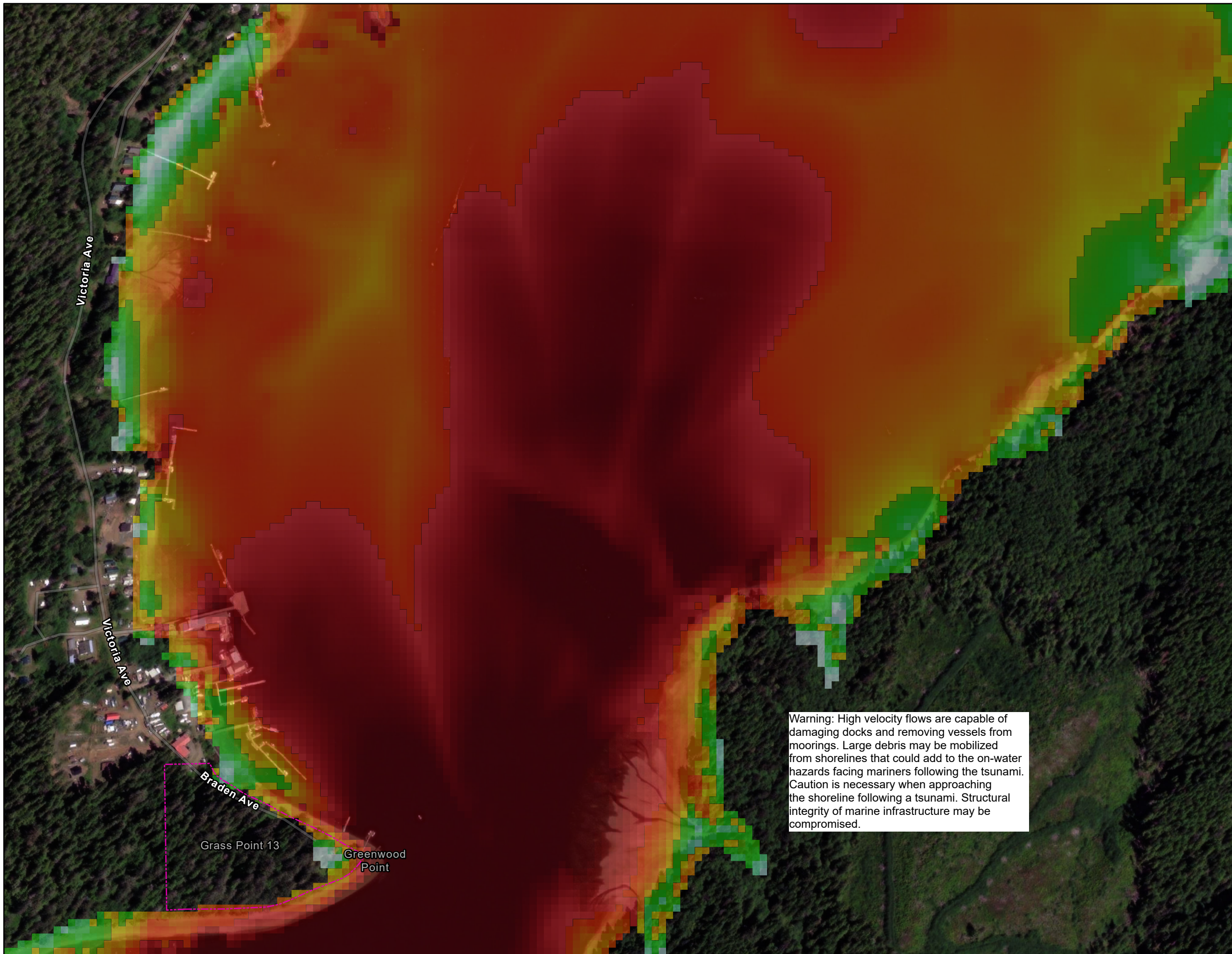
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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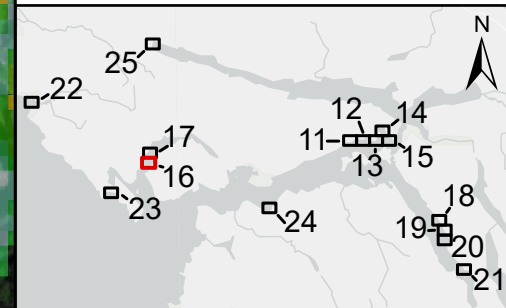
**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**QUATTISHE
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

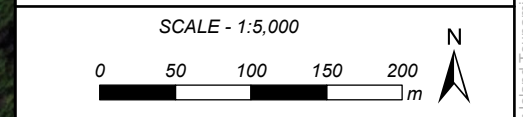


Warning: High velocity flows are capable of damaging docks and removing vessels from moorings. Large debris may be mobilized from shorelines that could add to the on-water hazards facing mariners following the tsunami. Caution is necessary when approaching the shoreline following a tsunami. Structural integrity of marine infrastructure may be compromised.



