



Comox Valley Regional Flood Resilience

Collaborative Framework Development Process

Summary Report

August 13th, 2024

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Introduction

In 2021, the Comox Valley Regional District initiated a Flood Risk and Options Assessment, building on previous flood mapping work done for the region. That process engaged a broad range of rights holders and stakeholders to assess risks due to a changing flood hazard and consider a range of ways of responding and adapting over time to reduce risk and build resilience in the region. One of the recommendations of that work was to develop a Collaborative Framework to guide flood resilience work at a regional scale, and to initiate a joint planning process for one of the focus areas identified through this assessment. In 2024, the CVRD initiated the next phase of the Coastal Flood Adaptation Strategy, with the key goals of developing a collaborative framework and implementing a joint planning & decision process for the Comox Road focus area (see Figure 1). Through a series of working sessions in the spring of 2024, a group of land use authorities relating to flood management in the region were invited to develop a set of elements that together form the Collaborative Framework. This report provides a summary of that process and results.

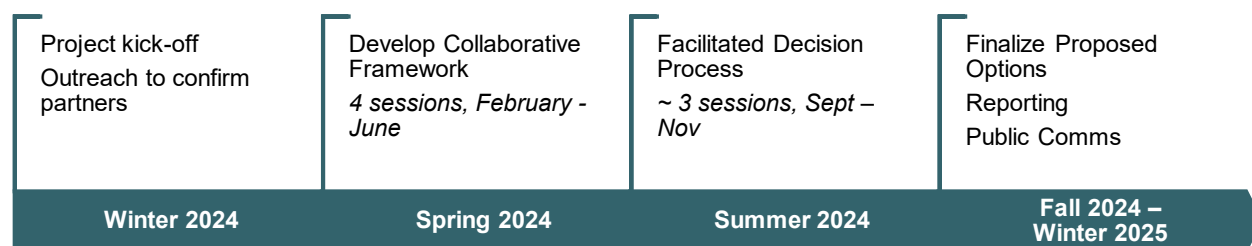


Figure 1. Project Timeline

Engagement Process

Development of the Collaborative Framework took place from February to July 2024 and was organized around four engagement sessions:

Topic	Participants
Feb 15th, 2024 Introductory call	City of Courtenay - Engineering - Fire Rescue - Planning and Development Comox Valley Regional District - Planning Department - Comox Valley Emergency Management K'ómoks First Nation Disaster Risk Reduction Main Road Ministry of Transportation and Infrastructure

Topic	Participants
	Town of Comox - Fire Department - Planning Department Village of Cumberland Fire Rescue
Apr 9th, 2024, Workshop 1: Understanding Flood Risk & Resilience	City of Courtenay - Planning and Development - Engineering Comox Valley Regional District - Planning Department - Comox Valley Emergency Management - Engineering - Strategic Initiatives - Community Development and Resilience K'ómoks First Nation Disaster Risk Reduction Ministry of Transportation and Infrastructure Town of Comox - Planning - Engineering Comox Valley Conservation Partnership
May 21st, 2024, Workshop 2: Conditions for Successful Collaboration	City of Courtenay - Planning and Development - Engineering - Fire Department Comox Valley Regional District - Planning Department - Comox Valley Emergency Management - Engineering - Strategic Initiatives - Community Development and Resilience - Parks - Liquid Waste Planning K'ómoks First Nation - Disaster Risk Reduction - Lands Management - Archaeology - Elder Mainroad North Island Contracting Ministry of Transportation and Infrastructure

Topic	Participants
	Ministry of Water, Land and Resource Stewardship - Reconciliation Program Management Town of Comox - Planning - Engineering Comox Valley Conservation Partnership
June 27th, 2024, Workshop 3: Review draft agreement	K'ómoks First Nation - Lands Management Ministry of Transportation and Infrastructure Comox Valley Regional District - Planning Department - Engineering - Strategic Initiatives City of Courtenay - Planning and Development - Engineering - Fire Department Town of Comox Fire Rescue

