



# Mamquam Blind Channel Long-Term Maintenance and Funding Strategy

Status Update May 7, 2024

📷 J Buchanan 2023

# MASt Priority Actions



## Marine Action Strategy

Prepared in collaboration with community and the District of Squamish



July 17, 2018



## OCP Policy 20.24 e

Develop a dredging strategy for the Mamquam Blind Channel as needed in order to address navigability for transportation, recreation and commerce, while minimizing impacts to marine habitats and biodiversity.

### FOCUS AREA 3 Marine Economy

9. Initiate scoping, collaboration and engagement on an ecosystem based dredge program, priority navigation maintenance activities, and funding strategy. (3.1.3 A1). **DISTRICT LEAD**

# Project Focus + Study Area

- Develop channel maintenance and funding strategy to provide safe navigation while enhancing coastal ecosystem function + minimizing environmental and cultural impacts

## Study Area

- Based on navigational safety priority and Navigational Channel Area established with Transport Canada in 2017 (MOU) and bathymetric survey data (CHS, 2020) – significant areas do not meet design depth
- Acknowledges Sta7mes and estuary area of interest and importance (habitat restoration and cultural significance)
- Upper MBC out of scope for now: limited available funding envelope and data, high sensitivity and future review through UMBC land and water use projects



# Project Stages, Key Tasks + Deliverables

## Scoping + Early and Ongoing Engagement

**Project Scoping** Fall 2021  
**Procurement** (Westmar Advisors) Dec 2021  
**Engagement Plan Endorsement** (April 2022)  
**Intergovernmental Engagement Initiation**  
**Working Group Recruitment** September 2022

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## Data Gathering + Technical Analysis

**Preliminary Technical Review** Spring-Fall 2022  
Bathymetric and sediment quality data, nav channel design and vessel considerations reviewed.  
**Working Group Meetings 1, 2** October /November 2022


2

## Strategy Development

**Dredge Options Review + Evaluation** Winter 2023  
**Working Group Meeting 3** March 2023  
**Discussion Draft Council Presentation** July 2023  
**Senior Government Advocacy Letter** September 2023

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## Strategy Finalization + Endorsement

**Squamish Nation Engagement** (TBD)   
**Finalize with technical options, SN inputs and opportunistic funding approach**  
**Council Endorsement** (Fall Q3/4 2024)

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# Engagement Program (3 streams)

IAP2 "CONSULT" LEVEL

INTERGOVERNMENTAL

COMMUNITY WORKING GROUP

COMMUNITY AT LARGE / PUBLIC

## Intergovernmental Engagements

- ✓ Squamish Nation Referral 2022
- ✓ Outreach to Transport Canada, Province of BC, Fisheries & Oceans Canada (Small Craft Harbour)
- ✓ Advocacy Letter September 2023
- ✓ Squamish Nation Engagement Fair January 2024
- *Further request for Nch'Kay inputs; also respecting Sta'7mes, Site B Comprehensive Planning underway*

## Community Working Group

- ✓ 17 members (cross-sector, community organizations and stakeholders)
- ✓ 3 technical review meetings
- ✓ Inputs summarized in July 2023 Discussion Draft

## Public/Community At Large

- ✓ Parallel engagement focused on downtown Marine Access Review engaged on marine access more broadly
- ✓ Barriers and access priorities identified, including dredging and safety needs
- *No standalone engagement on specific dredge options with broader community; initiate in future with specific opportunistic funding scenarios*

# Discussion Draft Content (July 2023)

- Introduction, Reasons for Maintenance
- Objectives and Guiding Principles
- Engagement – Discussions, themes, and priorities
- Channel context – Importance to Squamish Nation, Ecological and Fluvial snapshot
- Historic channel maintenance; current channel uses and activities and maintenance needs
- Design parameters, channel maintenance means and methods
- Sediment characterization and permitting
- Beneficial reuse considerations and case studies
- Capital dredging options and costing
- Funding (municipal context, financial tools, case studies and need for future scenarios)