- FERRY ROUTE
 - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



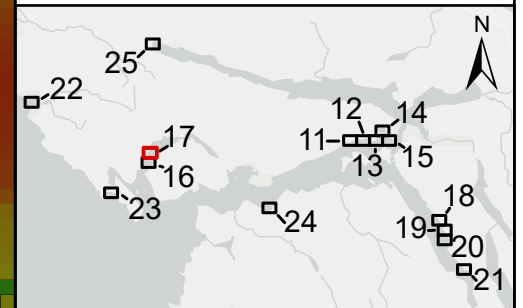
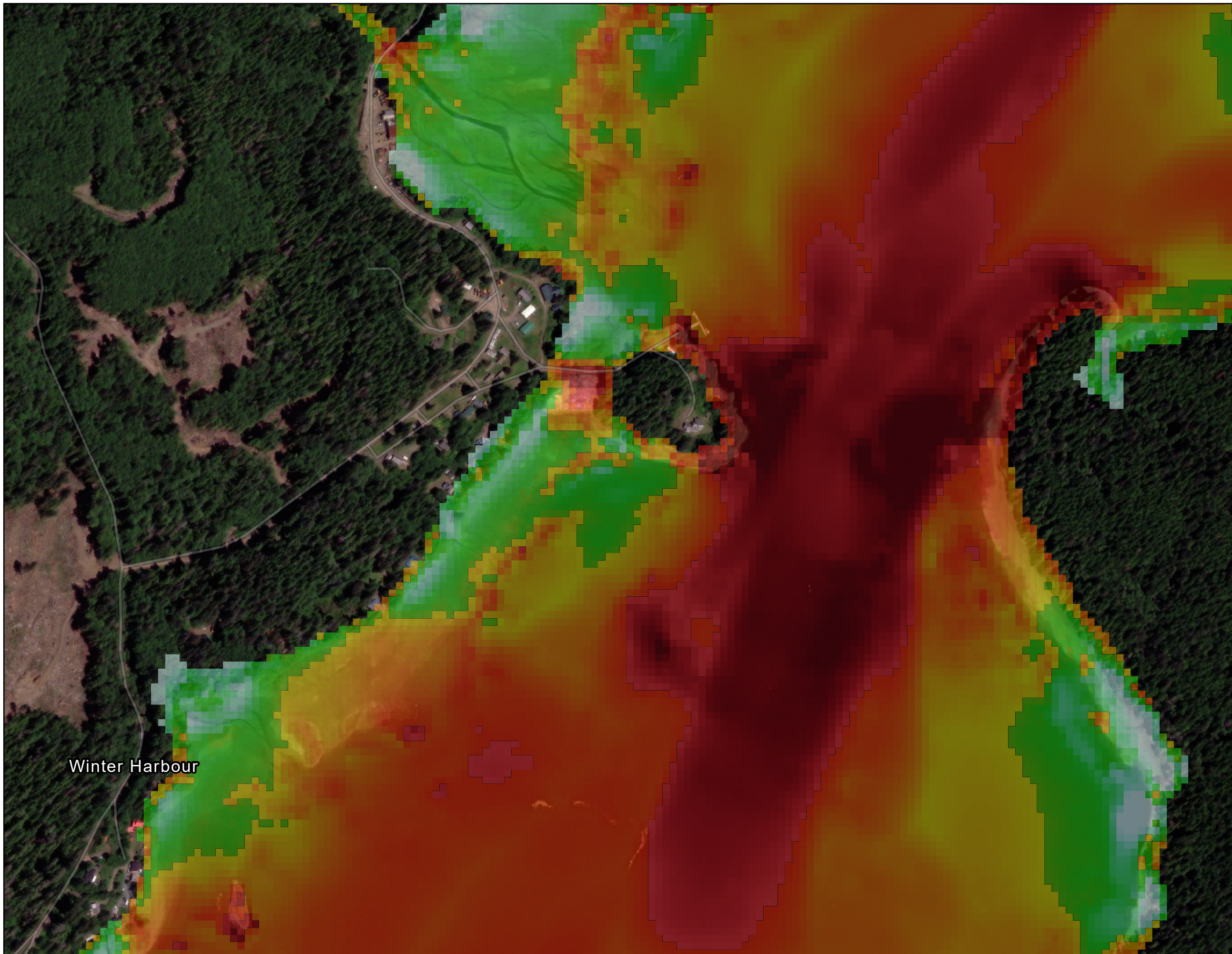
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Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**WINTER HARBOUR SOUTH
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

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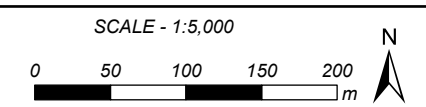


— FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 □ MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
- 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

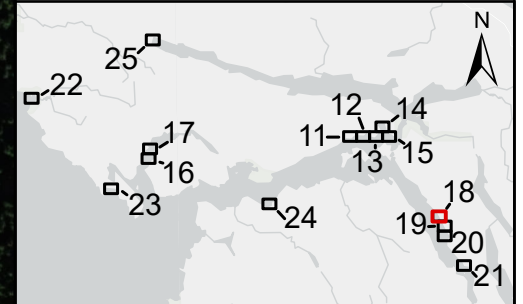
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**WINTER HARBOUR NORTH
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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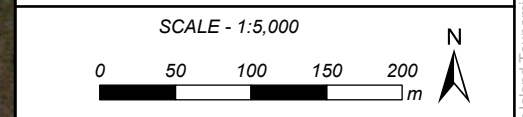