Summary of Results

Step 1: Understanding Flood Risk and Resilience in the Region

Overview of Intro Session & Workshop 1

The Introductory Session and Workshop 1 aimed to:

- Provide an introduction/overview of work to date and the proposed Phase 3 process
- Answer questions and provide partners with what they need take the request back to their organizations for official participation
- Build a shared basis for understanding flood risk/resilience in the region;
- Reveal and discuss different perspectives, priorities, interests, to better understand the nature of the work ahead
- Inform the Purpose Statement and Scope of the Collaborative Framework

Workshop 1 included presentations from:

- Robert Larson of Ebbwater Consulting Inc. (Ebbwater) (Overview of project, results of Phase I and II, background on the BC Flood Strategy)

- Brian Chow of Comox Valley Regional District (changes to housing and emergency management policy in relation to local flood risk management)

This was followed by Meghan Cursons from the Comox Valley Conservation Partnership, who provided a visual history of changes to the landscape of the Comox Valley, in relation to watershed resilience and flood risk.

Participants discussed:

- What do we know about flood risk and resilience in the region? What do we not know, or what questions do we have?
- What are some of the drivers and root causes that give rise to patterns of flood risk and resilience in the region? How are these connected?
- How much certainty do we have about what the issue of flood risk & resilience in this region is? How much agreement do we have about what to do about it?

The following is a summary of discussions and key take-aways in the introductory session and Workshop 1.

Key priorities and impacts faced by communities

Priorities & Existing Work

- Many floodplain assessments and strategies are underway in the region, including:
 - K'ómoks coastal vulnerability assessment, Flood Mitigation Plans and funding for IR1
 - CVRD Floodplain Management Bylaw updates to implement the results of the coastal flood hazard mapping
 - Courtenay Flood strategy and bylaw (update)
- K'ómoks treaty is entering final stages
- Capacity is growing around regional emergency management
- MoTI collaboration has been limited but is important to manage these issues effectively
- Infrastructure risk assessment
- Nature-based solutions / green infrastructure is of growing interest. Initiatives are underway locally (Kus-Kus-Sum; Dyke Road Park, etc.) and are supported by OCP policies.
- A collaborative approach to these issues is needed

Impacts & Issues Faced

- Comox Road / Dyke Road is a vulnerable transportation route and a main connection between communities
- Regional impacts of disruptions to this area
- Infrastructure, properties, agricultural lands and services in this area are within the jurisdictions of K'ómoks, municipalities and the regional district, as well as the province (MoTI).
- There are also adjacent commercial / industrial uses
- Of critical importance are community member homes, cultural heritage, burial sites and concerns for evacuations and safety
- The impact of recent changes to housing directives combines with flood hazard area requirements to create uncertainty around decision-making

Figure 2 illustrates key issues identified in the introductory call, as well as their interconnections.

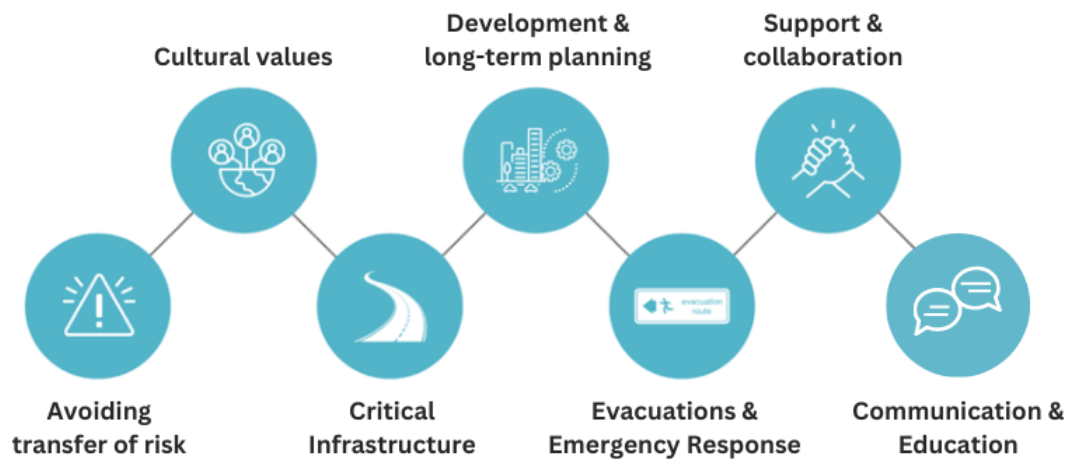


Figure 2: Summary of Interconnected Themes from the Introductory Call.

