



Lower Fraser Floodplains Forum 2023 Dialogue on Regional Action

HOSTED AT: THE'Í:TSELÍYA - S.A.Y. HEALTH & COMMUNITY CENTRE • JUNE 9, 2023



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Executive Summary

At the S.A.Y. Health and Community Centre on the traditional land of the Sq'ewqeyl people, the Lower Fraser Floodplains Coalition reconvened key actors in the region for dialogue about actions to reduce risk and build resilience in the floodplain.

In attendance were representatives from 14 First Nations, 20 local governments, 2 regional governments, senior staff from 10 provincial and federal agencies, including Minister Bowinn Ma from the Ministry of Emergency Management and Climate Readiness (EMCR) as well as Robert Phillips from the First Nations Summit, and 5 agricultural associations (including the BC Agricultural Council).

The purpose of the Forum was to identify priorities for a region-wide approach to implement the 5 Principles for community and floodplain resilience. This followed the July 2022 Build Back Better Forum, Informed by the Sendai Framework on Disaster Risk Reduction and UNDRIP.

Since July 2022, the Province has created EMCR, begun a provincial risk assessment, advanced the BC Flood Strategy and tabled emergency management legislation. The federal government released a National Climate Adaptation Strategy, reviewed its disaster financial assistance funding program, and is rolling out new funding programs. Many Lower Fraser communities continued recovery from November 2021, but are also committed to long term resilience. There is collective momentum for developing a regional action plan and getting it funded.

SETTING THE TABLE FOR DIALOGUE

The Forum began with an opening from Darcy Paul, Sq'ewqeyl First Nation, who welcomed guests to the Sq'ewqeyl Territory.

Sq'ewqeyl Elder, Th'et-simiya Wendy Ritchie, shared her people's creation story. In this story, the rooted, the 4-legged, the finned, and the above-ground plants each offered themselves to the 2-legged humans for food, clothing, medicine, shelter, and utensils, while only asking for respect in return. This story reminded those in the room that all other creatures can survive without us, but we cannot survive without them. Elder Ritchie shared her hopes that the work happening at forums such as this one can change our future to be resilient and safe for ourselves and future generations.

Minister Bowinn Ma provided an overview of Provincial initiatives, and emphasized her support for collaborative, nature-based approaches to resilience in the region.

Tribal Chief McNeil and **Gillian Fuss, Program Manager for the Emergency Planning Secretariat**, spoke about Hilekw Sq'eq'ó ("getting ready together" in Halq'eméylem) the draft Regional Coast Salish Action Plan for Disaster Resilience that is being developed for all 31 Mainland Coast Salish Communities, from Yale to Semiahmoo to Squamish. The plan weaves First Nation knowledge with global best practices and is grounded in the Sendai Framework.

Jason Lum, Chilliwack Councillor and FVRD Board Chair, noted it is important to ensure that those who lack technical capacity are not left behind. Regarding recovery efforts in Chilliwack, he said that it may seem slow, but taking the time to work collaboratively and in accordance with the 5 Principles is a pathway to durable progress.

On good practices for floodplain management, **Patrick Lilley of Kerr Wood Leidal** explained how working together at regional and sub-regional scales opens up pathways to resilience for shared critical infrastructure and multi-benefit projects that protect habitat. **Robert Carey, Nature Conservancy, State of Washington**, shared successful outcomes from collaborative work supported through the **Floodplains by Design** program.

DIALOGUES FOR ACTION

At tables based on the proposed 'Regional Hubs' model for Hílekw Sq'eq'ó (Up-river, Mid-river, River-tidal and Coastal), Forum guests identified five areas of focus for regional action and related objectives:

1. Understanding risk and risk management options;
2. Critical infrastructure and essential services;
3. River and waterways restoration, recovery and resilience;
4. Food security; and
5. Regional planning and decision making.

RECOMMENDATIONS FOR NEXT STEPS

Based on the Forum dialogue, LFFC has developed proposed actions for the next 2-3 years:

1. Build the knowledge foundation needed for regional planning and investment in flood risk management in the Lower Fraser, including a regional flood risk assessment and a suite of specific mitigation options;
2. Build a framework for regional planning and investment in flood risk reduction, guided by the 5 principles by convening an interim Regional Advisory Committee; and
3. Unlock a steady flow of flood and ecosystem resilience projects in the sub-regions of the Lower Fraser through relationship building, capacity funding and technical support.

LFFC committed to prepare this Forum report, and will continue its work convening for collaboration, catalyzing nature-based projects and advocating for supportive policy and funding, as well as organizing the next forum in 2024.