— FERRY ROUTE
 [Pink dashed line] FIRST NATION ADMINISTRATIVE BOUNDARY
 [Grey outline] MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- [Red] >9 KNOTS
- [Orange] 6 KNOTS
- [Yellow] 3 KNOTS
- [Green] 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

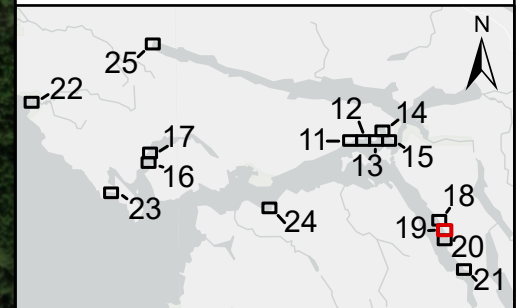
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**JEUNE LANDING
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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— FERRY ROUTE

— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

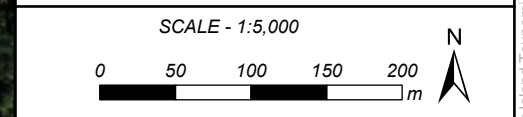
>9 KNOTS

6 KNOTS

3 KNOTS

0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
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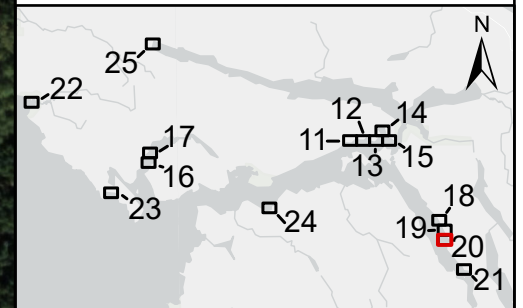
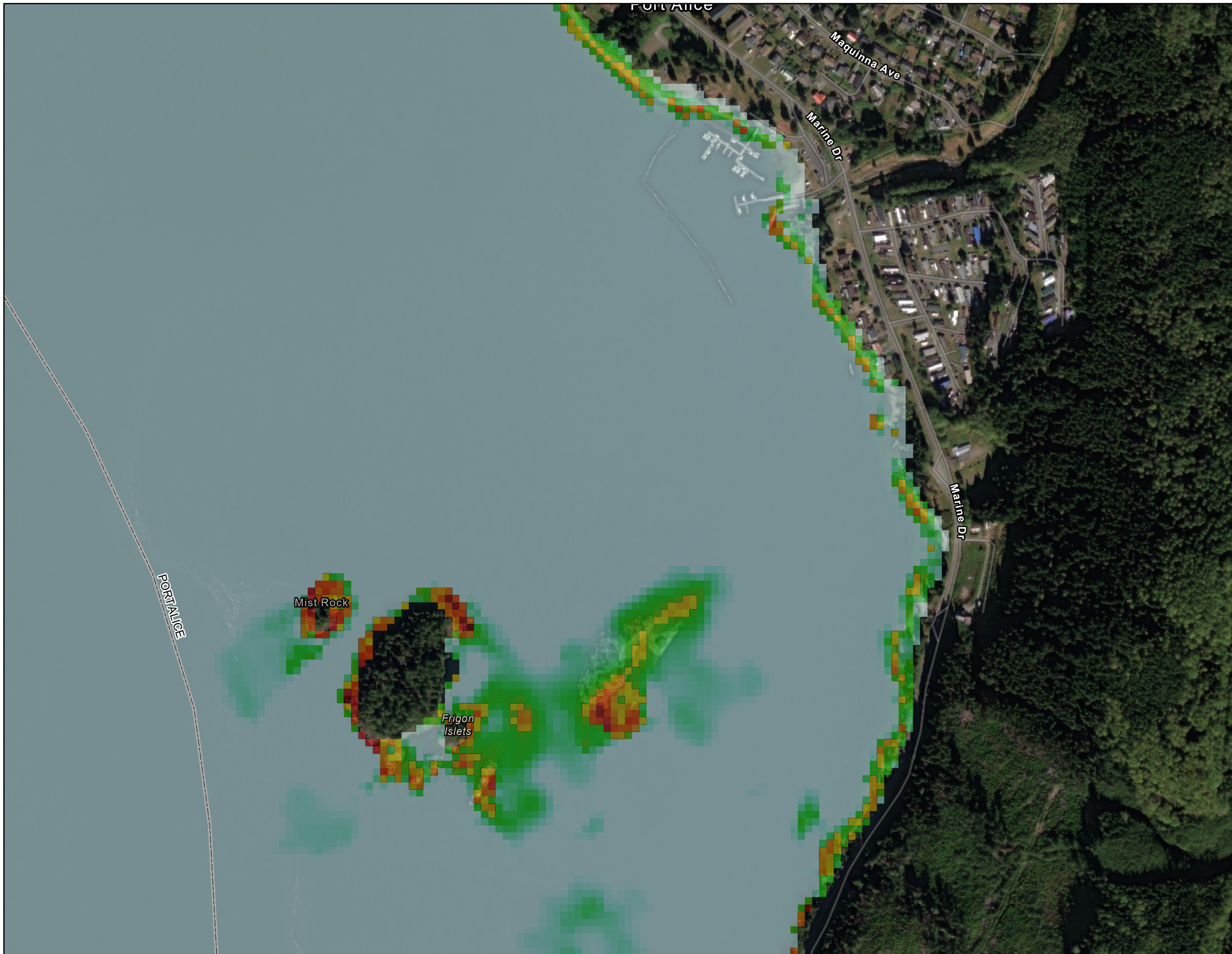
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