WESTMAR  
ADVISORS

  
SQUAMISH

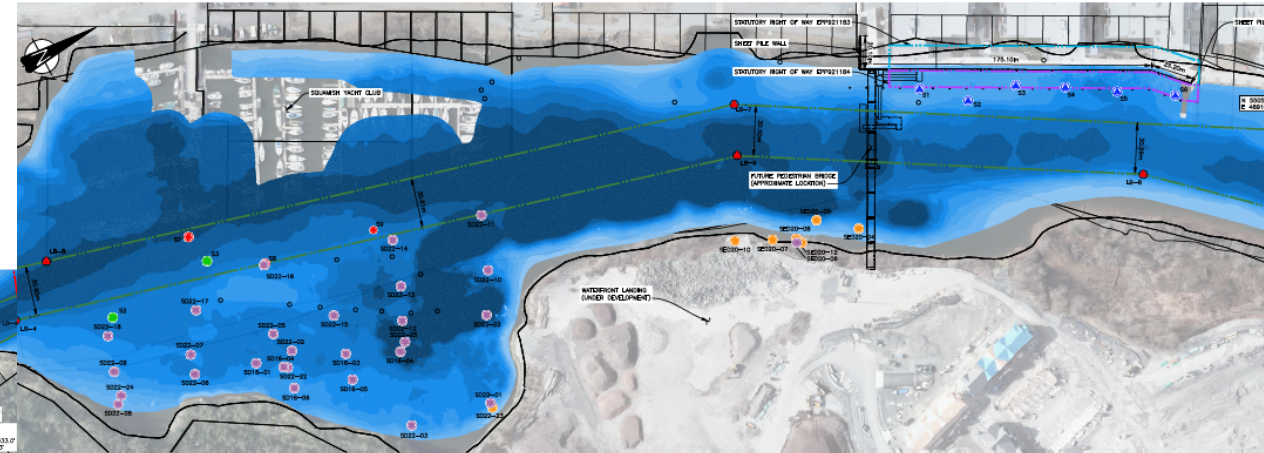
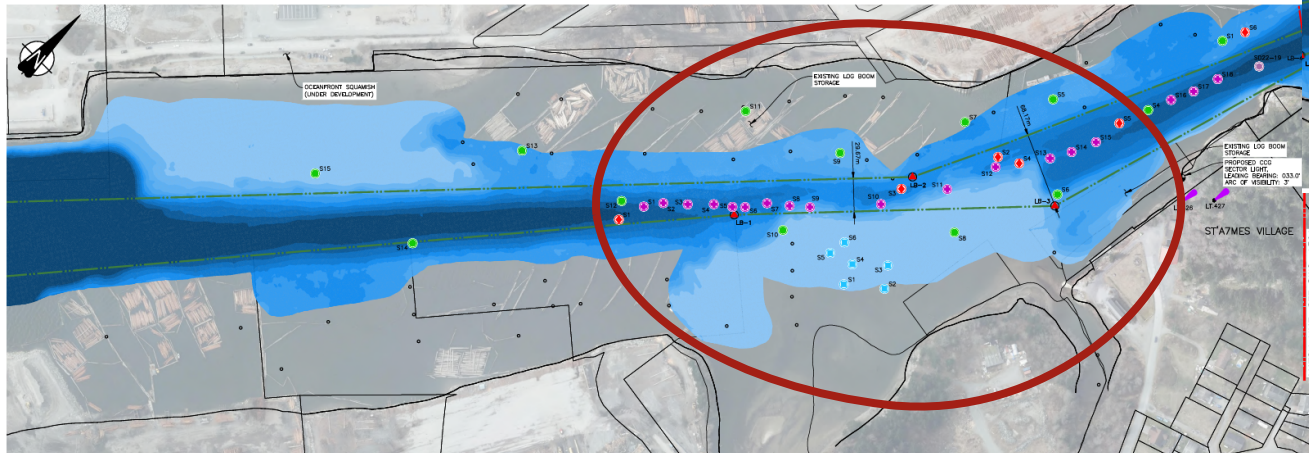
District of Squamish

**Long-Term Mamquam Blind  
Channel Maintenance &  
Funding Strategy**













  
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# Channel Bathymetry (2020) and Design Depths



- Significant extents of the navigation channel do not meet standard depth and width for 2-way small boat traffic in protected waterway