A resilient BC is when...we build to accept and work with nature. – Minister Bowinn Ma, EMCR



Introduction: Coming Together

On June 9, 2023 at the S.A.Y. Health and Community Centre on the traditional land of the Sq'ewqeyl people, the Lower Fraser Floodplains Coalition reconvened key actors in the region for information sharing and dialogue about reducing risk and building resilience in the floodplain. Guests included representatives from 14 First Nations, 20 local governments, 2 regional governments, senior staff from 10 provincial and federal agencies, including Minister Bowinn Ma from the Ministry of Emergency Management and Climate Readiness, Robert Phillips from the First Nations Summit, and 5 agricultural associations (including the BC Agricultural Council). In all, 122 people attended in-person, and 30 guests attended online. The purpose of the Lower Fraser Floodplains Forum was to identify the focus and priorities of a region-wide approach to implement the 5 Principles for community and floodplain resilience, while continuing to build awareness, capacity, and place-based relationships in this region.

The 5 Principles were an outcome of the July 2022 forum, where leadership and representatives from Lower Fraser First Nations, local governments, the Union of BC Indian Chiefs, and federal and

provincial representatives came together in the wake of the November 2021 atmospheric river and flooding events. Faced with realities of the region’s vulnerability to these, and future, climate-related events, guests at the first forum discussed, and supported, the 5 principles as a foundation for working together, based on the Sendai Framework on Disaster Risk Reduction as well as the implementation of the United Nations *Declaration on the Rights of Indigenous Peoples* (UNDRIP). To do the work, they also voiced the need for a collaborative and proactive plan, with actions and milestones, aimed at reducing risk rather than responding to each new emergency as it strikes. The 2022 forum proved that we have the opportunity, now, to proactively work together to build our flood resilience.

Since July 2022, the Province has been working to develop new approaches, including the creation of a Ministry of Emergency Management and Climate Readiness, undertaking a province-wide risk assessment, finalizing the BC Flood Strategy and has tabled new emergency management legislation. The federal government has released a National Climate Adaptation Strategy, reviewed its disaster financial assistance funding program, and is beginning to develop and roll out new funding programs for resilience. Many Lower Fraser communities have continued to recover from the November 2021 flood, but are also committed to building resilience over the medium to long term.

The June 2023 Forum was an opportunity to build on the collective momentum and identify shared priorities for action that can attract funding and move the region forward to resilience in a principled, strategic and effective way. In addition to organizing this Forum, the Lower Fraser Floodplains Coalition (LFFC) has continued working behind the scenes to catalyze projects that align with the 5 Principles, advocate for policy change at the provincial and federal levels, and convene rights holders and stakeholders to build relationships for the hard work ahead. This report documents the thoughtful and substantial input on priority actions towards a regional plan and process from the 2023 Forum and concludes with LFFC’s recommendations for next steps.

“A resilient BC is when we are in a place where we are not afraid of what Mother Nature is throwing at us because we are working with her and not against her. We build our communities in a way where we understand nature instead of fighting it. We build to accept and work with nature.”

*Minister Ma, Emergency Management and Climate Readiness,
reflecting on the June 2023 Forum*



Setting the Table for Dialogue

The Forum began with an opening from Darcy Paul, Sq'ewqeyl First Nation, who welcomed guests to the Sq'ewqeyl Territory and the Nation's beautiful new community facility. This was followed by remarks from the Forum Co-Chairs Tyrone McNeil (Chair of the Emergency Planning Secretariat and Stó:lō Tribal Chief) and Jason Lum (Councillor, City of Chilliwack and Chair of the Fraser Valley Regional District Board). Gillian Fuss, Program Manager from the Emergency Planning Secretariat welcomed guests to the Forum on behalf of the Lower Fraser Floodplains Coalition. She highlighted the 5 principles from the 2022 Forum as a foundation for the day's dialogue on priorities and actions:

1. Understanding and reducing risk and adapting to climate change in accordance with the Sendai Framework on Disaster Risk Reduction;
2. Advancing reconciliation, with particular attention to Articles 18, 19, 29, 32 of UNDRIP;
3. Ensuring that salmon and the coastal and freshwater ecosystems they depend on are thriving;
4. Everyone is part of the solution – there are many siloes in planning, decision-making and actions on the ground in the lower Fraser, and a more holistic and collaborative approach to managing flood risks is needed;
5. Sustainable economies and resilient communities for the long term – we need a shared vision for the future and a plan to measure progress and ensure accountability.

BUILDING A FOUNDATION WITH FIRST NATIONS KNOWLEDGE & TEACHING

Good work in this region means collaborating with First Nations and acknowledging their rights and title to the land. Tribal Chief McNeil reminded participants that it is vitally important for settlers to learn about the Stó:lō and Coast Salish peoples: who they are, their values, and their traditions. Through these teachings, we can understand each other better and become more accepting of collaborating together on regional processes and plans. With that context in mind Tribal Chief McNeil invited Sq'ewqeyl Elder, Th'et-simiya Wendy Ritchie to speak.