What do we know and not know about flood risk and resilience in the region?

Participants outlined some of the key areas of knowledge around this topic, highlighting that a lot is now known about the nature of flood risk and resilience, but the big questions are largely about what can be done, and how to work together to achieve flood resilience.

Known / Agreement	Unknown / Disagreement
That the issues are multi-jurisdictional, and we need to collaborate	How to get past the silos. How to stitch it all together
That climate change will increase sea level rise, storm surge and rainstorm intensity	Exactly when / how this will impact aspects of the community
Planning and development contribute to flood risk	Where development will occur, how policies will change, what solutions are viable
Critical infrastructure is a key concern	How to work together to plan and make decisions about roads, highways, etc. How will roads be part of the solution?

Known / Agreement	Unknown / Disagreement
K'ómoks priorities and knowledge needs to be at the centre	Other organizations and people have a lot to learn. Don't know how treaty will change things.
Traditional knowledge, historical understanding and nature-based solutions are critical to this work	Full scope of policy change
Connectivity during emergencies is key	How to get people on board and engaged.

Root causes and drivers of risk and resilience

Using the “iceberg” diagram as a guide to conversation, participants reflected thoughtfully about the factors that give rise to current and future flood risk in the region, in order to widen our perspectives on where the potential “leverage points” and issues might be, that need attention. Key themes from this exploration included:

- We need to learn from the past and the natural world.
- The ongoing and disproportionate impacts of colonial mindsets and systems are being experienced in this region; we are early in the important journey of reconciliation.
- Belief in perpetual progress and humans dominating nature puts settlements in harm's way and exacerbates risk.
- Behaviour change is difficult but possible, we can build on past examples.
- Valuing individualism and self-interest over relationships and interconnectedness entrenches us in silos, competition and conflict.
- Short term thinking leaves us stuck in small ideas – yearning for a larger vision.

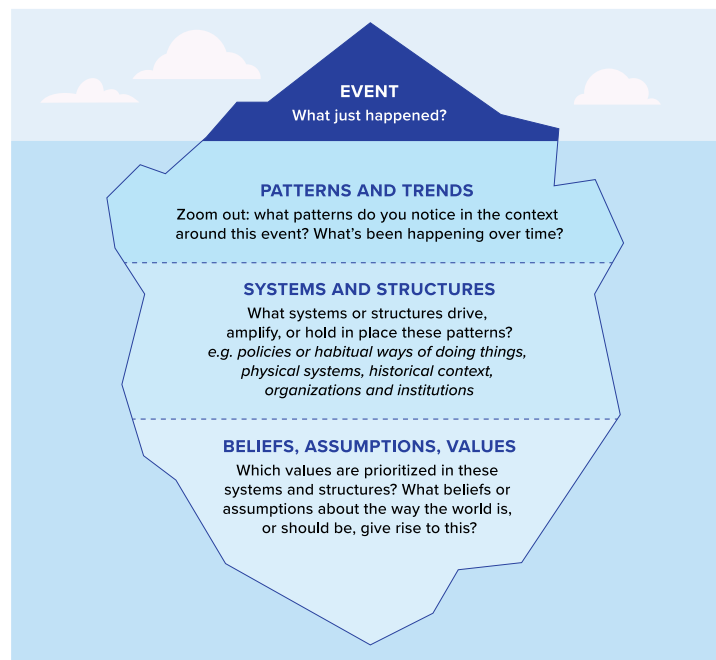


Figure 3. “Iceberg” diagram: uncovering the root causes and drivers of flood risk and resilience (adapted from EcoChallenge / Sustainability Institute)

Step 2: Conditions for Successful Collaboration

Overview of Workshop 2

Workshop 2 expanded our focus from the topic of flood risk and resilience, to considerations for establishing a successful collaborative approach to these issues. The objectives were to:

- Learn about the priorities and issues impacting K’ómoks and IR1
- Explore what conditions will support successful collaboration for flood resilience as a region
- Develop Principles for working together, and further inform Purpose / Scope / Roles & Responsibilities / etc.