ELEVATIONS TABLE		
COLOUR	MINIMUM ELEVATION	MAXIMUM ELEVATION
	—	−3.50m
	−3.50m	−3.00m
	−3.00m	−2.50m
	−2.50m	−2.00m
	−2.00m	−1.50m
	−1.50m	−1.00m
	−1.00m	−0.50m
	−0.50m	0.00m
	0.00m	0.50m
	0.50m	—



Note: Bar extending over chan



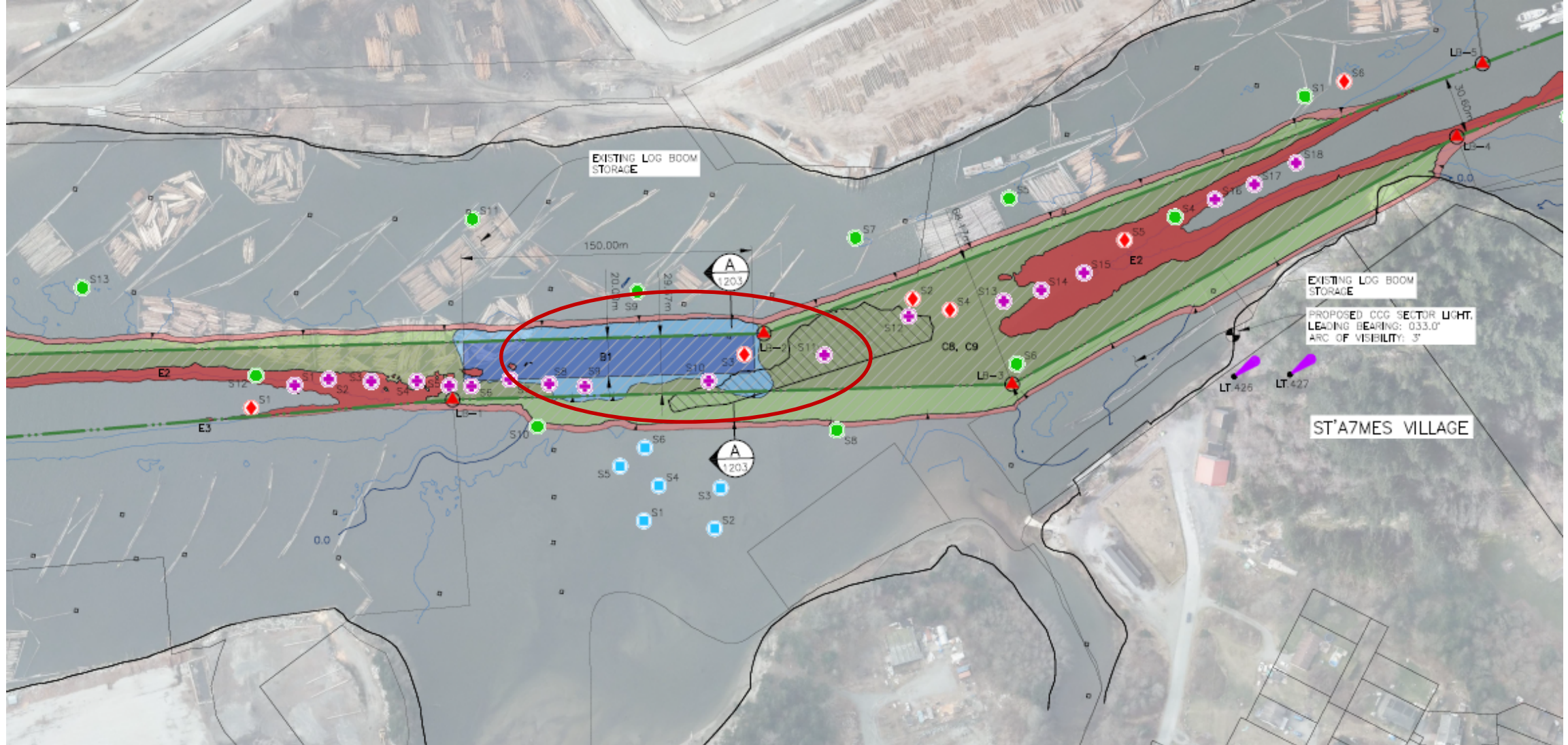
# Preliminary Options Matrix

- A. Do Nothing (Status Quo)
- B. Another 'Stop Gap' (@Sta'7mes River)
- C. Focused Dredging in South Channel -2.6m CD and -1.6m in North Channel
- D. Dredge All to -2.6m CD
- E. Dredge All to -3.2m CD