Elder Ritchie began her teachings with her people's creation story. In this story, the rooted, the 4-legged, the finned, and the above-ground plants each offered themselves to the 2-legged humans for food, clothing, medicine, shelter, and utensils, while only asking for respect in return. This story reminded those in the room that all other creatures can survive without us, but we as humans cannot survive without the Earth's creatures. This is why we must protect, respect, and thank the creatures, rather than ignoring them or actively destroying their way of life. Elder Ritchie also spoke of her childhood and how much the landscape of her home in Sq'ewqeyl has changed. As a child, she swam in creeks that no longer exist, observed miles of open fields that have been converted to malls, and learned about the changes from the draining of Sumas Lake. Elder Ritchie shared her hopes that the work happening at forums such as this one can change our future, making it more resilient and safe for ourselves and future generations.



“We need to realize that we cannot survive on Mother Earth without the beings and the elements that have been provided for us”

Th’et-simiya Wendy Ritchie

PROVINCIAL INITIATIVES

Minister Bowinn Ma provided updates on provincial activities since the July 2022 Forum. Recognizing that the scale, frequency, and magnitude of emergency events was increasing, the Province established the new Ministry of Emergency Management and Climate Readiness (EMCR). The goals of EMCR include proactively addressing impacts of climate related disasters, upholding the Sendai Framework for Disaster Risk Reduction, and establishing Indigenous Peoples as true partners in emergency management and disaster recovery. Minister Ma also gave an overview of ongoing initiatives including the modernization of the Emergency Program Act, the BC Disaster and Climate Risk and Resilience Assessment (DCRRA), the BC Flood Strategy (led by the Ministry of Forests), the recently-completed Pathways to Action Report for the Lower Fraser region, and several recovery projects. She also mentioned the new Sumas River Flood Mitigation Framework that brings together First Nations and local governments.

Minister Ma expressed gratitude for the difficult work that those at the Forum are engaged in. She observed that there is a role for everyone in floodplain management – from the various governments to the individual household level. She also emphasized working together, and stressed that EMCR’s mandate and direction align strongly with the 5 Principles.



“If you want to go fast go alone. If you want to go far, go together. The work here today will help us go far and we will go together.”

Minister Ma

Summary of Provincial Initiatives

1. Modernization of the *Emergency Program Act* - The Province set itself the goal of co-developing the new legislation with First Nations in BC.

Objectives include 1) Building the Declaration of the Rights of Indigenous Peoples Act (DRIPA) into the new legislation; 2) addressing climate change and its impacts; 3) following the Sendai Framework for Disaster Risk Reduction; and 4) including all four phases of emergency management (mitigation, preparedness, response, recovery).

Responding to concerns from First Nations that more time was needed to co-develop the act, the new legislation will be tabled in Fall 2023. Minister Ma also discussed the role of Disaster Financial Assistance in recovery, acknowledging the need to modernize this regulation to make it more flexible for communities.

2. Disaster and Climate Risk and Resilience Assessment (DCRRA) is the BC Provincial version of Sendai Priority for Action 1: Understanding Disaster Risk. It will consider extreme hazards like wildfires and floods, as well as sea level rise and ecosystem changes related to climate change. To be completed April 2024 with regional risk assessments to follow.
3. The BC Flood Strategy is being developed by the Ministry of Forests in collaboration with EMCR, to be released in Fall 2024. It will guide Provincial funding and resources for flood management with the goals of increasing resilience and public safety, strengthening First Nations relationships in emergency management, supporting a transition to more holistic planning, and aligning with the Sendai Framework.
4. The Pathways to Action Report summarizes technical work prepared through the Lower Fraser Flood Management Strategy process and provides recommendations for future action, related to priorities like critical infrastructure and essential services.
5. Minister Ma described several further provincial initiatives, including: The Flood Mitigation Framework between the Province, Semá:th, Matsqui and Leq'á:mel First Nations, the City of Abbotsford and the City of Chilliwack to design mitigation projects in the Sumas River Watershed; funding to critical watersheds to increase flood resilience; the Community Emergency Preparedness Fund for First Nations and local communities to plan and prepare for future hazards; and the shoreline stabilization project with Skwah, Shxwhá:y Village and Chilliwack to complement a new dike.



FIRST NATIONS REGIONAL INITIATIVES – EMERGENCY PLANNING SECRETARIAT

Program Manager Gillian Fuss and Chair, Tribal Chief Tyrone McNeil from the Emergency Planning Secretariat shared information about Hílekʷ Sqʼeqʼó, which brings together all 31 Mainland Coast Salish Communities, from Yale to Semiahmoo to Squamish, to create and implement a Regional Action Plan for Resilience to flooding and climate change impacts in general. Hílekʷ Sqʼeqʼó means “to get ready together” in the Halkomelem language – the language of many Mainland Coast Salish people. The plan weaves First Nation knowledge with best practices from around the world and is firmly grounded in the Sendai Framework for Disaster Risk and Resilience.