This workshop was hosted at the K’ómoks Boardroom, located within the focus area for the joint planning process that will be initiated in the fall of 2024. This was a valuable opportunity to situate the group’s awareness in the present-day realities of how flooding is impacting community members and important community values and assets, learn about changes over time, and gain insight into the importance and challenges of protecting and honouring burial sites and archaeologically significant areas along or near the coast.

The group visited the Dyke Road park, where a collaborative Green Shores¹ approach is being planned and implemented by various project partners. This was followed by a visit to the shoreline

¹ Visit the Stewardship Centre for British Columbia for more information:
<https://stewardshipcentrebc.ca/green-shores-home/>, accessed 11 July 2024.

within a main residential area of IR1 and learn about the changing shoreline and efforts that have been initiated by K'ómoks to prevent erosion and respond to changes. After a beautiful lunch catered by K'ómoks members, Raini Bevelacqua (Archaeologist with K'ómoks) provided an in-depth view of work by K'ómoks to identify and protect archaeologically significant areas, and the need for active participation from local governments to understand and support these efforts. Finally, Krissy Brown from the K'ómoks Guardians provided a look at the wide-ranging activities being tended to by the Guardians, and the valuable knowledge and perspectives they hold from being consistently out on the lands and waters now, and for generations.

After the workshop, participants shared their reflections on what they had learned, and the sense of being strongly impacted by their experiences throughout the day. They highlighted the importance of being on the land with the K'ómoks First Nation during the process, and the value of taking a broader perspective on what is included in our consideration in this project. Key messages heard in the debrief included:

- Creativity will be needed to bind integrated solutions with engineering and cultural importance (and different environmental impacts)
- “Archaeology is a shared responsibility”: We will need to ensure that archaeological history is respected as a pillar for Comox Road development
- We need to remove barriers to sharing data because we need to leverage local sources of data (i.e. from Guardians) to understand the impacts of climate change and new climate hazards and ecosystem impacts
- Respect for all voices/viewpoints in the discussion but especially Indigenous Knowledge
- Local governments such as the CVRD may need to evaluate the Cultural Heritage Investigation Permit (CHIP) process which specifies KFN expectations for developers in managing impacts to archaeological sites across the territory
- Creating opportunities to come with humility, without blame, but with acknowledgement and willingness to take action
- Building awareness by seeing the issues from others' perspectives: “Comox Road is busy and it divides IR1, not having to cross during my regular routines is an eye opening experience”
- There are disproportionate impacts and cultural significance of rising sea and flood levels

Collaboration success factors

Participants were invited to share examples of successful collaboration that they had been part of, and together to identify what factors contributed to this success. Key themes that emerged from this include:

- Relationships, trust, communication, seeking to understand each other
- Food!
- Finding common ground, shared goals
- Practical, action oriented
- Intentionality and openness to including all voices
- Taking time to work through the process (together)
- Informed by on-the-ground understandings, data, shared information
- Agreement that status quo is unacceptable – mutual desire for change

- Ability to pivot, adaptability
- Clarity of roles

Values, in practice

The table below provides a summary of the values participants see as informing this work, that were named in the sessions to date.