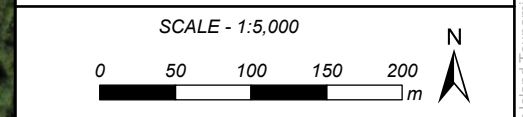
**PORT ALICE
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

S:\NW\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI**
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED
 TO THE RESULTS SHOWN. FOR INUNDATION
 EXTENTS, REFER TO MAPS OF TSUNAMI
 INUNDATION LEVEL FOR EMERGENCY PLANNING.



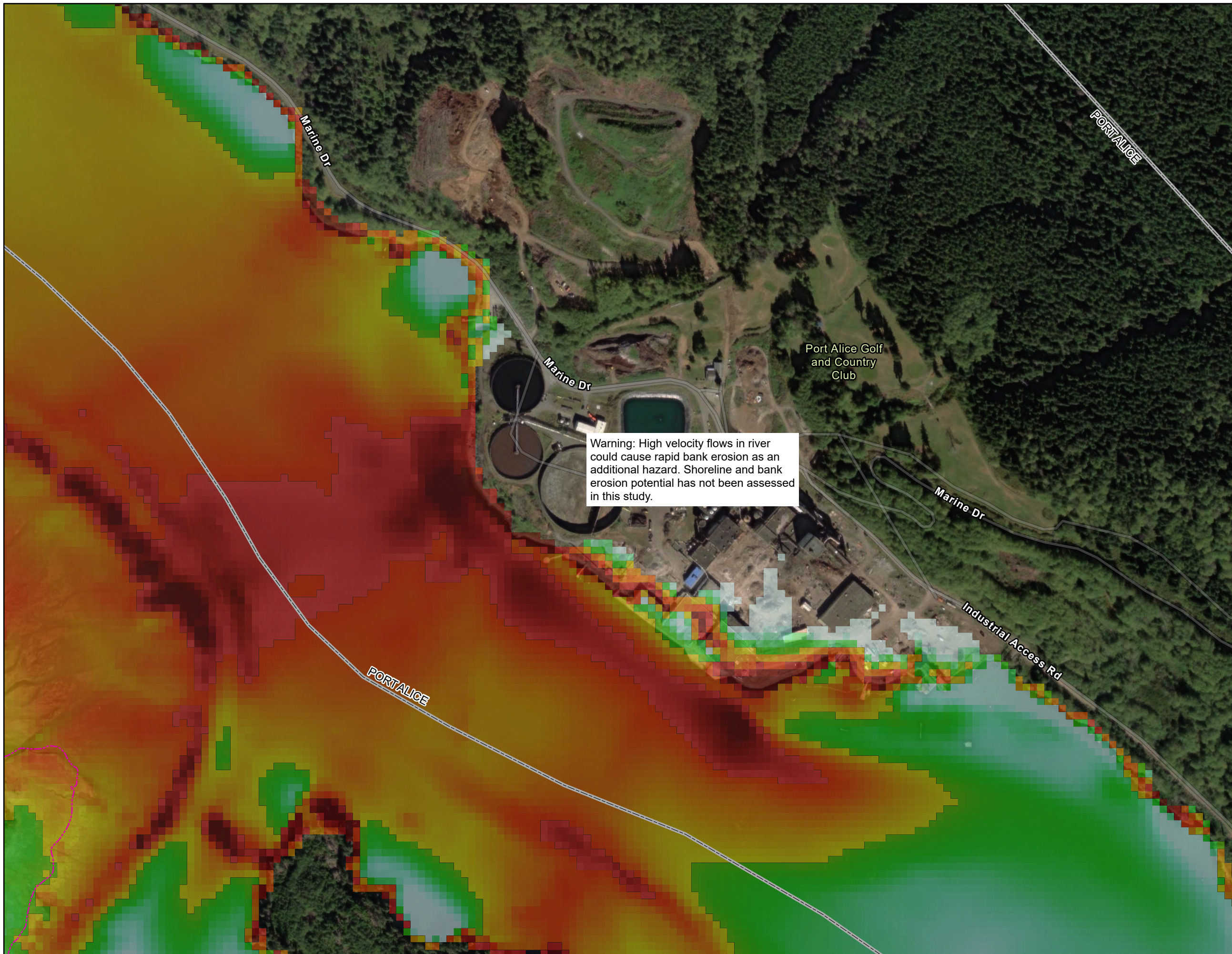
Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332			Date	07-JUL-2023

**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**RUMBLE BEACH
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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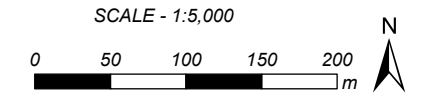


Warning: High velocity flows in river could cause rapid bank erosion as an additional hazard. Shoreline and bank erosion potential has not been assessed in this study.



- FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



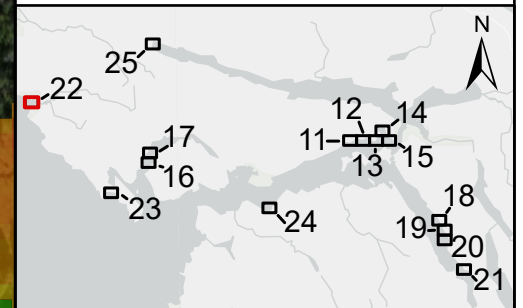
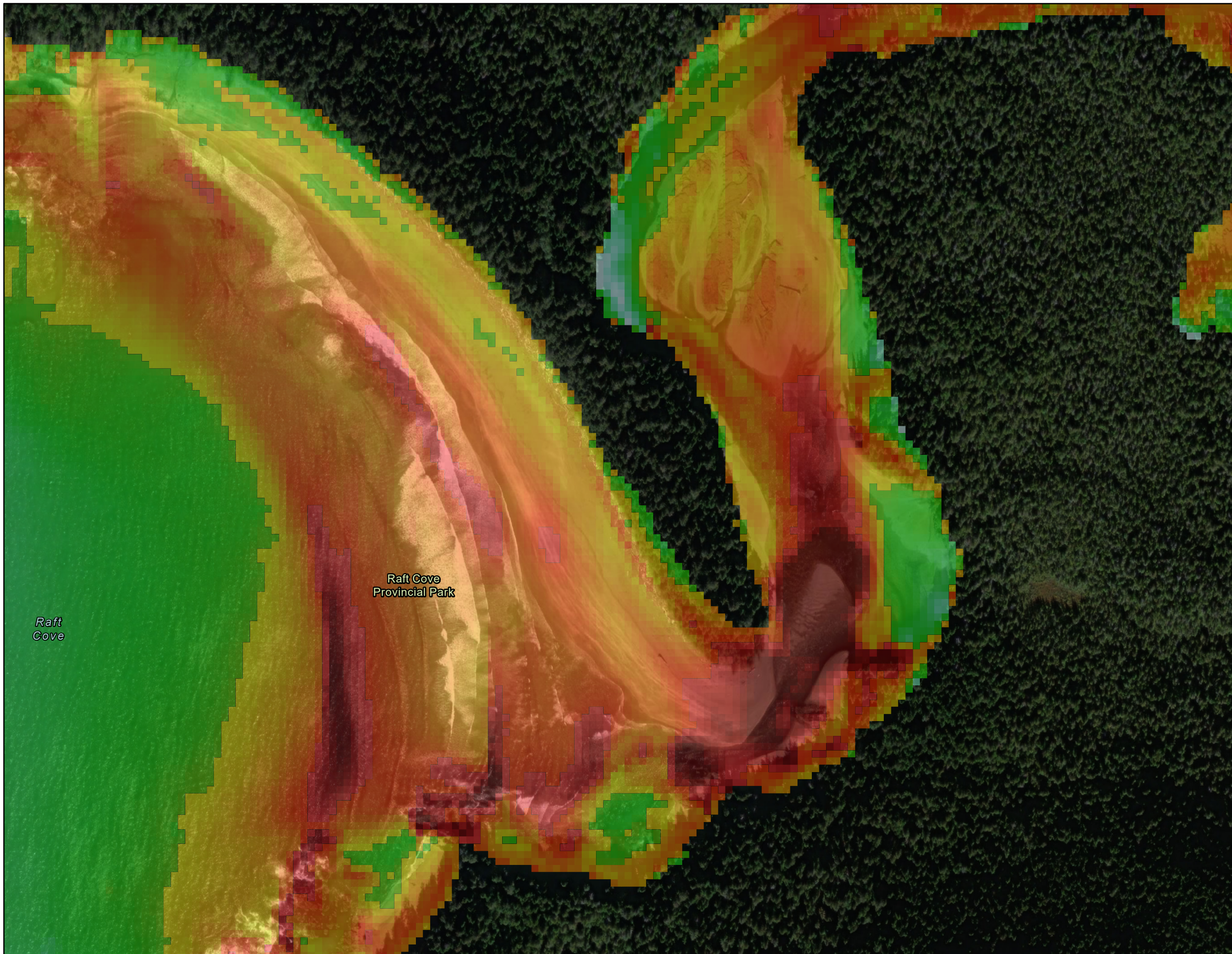
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Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