Hílekʷ Sqʼeqʼó has an additional two overarching priorities for action based on specific needs in the region. The first is to strengthen tactical capacity for First Nation communities to effectively respond to emergencies; the second is “Xyolhmethet,” to provide better aid and care to communities experiencing emergencies and to first responders, encompassing physical, spiritual, emotional, and cultural care. The role of the Emergency Planning Secretariat is to support, assist, and advocate for First Nation communities in achieving Hílekʷ Sqʼeqʼó, in whatever capacity that requires. EPS does not replace the vitally important work happening within communities.

Tribal Chief McNeil offered his vision for the region, emphasizing that the creation of a plan for the entire region, including First Nations, local governments, and agriculture, could result in a shift in our current funding regime. Instead of each community competing for funding from the federal and provincial governments, the region could work together to ask for what it needs, collectively.

Further, as the legal landscape of BC changes to better acknowledge First Nations as true partners and leaders in decision making, others need to work with them – not against them – and embrace this changing landscape as a benefit and an opportunity for all. He noted it may not be easy, but it will be worth it.

“As Former National Chief Shawn Atleo reminds us: There are 2 ways we can do this: the hard way or the harder way. The hard way is together. The harder way is alone.”

Tribal Chief Tyrone McNeil

“Tomiyekw” is the Halq’eméylem name for the ancestors 7 generations past as well as 7 generations into the future. This also represents the concept and intent of learning from the past 7 generations for the benefit of the future 7 generations.

Illustration by Carrielynn Victor





LOCAL GOVERNMENT PERSPECTIVE

Jason Lum, Councillor, City of Chilliwack and Chair of the Fraser Valley Regional District Board (FVRD), observed that conversations in this space have drastically improved over the decade since he became involved in flood risk and resilience. Today, there is an appetite for discussion and an even greater appetite for action. Councillor Lum urged those in the room to continue this progress while ensuring that those who lack technical capacity are not left behind. He has seen firsthand how relationship building efforts pay off over time, resulting in greater trust between partners. He acknowledged Minister Ma for being responsive to the region's needs, a good listener, and appreciative of the knowledge and concerns of those working on the ground. Finally, discussing recovery efforts in Chilliwack, he noted that efforts may seem slow, but taking the time to work collaboratively and in accordance with the 5 Principles is a pathway to durable progress to better resilience for our shared future. Councillor Lum Jason shared optimism for the next 5 to 20 years as we purposefully and intentionally strive to achieve solutions that benefit all of us, including non-human species.



“It is important for us to ... support one another. It is not a competition, what we should be striving to achieve is solutions that best protect all of us. Solutions that build resilience in all our communities. Solutions that do not leave anyone behind, including non-humans. And while it may seem really tough, I urge you to look around because you will find examples of [solutions] already happening.”

Jason Lum, Chilliwack Councillor and Chair, FVRD



REGIONAL APPROACHES – GOOD PRACTICES

Before Forum guests began dialogue about regional priorities and focus areas for action, two expert presenters shared examples of good practices in floodplain management, grounded in nature-based approaches and respectful collaboration.

Patrick Lilley, a Senior Biologist from Kerr Wood Leidal and Associates and a member of the Lower Fraser Floodplains Coalition, reviewed the 5 Principles for Working Together, and then zoomed in on Principle 5: Everyone must be a part of the solution. Patrick explained that the existing framework for planning, policy and action requires local governments to manage their own flood risk, but this has ultimately proved ineffective for our region. Water does not respect municipal boundaries, and, further, competing against each other for funding means that some communities lose out and must face greater risk. Historical inequities, including First Nations communities left without flood protection, are also not addressed.

Similarly, shared regional interests and needs are not identified, and opportunities for new flood risk management solutions that require cooperation across jurisdictions are missed. By contrast, a collaborative approach brings communities together so we can understand risk and prioritize regional and local needs, make better planning decisions and allocate resources effectively.

Patrick highlighted several examples where regional approaches to risk management are important:

1. ensuring resilience of critical Infrastructure (e.g. Highway 1 and major roads, rail lines and supply chains, communication services, energy systems, electrical grids, and securing essential services for all communities, such as hospitals or fire halls), and
2. developing multi-benefit projects such as those that reduce flood risk while restoring habitat.

Patrick acknowledged that subregional work is also important as there may be unique issues or geographic differences across the landscape. With that in mind, there is a need to convene at both regional and subregional levels for planning and decisionmaking to build floodplain resilience.

Bob Carey, Strategic Partnerships Director at The Nature Conservancy in the State of Washington, spoke about the Floodplains by Design initiative. Floodplains by Design (FbD) is a public-private partnership in Washington. The program is an integrated floodplain management program developed to reduce flood risk, accelerate habitat restoration, and advance agricultural and recreational zones for participating communities. It is neither a flood program nor a habitat program – FbD works to achieve both. Having a multi-benefit approach, working at a system scale, bringing First Nations/tribes into the collaboration from the beginning, ensures that projects benefit all-of-society. Bob explained that, in his experience in Washington State, we have too often worked in silos.