Values	What these values mean...
• Collaboration • Respect • Collective governance • Understanding our common obligations • Relationships • Co-existence • Advancing reconciliation	• Invest in relationships; mutual respect • Food! • Continued Commitment • Work collaboratively to create alignment across the region • We look to difference as a source of learning and expanding possibilities, while building common ground across perspectives • We take the time to listen and build understanding from various perspectives and sources of knowledge • Support to implement legislation • When any of the partners are engaging in projects / initiatives, they are always ensuring that they have invited, notified, asked, engaged with all the other partners in the region • Created a canoe -> pull in same direction • Archaeological / cultural understanding and prioritization
• Courage • Creativity • Purpose-built, intentional	• Redefine how we work / reinvent the wheel • Status quo is unacceptable; mutual desire for change
• Learning • Adaptable	• Don't be afraid to pivot; Acknowledge pain points/mistakes, make repair when needed and take action • Address issues as they arise, we are always learning, integrating and building on experience • It doesn't have to be perfect / figured out, to take a next step • Practice Habit Changing Processes
• Whole systems / holistic • Land ownership, historical patterns & relationship with land • Place-based, storytelling • Multiple ways of knowing; traditional knowledge; local sources of knowledge • All of society	• Sharing the responsibility of leadership/each scenario may need a different leader • Place community and nature at the centre • To look for opportunities for alignment • Sendai (mitigation, preparedness, response, recovery) • Thoughtfully combine different perspectives and approaches • Integrating safety standards, natural systems and community/cultural services • Address drivers of risk and resilience

Values	What these values mean...
• Ecosystem restoration • Natural / nature-based vs "fixing", engineering	• Upstream & transfer of risk • Mindset of interconnectedness • Get out of the way of flood / nature
• Future generations • Relationship with time • Proactive; election cycles • Do something about it (importance of taking action) • Equity / disproportionate impacts	• Creating opportunities to come with humility, without blame, but with acknowledgement and willingness to take action • This may be impossible, it will certainly be hard. But we commit to keep going • Avoid making the problem worse • Who pays? Who benefits? • Balance long and short-term considerations

Considerations for designing a collaborative approach

Participants opened the day by drafting a "purpose statement" in each of their small groups. These 4 statements were brought together and adapted to produce the final statement (see next section).

At the end of the workshop, participants were invited to provide suggestions and insights into elements of a collaborative approach, with ideas summarized here:

Topic	Suggestions
Funding	Stable, dedicated core funding • Regional service requisition & governance? Additional, multi-jurisdictional funding • Submit joint applications for grants (e.g. EMCR) Policies for Procurement, how money is to be spent
Monitoring, learning, adapting	Monitoring and evaluation: • Develop key performance indicators that inform work going forward • Inform updates to risk assessments (e.g. are the mitigations effective? Is anything else needed?) • Data collection to serve this Meet regularly to reflect, learn, improve • At least once before and once after storm season

Topic	Suggestions
	• Establish a culture of learning and adapting, e.g.: Don't be afraid to pivot • Acknowledging pain points/mistakes and taking action (not shelving lessons learned)
Roles	Which roles? • Technical Experts: biologists, engineers, planners, archaeologists • Community Builders: elected officials, NGOs etc. • Staff: to facilitate processes • Champion, i.e. lead • Facilitator – neutral party • Communication (external) How? • Participants are empowered to represent their agency/org • Leverage diverse skillsets of partners/participants
Membership & Relationships	Who needs to be involved? • K'ómoks First Nation • Local Governments • MOTI • EMCR • Elected Officials • DFO • Watershed Protection/Security • Indigenous Affairs (federal) • Public/community reps • CVEM • Guardians • Emergency Managers • Provincial requirements to have private industry / land mgmt. at the mitigation/planning table (all of society) How do we tend to relationships? • With the land • With each other • Identify shared values as basis of relationships – return to those to advance work
Governance and structures	• Communicate structures and processes clearly so people understand (e.g. gantt charts, org charts, flow charts, etc.)