**PORT ALICE TERMINAL
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

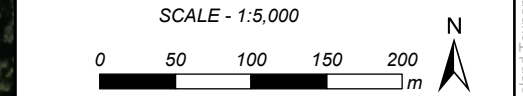


— FERRY ROUTE
 - - - FIRST NATION ADMINISTRATIVE BOUNDARY
 □ MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

- >9 KNOTS
- 6 KNOTS
- 3 KNOTS
- 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



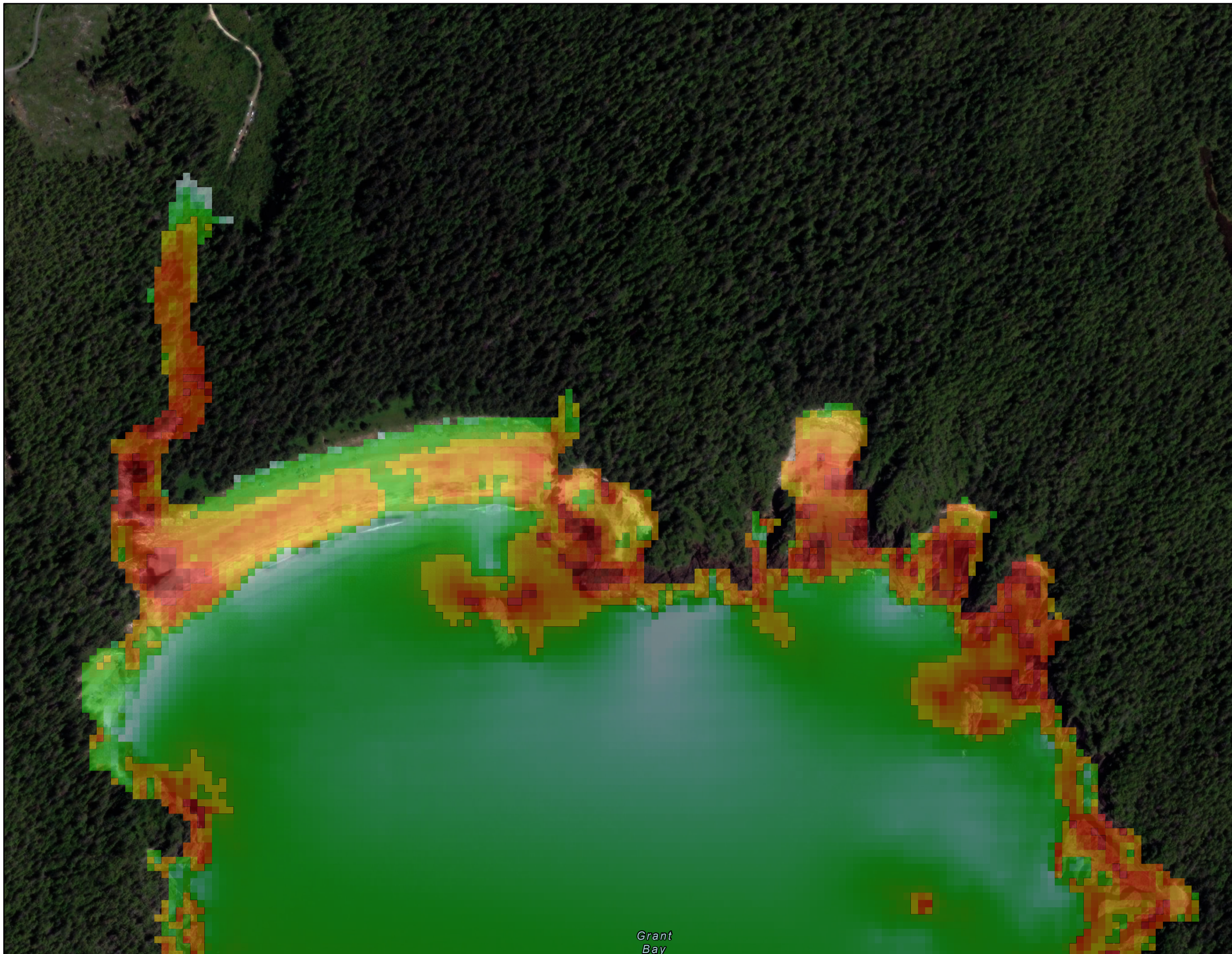
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 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
Job Number	3006332		Date	07-JUL-2023	

NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT

RAFT COVE
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx

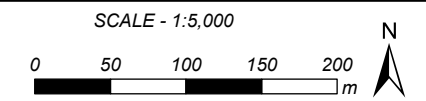


Grant Bay



- FERRY ROUTE
 - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

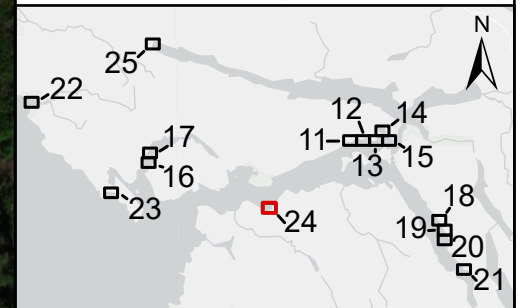
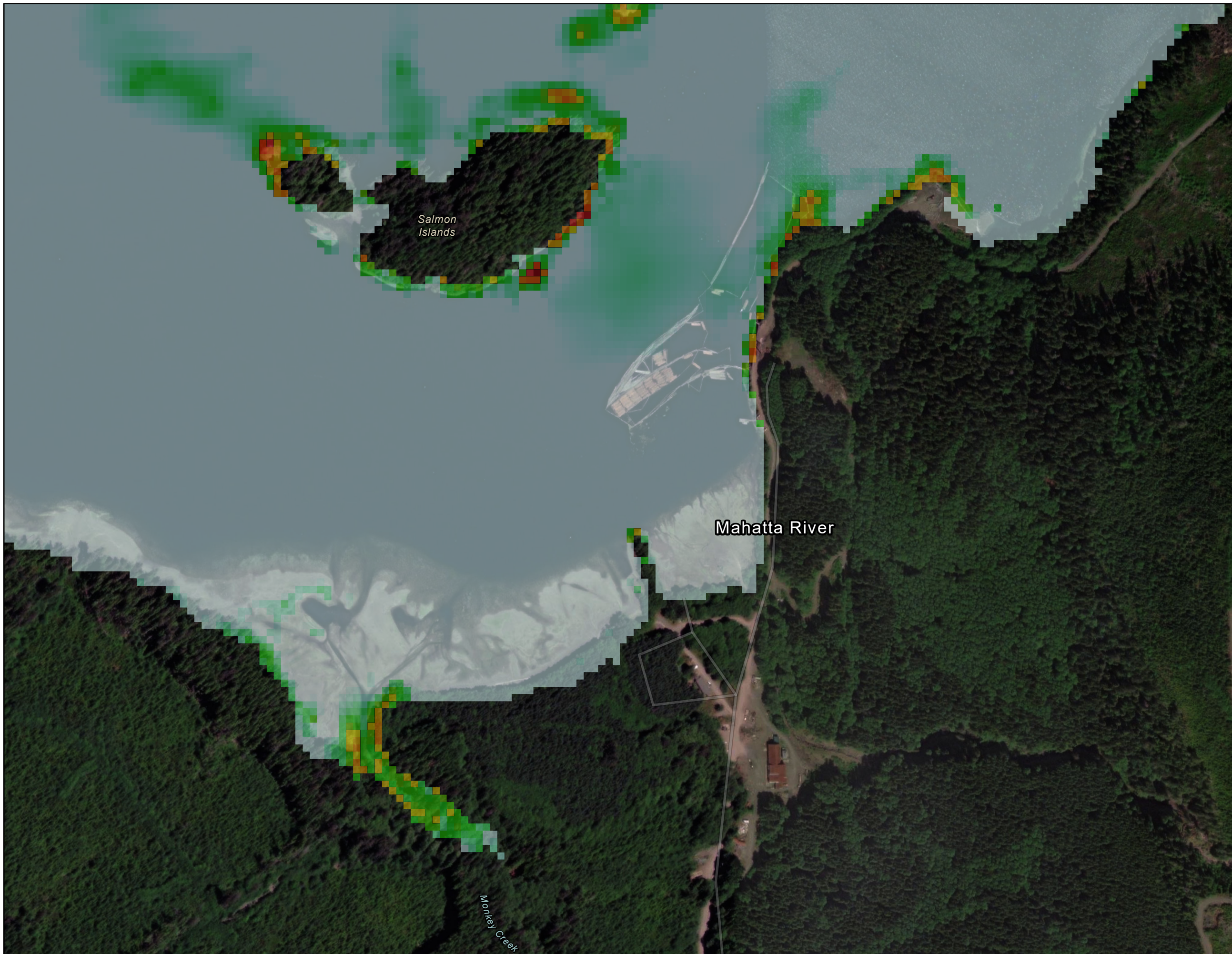
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**GRANT BAY
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



— FERRY ROUTE

— FIRST NATION ADMINISTRATIVE BOUNDARY

— MUNICIPAL BOUNDARY

MAX CURRENT VELOCITY INDUCED BY TSUNAMI

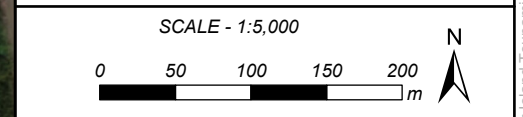
>9 KNOTS

6 KNOTS

3 KNOTS

0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES. NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
Units: METRES; Vertical Datum: CGVD2013