As an example of this, he described a project in the Skagit River, where work was done to protect a main transportation corridor against flooding that simply transferred the flood risk and eventual damage upstream and downstream. If protection for the highway had been designed using a more holistic

approach, taking advantage of the extensive habitat conservation work in the area, the entire river reach may have been better protected and more productive for fish and wildlife. Instead, in this case as others, we find ourselves achieving good things for one objective or community that undermine others. To illustrate a different, and better way of working, Bob described two successful case studies of multi-benefit floodplain management: the Nooksack River and the White River Corridor.

CASE STUDY 1: Nooksack River

Integrating regional and subregional assessment and management, supported by collaboration

Problem/issue: Over the years there had been attempts by government officials, land-owners and farmers to manage flooding risks associated with the Nooksack River. It was recognized that these individual efforts to hold back the water just ended up sending it to other places and creating new flooding risks along the river. In 2017 Whatcom County initiated a collaborative process of “Floodplain Integrated Planning”, aiming to achieve flood risk reduction, support salmon recovery, and maintain a vibrant agricultural economy.

Who: The FLIP Team is composed of staff and representatives from over 50 organizations that represent agricultural, city, county, salmon recovery, tribal, federal, and state interests.

What: The FLIP Team is supported with staff from the regional government (Whatcom County) and guided by a Steering Committee made up of tribes, agricultural, and cities. Along the Nooksack, they have also organized sub-regionally to work within a smaller reach or area of the river, into “REACH” teams to formulate specific strategies for action. Technical work, such as hydraulic modeling, habitat assessment, floodplain mapping happens primarily at the regional /basin scale to inform priorities in the region. The Steering Committee is an overarching body that sets direction, ensures each sub-regional REACH team is working together, talking to each other, ensuring co-benefits across the system. REACH teams implement flood solutions at the local scale.

Big Win: This process integrated adaptive capacity from the beginning. This means that the project changes and evolves as the different partners work together and build trust. The Steering Committee has worked together long enough that there is trust, community, and strong relationships to do the work.

Over time, they have found a way to balance long-term interests of each community involved while achieving long-term resilience. As a result of working together they have more holistic plans, are leveraging more funding, getting more done on the ground, and are also better poised to respond to flood disasters.

CASE STUDY 2: White River Corridor

New collaboration leads to nature-based flood risk reduction

Problem/issue: Industrial buildings and local communities along the White River Corridor were subject to flooding and the City of Sumner initially proposed dike improvements which were opposed by tribal nations, and eventually abandoned by the City of Sumner.

Who: City Governments, Tribal Nations, Regional Government, NGOs in the White River Corridor of Washington State

Where: Urbanized Part of Puget Sound, City of Sumner (near Tacoma)

What: After the failure to get support for the diking option, the City of Sumner began to work with the Muckleshoot Indian Tribe, the Puyallup Tribe of Indians, and the regional county. As they began planning in collaboration with others, they began to better understand their flood risks were due to sediment accumulation at the bottom of the river as well as the habitat needs of culturally important salmon runs. Instead of a dike, there is now a new plan to give the river room and allow for sediment to spread out. This new proposal reduces flood risk, enhances habitat, and provides green space for the community. Since the original proposal, the work has expanded up and down the river.

Big Win: Since the project began, nearby communities and other partners have gotten on board. They see what is possible when everyone works together.



Slides from the Floodplains by Design presentation:

Floodplains by Design: A public-private partnership
 Focus on “changing the floodplain management paradigm”
 Goals:

- Significantly reduce flood risks
- Accelerating habitat restoration
- Advance agriculture, recreation, and clean water



The Approach: Integrated Floodplain Management

- Highly flexible, locally-driven solutions
- Deep Collaboration (beyond coordination and outreach toward trust and respect)
- Inclusive and Reconciliatory (tribal government have veto authority)
- Co-Equal Goals (integrated, multiple benefits, not secondary or co-benefits)
- Reach/watershed scale (beyond postage stamps)
- Climate-smart (based on future conditions, not historic)



The Nooksack River

Whatcom County – Floodplain Integrated Planning (FLIP)

FLIP Stakeholders

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graph TD
    FLIP_TEAM[FLIP TEAM] --- FLIP_Steering[FLIP Steering Committee]
    FLIP_Steering --- Reach1[Reach 1 Team]
    FLIP_Steering --- Reach2[Reach 2 Team]
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Summary of Dialogue