Topic	Suggestions
	• Possible structures: ○ Technical and Public Advisory Committee ○ Steering Committee (Chief Administrative Officers (CAOs) and Kómoks Admin) ○ Political support • Structured for longevity (sustain the coming and going of participants; withstand political changes or new elected officials) • Awareness of power dynamics

Step 3: Review Draft Framework

Overview of Workshop 3

The final workshop was held online and had lower participation due to scheduling issues. The group was engaged to:

- Review and confirm draft content to be included in the collaborative framework (purpose, goals, scope of work)
- Refine a set of principles/values to guide a collaborative approach to flood risk & resilience in the region
- Identify next steps and directions for implementing the framework

Elements of the collaborative framework

Through the three-workshop process, the group developed a set of elements that together form the collaborative framework. This is meant to be a living document, a guide to practice and how partners show up to each other and the work over time. The framework outlines the areas relating to flood risk and resilience where they wish to work collaboratively and in alignment to build resilience for the entire region, transcending individual jurisdictions. It is meant to be revisited regularly to incorporate learning and insight as the group travels this journey together. These core sections are presented below.

1. Purpose statement

Working collaboratively to coexist with flood by restoring natural processes, aligning with community values and, as a result, securing watershed and shoreline resilience for future generations.

Of note, feedback in workshop 3 led to separating this purpose statement from the following section, which people felt was important but would be better addressed in other sections of the framework describing “how” the purpose would be addressed: “Together, we will work to dismantle the silos that have limited our ability to implement practices of mutual respect and shared responsibility that foster resilience for future generations.” Of note, “for future generations” was added to the purpose statement as an important aspect of the purpose.

2. Guiding Principles

The following statements will serve as a guide for partners to work together to achieve the intended purpose and goals.

- Think like a watershed, act as a region
- Practice mutual respect and shared responsibility
- Be brave
- Learn from the past and each other
- Be open-minded, nimble and creative
- Take action for current and future generations

3. Goals

By tending to these goals, the partners will move forward together, in fulfillment of their purpose:

- Develop flood strategies across the region that are integrated, sustainable & effective in reducing risk and building resilience
- Align governance structures to “think like a watershed”
- Align policies, procedures and decision-making across the region to reduce hazard risk and build resilience.
- Restore natural watershed processes and coastal ecosystem services to reduce risk and build resilience
- Adapt existing infrastructure and uses for multiple values and risk reduction
- Centre Indigenous Knowledge and the priorities of K’ómoks First Nation

4. Scope of work

In addition to the important work that will be carried forward individually by the various organizations, our collective efforts to advance the following areas of work will serve to advance our goals and fulfill our purpose as we “think like a watershed, act as a region.”

Develop a shared vision, priorities and goals

- Build consensus around approach and priorities

Develop effective engagement and collaborative processes

- Enhance collaboration across departments, governments and agencies
- Engage interested and affected parties meaningfully
- share information widely
- Build capacity and change culture for others to engage with K’ómoks
- Ensure K’ómoks has resources to engage and address priorities

Conduct joint planning processes to address flood risk & resilience

- Beginning with the Comox Road focus area in fall 2024

Build political support and alignment

- Develop a shared understanding and prioritization of flood risk in the region
- Engage in joint advocacy to other levels of government
- Mobilize the will to act collectively to address priority impacts (e.g. IR1) and upstream causes

Develop tools and information for application across the region, such as:

- Floodplain mapping & watershed-scale stormwater model
- Floodplain bylaws and policies
- Land use planning & development (floodplain and upstream)
- Infrastructure services and development
- Public education and communication

Implications for the Comox Road focus area planning process

The Collaborative Framework will be the foundation for how the group works together on a joint planning exercise in the fall, addressing the Comox Road focus area. To this end, the group took time to map out some of the factors that influence and are influenced by this planning process, and discussed what would make this process a success and opportunities to advance the intentions of the framework through that process.

<i>Who / What <u>influences</u> the decisions about flood resilience planning for this area?</i>	<i>Who / What <u>is influenced</u> by the decisions about flood resilience planning for this area?</i>
Who: • Councils • Boards • K'ómoks First Nation • DFO • The public • MOTI • EMCR • WLRS • BC Nature Trust • Provincial actors depending on treatment • Higher level government regulators • ENGOs • Project Watershed: Kus-Kus-Sum • Property owners for service area funding tide gates • MoTI: the road is a dyke • CVEM • CVRD park project What: • ALR • Funding • Archaeology • Environment (salmon-bearing streams) • Drainage impacts • Water infrastructure	Who: • MainRoad • Area B residents and property owners • K'ómoks First Nation • Commuters • Operations groups (Municipal/ Regional) • Infrastructure groups • Road users • Emergency services • Salmon • Utility operators • CVEM • ENGOs • Project Watershed: Kus-Kus-Sum • MoTI • Businesses • Multi-business building on waterfront properties • Farmers What: • Ecosystems and estuary communities • Built infrastructure • Potential solutions • Potential "upstream or downstream" impacts from the chosen treatment • CVRD parks • Courtenay water main • CVRD wastewater • Houses, businesses • Farmland