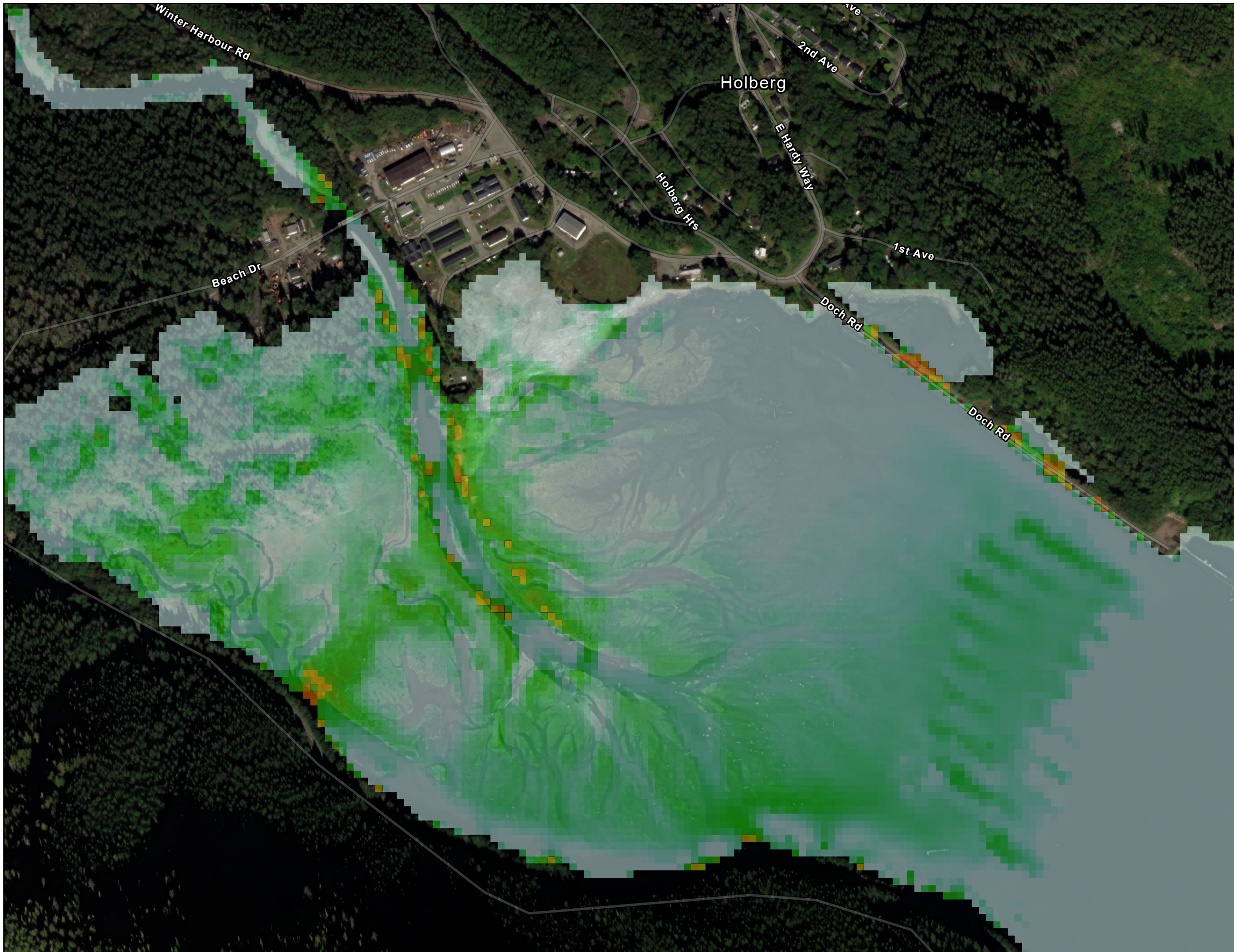
Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
TSUNAMI RISK ASSESSMENT PROJECT**

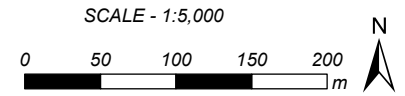
**MAHATTA RIVER
MAXIMUM TSUNAMI
CURRENT VELOCITY
CASCADIA TSUNAMI**

SWM: \\mainfile-van\Projects\Active\3006332 NW Vancouver Island Tsunami Risk Assessment - Phase 2\95 GIS\3006332_map_5K_HazardMapping_2.aprx



- FERRY ROUTE
 - FIRST NATION ADMINISTRATIVE BOUNDARY
 - MUNICIPAL BOUNDARY
- MAX CURRENT VELOCITY INDUCED BY TSUNAMI
- >9 KNOTS
 - 6 KNOTS
 - 3 KNOTS
 - 0 KNOTS

REFER TO INDEX MAP FOR COMPLETE NOTES.
 NO SAFETY FACTOR OR FREEBOARD WAS APPLIED TO THE RESULTS SHOWN. FOR INUNDATION EXTENTS, REFER TO MAPS OF TSUNAMI INUNDATION LEVEL FOR EMERGENCY PLANNING.



Coordinate System: NAD 1983 CSRS UTM ZONE 9N
 Units: METRES; Vertical Datum: CGVD2013

Engineer	PSG	GIS	SWM	Reviewer	GFL
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Job Number	3006332	Date	07-JUL-2023
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**NORTHWEST VANCOUVER ISLAND
 TSUNAMI RISK ASSESSMENT PROJECT**

**HOLBERG
 MAXIMUM TSUNAMI
 CURRENT VELOCITY
 CASCADIA TSUNAMI**

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