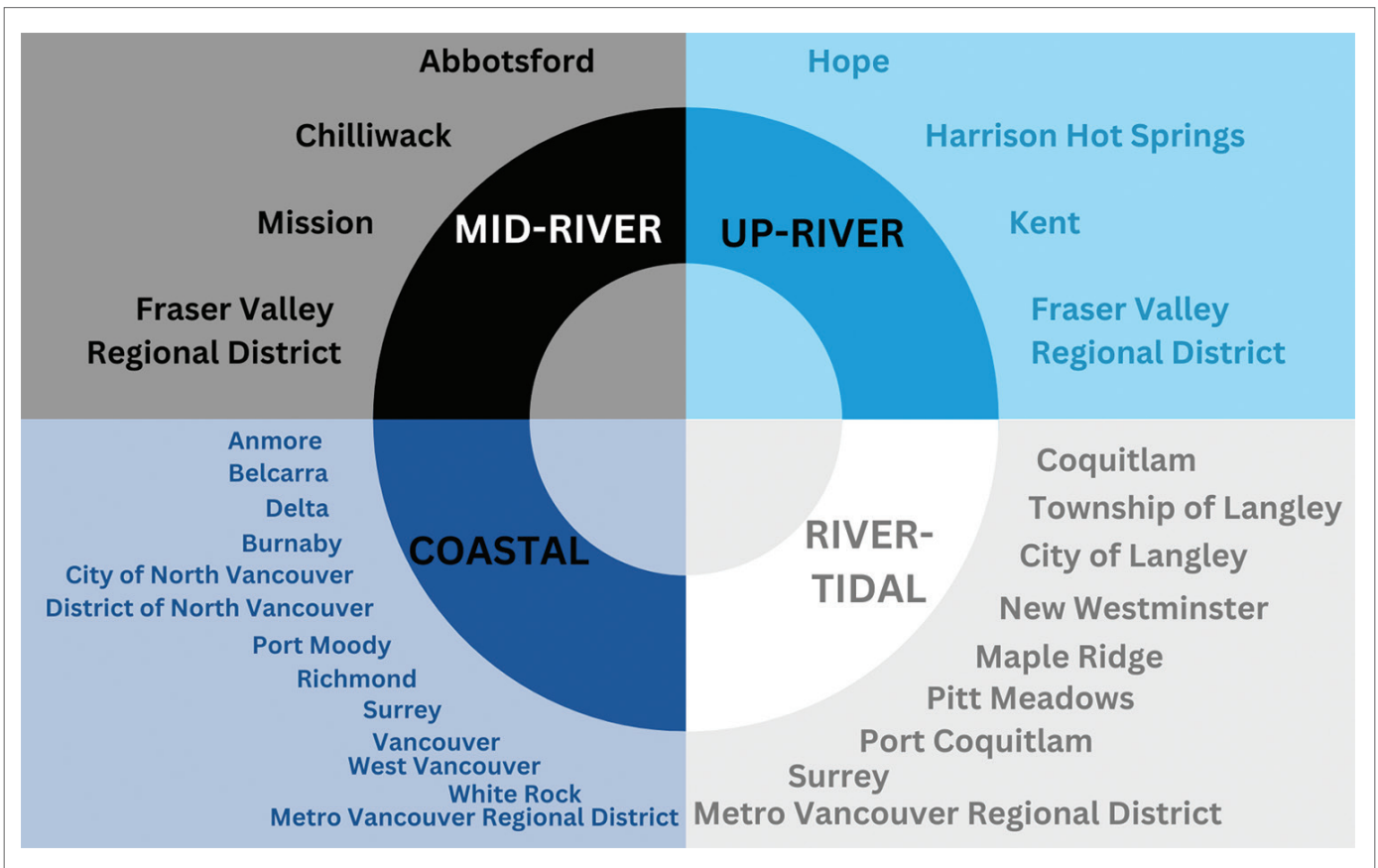
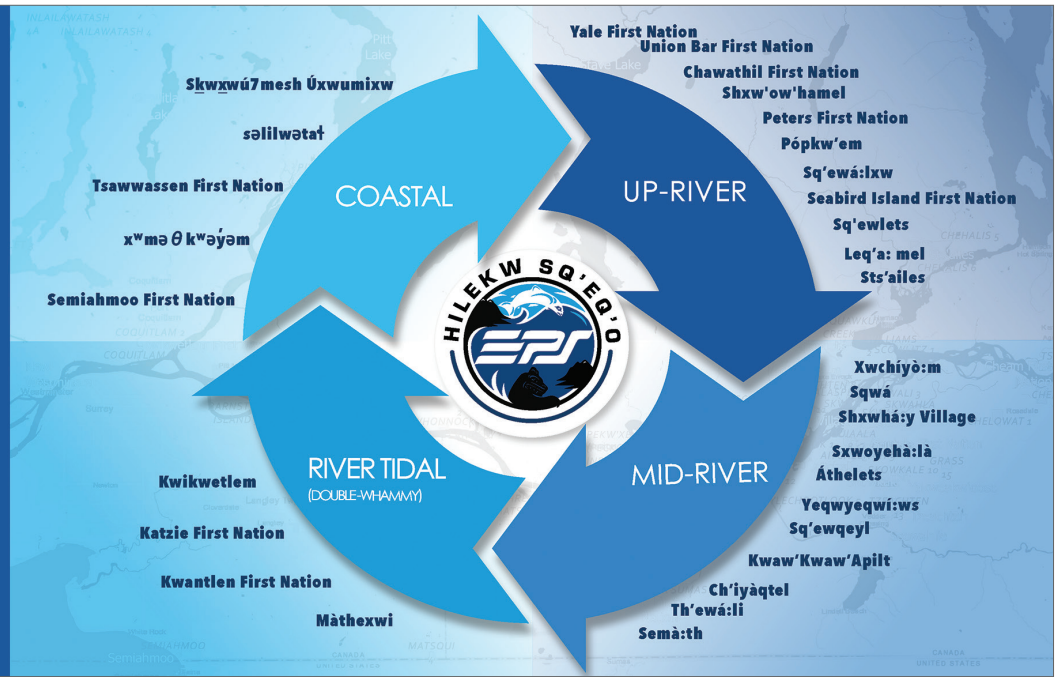
IDENTIFYING REGIONAL ISSUES