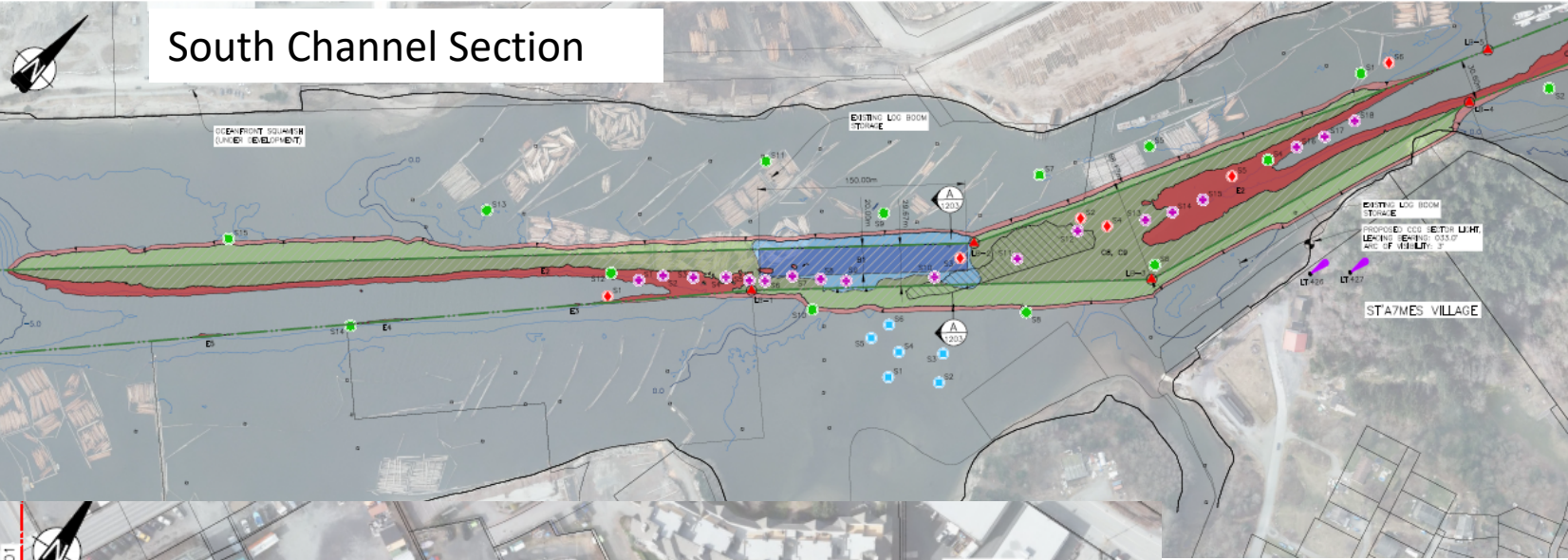


Dredge Option		Estimated Volume (m <sup>3</sup> )	Estimated Costs
A	Status Quo	0	\$0
B	The 'Stop Gap'	5,000m <sup>3</sup>	\$650,000
C	Focused Dredge Area in South Channel (at Sta'7mes)	~55,000m <sup>3</sup>	\$3,500,000
D	Dredge All to -2.6 m CD	68,000m <sup>3</sup>	\$4,400,000
E	Dredge All to -3.2m CD	117,000m <sup>3</sup>	\$7,200,000