Success is....:

- Improved resilience and protection, but no additional harm
- Shared understanding of the situation and potential solutions / opportunities
- Agreement on how to proceed that works for everyone
- Integration of local priorities to achieve multiple objectives
- Improving cultural safety for KFN
- Meet and share knowledge regularly to share resources and be aware of what other teams are doing
- Optimizing / minimizing amount of negative impacts to all stakeholders
- Springboard into more collaboration for cross-jurisdictional issues; a framework for future collaborations on other topics
- Leverage each other's strengths and influences
- Design criteria / considerations for infrastructure projects on Dyke Road
- Best practices for shoreline work should include natural processes rather than built structures

Establishing a collaborative approach in the region

Some of the key areas participants suggested to focus on in establishing a collaborative approach going forward included:

Coordination of a collaborative approach

- Determine frequency of meetings and who's leading
- Clear distinction between who is responsible for steering the decisions vs those with an interest (core group vs broader roundtable)

Communication & information sharing

- Transparency with public: build trust and get buy-in
- Learn how to communicate better with the public about risk, climate
- Encourage thinking of the region as a whole rather than individuals

Get political support from beginning

- Time a presentation to council the week before King Tide
- All need to identify this as a priority to enable resources to support coordinative function
- Adequate resources and time to work effectively, meaningfully with K'ómoks Nation
- May require urgency: need to develop literacy around flood due to lack of catastrophic event

Align activities and efforts across the region

- Recognize further changes due to EDMA beyond this project timeline; connect this process to EDMA requirements as much as possible; make links between climate risks and EM
- Highlight potential strategies from Courtenay or other plans that could be more regional
- There is a lot on the go! Can we leverage other groups for this?

Next Steps

There are two immediate directions to pursue to implement the Collaborative Framework. The first is to invest in the capacity and structures that will enable a collaborative approach to take hold and evolve to meet changing needs. This may include:

- Translate the collaborative framework into an MOU and invite endorsement from core organizations (local governments, K'ómoks First Nation, BC Ministry of Transportation and Infrastructure)
- Share the framework with organizations and the public in the Comox Valley and invite their participation and endorsement
- Develop terms of reference for a working group to act as the steward of the Collaborative Framework and its scope of work, including:
 - Guide the joint planning process for the Comox Road focus area in fall 2024
 - Develop priorities and an action plan
 - Build political support across organizations
 - Establish a learning agenda, practices and a set of indicators to guide learning, improve the Framework and track progress towards our goals and purpose
 - Clearly outline responsibilities and roles of different parties
- Secure a mandate and funding to provide coordination and facilitation supports for this working group
- Explore opportunities for regular knowledge exchange across a broad group of organizations and individuals with interests in risk reduction and resilience building in the Comox Valley. For example:
 - A “roundtable” hosted by Comox Valley Emergency Management, with working groups on specific topics
 - Meet twice annually to prepare, debrief and learn about hazard risk reduction and preparedness (timed with hazard seasons)

The second direction is to implement this framework through the next step in this project, which is the Comox Road focus area planning process beginning in fall 2024, including:

- Funding is currently being pursued by the CVRD, to do more place-based process and direct engagement with K'ómoks
- Approach the joint planning process for Comox Road as an intentional opportunity to pilot the Emergency Disaster Management Act (EDMA) / Indigenous Engagement Requirements and transfer that learning into other projects in the future
- Develop practices to reflect and improve on the Framework through the planning process