Following the morning presentations, guests at the Lower Fraser Floodplains Forum engaged in facilitated dialogue: 11 tables in-person, as well as in an online group. They were first asked to identify short-and long-term priorities to build resilience for their communities, and then to discuss what is needed from a regional perspective to support those priorities—what is the work we need to do together. Tables were organized according to the four sub-regional hubs identified in Hílekw Sq’eq’o: Up-river, Mid-river, River-tidal and Coastal, and guests joined tables based on the communities they were representing.

From this dialogue five priority focus areas for the region emerged:

1. Understanding risk and risk management options;
2. Critical infrastructure and essential services;
3. River resilience, recovery and restoration;
4. Food security; and
5. Regional planning and decision making.

REGIONAL HUBS MODEL



For the first round of dialogue at the Forum, on identifying regional priorities and actions, guests were asked to join tables based on geography and according to the 'Regional Hubs' model proposed for Hilekw Sq'eq'o.

Reflections from Minister Ma following dialogue on regional priorities:

Minister Ma emphasized that the regional priorities can become a plan if grounded in strong partnerships. She recognized that partnerships are not always easy, but when we open our hearts and our minds, we can turn hard conversations into opportunities for change. She encouraged those at the Forum to develop a regional action plan, so that funding could be organized and attention could turn to implementation. Finally, Minister Ma shared that after listening to the presentations and dialogue at the forum she had formed a new understanding of what resilience truly means.



“A resilient BC is when we are in a place where we are not afraid of what Mother Nature is throwing at us because we are working with her and not against her. We build our communities in a way where we understand nature instead of fighting it. We build to accept and work with nature.”

Minister Ma, reflecting on the June 2023 Forum

PRIORITY REGIONAL FOCUS AREAS: OBJECTIVES AND ACTIONS

After lunch, guests from across the region chose tables assigned to one of the five priorities identified earlier in the day. They were asked to think about the priorities through the lens of the 5 principles, and to identify objectives and actions for each one. While each of the priorities discussed can benefit from further and deeper consideration, it was evident from the discussion that there are already significant levels of expertise and knowledge in the region to support work and planning. There is also awareness of data and knowledge gaps, and a desire to increase relationship building and collaboration. And it is apparent that there is work that can be done that will be useful for addressing multiple priorities, reflecting the benefits of a strategic and principled approach to risk reduction and resilience.

Dialogue from the tables is summarized in this section.


PRIORITY A: Understanding risk and risk management options

Forum guests said this was a priority for the region because:

- An action plan is unlikely to be effective unless it is built on an understanding of flood risk, climate change risk and ecosystem risk carried out at a watershed scale so that we understand the interconnectedness of our region.
- Risks not only need to be identified, they must be prioritized in a way that ensures that the region benefits as a whole.
- Risk management needs to go beyond flooding alone to include a broader range of options such as water storage, opening up blocked waterways, restoring riparian areas, adapting development to periodic flooding and shifting development away from the floodplain.
- Risk needs to be considered in the context of building long term resilience.
- UNDRIP should be in all things we do – education on what it is and what it means for non-First Nations at the table.

Objectives brought forward by the tables:

1. Both a regional assessment and local risk assessments are prepared for the Lower Fraser, collaboratively, and in accordance with UNDRIP, the *Declaration of the Rights of Indigenous People Act (DRIPA)*, and the *United Nations Declaration on the Rights of Indigenous Peoples Act (UNDA)*.
2. Risk assessments include:
 - Fluvial and pluvial events;
 - Climate change impacts;
 - First Nations knowledge, as shared by First Nations and according to OCAP principles;
 - Upslope factors;
 - Risks to ecosystems;
 - Risks to First Nations values, cultural sites and intangible elements of the land;
 - Risks to critical infrastructure and essential services;
 - Risks to public safety;
 - Risks to economic interests;
 - Risks to food security.
3. Data is designed to be share-able, and is shared.
4. Risk management options must:
 - Address equity;
 - Consider year-round water use and needs, including droughts;
 - Include protection/adaptation of critical infrastructure and essential services across the region;
 - Include nature-based and hybrid approaches that restore floodplain function and provide multiple benefit; and
 - Where appropriate, draw on good practices from other jurisdictions.