# Option B – Stop Gap @ Sta'7mes River



# Option C – Focused Dredge



South Channel -2.6m CD



North Channel Section

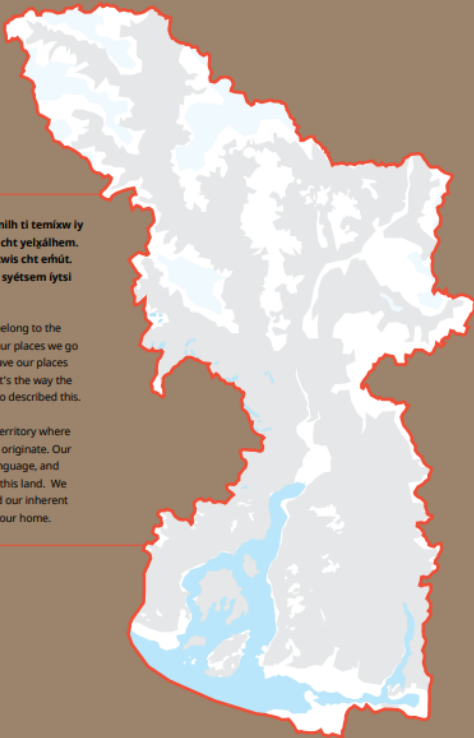
 OPTION C

North Channel -1.6m CD

S7ulh Słwqú7mesh nihł ti temixw iy ta stakw wa nánah cht yelgálhem. S7ulh iyá wa lh7na kwis cht ehút. Nihł wes tiháswit ti syésem iyasi kwekwín selsi7icht.

This land and water belong to the Squamish. We have our places we go to gather food. We have our places where we reside. That's the way the old people of long ago described this.

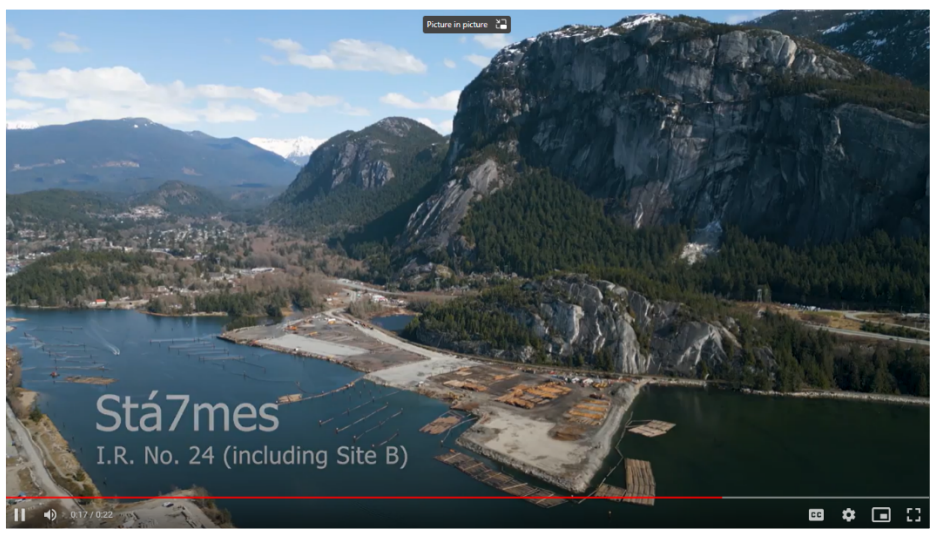
This map shows the territory where the Squamish People originate. Our ancestors, culture, language, and history are all part of this land. We have always practiced our inherent rights and respected our home.



Strategic Plan 2022-2026 v1.3

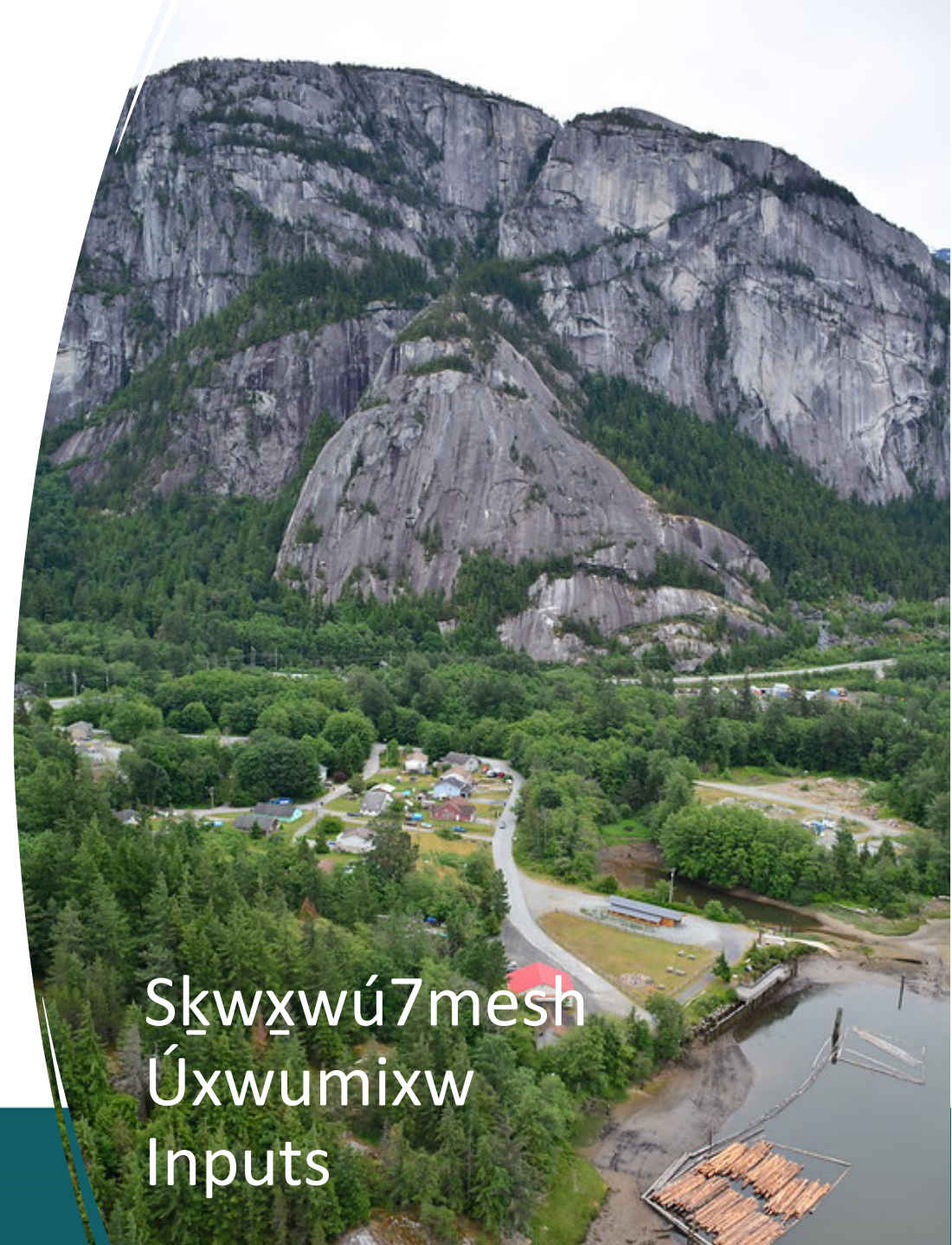


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# Inputs from Skwxwú7mesh Úxwumixw

- Importance and protection of Skwxwú7mesh lands and waters, Sta7mes community and rights and title
- Option C viewed as ‘middle ground’ balancing environmental needs with other considerations
- Encourages beneficial reuse of uncontaminated dredge material rather than disposal at sea
- Habitat enhancement focus and Sta7mes estuary restoration – opportunity to keep materials close; also general fill potential for various sites to be evaluated
- Archaeological assessment prior to any works on shorelines and mitigations to reduce turbidity (silt curtains), avoiding impacts to fisheries and eelgrass recommended
- ACE monitoring (SN archeology, culture and environment)



Skwxwú7mesh  
Úxwumixw  
Inputs

# Strategy Finalization and Next Steps (Q2-3 2024)

- Continue to seek input and guidance from senior government agencies on available funding opportunities
- Continue to seek input and guidance from Squamish Nation and include the Nation's interests and recommendations in the strategy + opportunities for partnership in community-based solutions
- Outline an opportunistic strategy to seek funding and how to address and/or proceed in the absence of senior government funding
- Finalize the technical review completed to date and preferred option recommendations – bring to Council for endorsement
- In future, subject to sourcing and confirming funding and cost-sharing opportunities, bring forward preferred option implementation report with financial scenarios for consideration through financial plan process involving consultation with the community on the preferred options, benefits and fiscal impacts

Questions?  
Thank you