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5. Risk management options are informed by better understanding of how ecosystem/floodplain function can contribute to flood risk management across the region, including:
 - Flood management benefits of reconnecting waterways;
 - Identification of lands that would be most useful to absorb or store water;
 - Increasing or restoring riparian areas;
 - Restoration of Sumas Lake;
 - Synergies with habitat restoration initiatives.
 6. Determine what level of risk is acceptable – there will always be risk but we need to understand consequences and costs (financial, social, ecological) to mitigate.

Potential Actions Discussed:

1. A regional risk assessment is scoped and prepared for the Lower Fraser, taking into account the objectives noted above.
2. Undertake modelling and studies to increase understanding of how ecosystem/floodplain function can contribute to flood risk management across the region.
3. Model risk management options, including a full range of nature-based approaches, and evaluate each option using a collaborative process.
4. Develop data sharing practices and protocols for the region.

PRIORITY B: Critical infrastructure and essential services

Forum guests said this was a priority for the region because:

Being unprepared for events like the November 2021 atmospheric river events can lead to catastrophic damage to critical infrastructure. In the Lower Fraser, impacts to roads and bridges created risks to human safety and even loss of life. Losing the connections provided by transportation corridors had cascading negative impacts that reached right across the country, and even after the flood-related events ended the damage and immense recovery costs remained.

Similarly, the November 2021 events made clear the need to secure essential services for every community. There was strong sentiment at the Forum that identifying and reducing risks to critical infrastructure and essential services should be a top priority and likely a first step for a regional plan. At the same time it was acknowledged that there needed to be collaborative work to develop a shared definition of critical infrastructure that will serve the Lower Fraser region because, depending whom you ask, you hear a different definition. Critical infrastructure that was discussed included roads, hospitals, railways, cell towers, First Nation reserve lands, farms and cultural sites.

Objectives brought forward by the Tables:

1. Risks from flood events in a changing climate are identified and reduced for critical infrastructure and essential services in the Lower Fraser. For example:
 - Highway 1 is operational during floods
 - Access roads to communities/farms are operational during floods
 - Cell towers are protected/adapted
 - Septic/wastewater infrastructure is secure
 - First Nations cultural sites are not harmed
 - Essential services for communities are secure
2. Systemic, historical harm to First Nations and their greater vulnerability to flood events from the perspective of critical infrastructure and essential services is addressed.
3. Risk reduction measures for critical infrastructure are prioritized through a collaborative regional process and in accordance with UNDRIP/DRIPA/UNDA.
4. Risk reduction measures for critical infrastructure emphasize fish-friendly and nature-based approaches.
5. Critical Infrastructure priorities are clearly identified in a regional action plan

Potential actions discussed:

1. Establish a regional leadership table (FN/Fed/Prov/Reg Gov't) and technical working group to confirm top priorities for investment and financial support.
2. Map/identify and rank risk for critical infrastructure and essential services, in a way that includes First Nations knowledge and priorities.
3. Provide cultural activities for those participating in critical infrastructure planning/management, including education about healthy relationships with salmon.
4. Address capacity needs, especially among First Nations, to do this work.
5. Plan critical infrastructure projects with maximum salmon benefits.

PRIORITY C: River resilience, recovery and restoration

Forum guests said this was a priority for the region because:

There was recognition from diverse voices at the Forum that resilience and recovery for the river ecosystem (and waterways across the floodplain) are a critical part of building long term resilience for everyone in the Lower Fraser. For some First Nations guests this was expressed as a responsibility to take care of all beings in the Lower Fraser, and to maintain or recover traditional practices and connections to the land and water that are essential to cultural identity and wellbeing.

Other Forum guests spoke of the need to understand the role of ecosystems in flood mitigation and water management, and the opportunities for multi-benefit approaches that keep communities safe while providing benefits for salmon and other species. There was interest in 'not reinventing the wheel', but leapfrogging forward by learning from experiences in other jurisdictions.

Objectives brought forward by the Tables:

1. Planning for river resilience and recovery is part of regional planning for flood resilience:
 - Wet and dry seasons are part of planning;
 - Progress is measured in relation to salmon returns;
 - Spawning and rearing areas are protected;
 - 'River' includes waterways across the floodplain;
 - Waterways across the floodplain are reconnected;
 - Water storage is enhanced to reduce flood risk, stabilize water supply, and unlock habitat for salmon.
2. First Nations choose and lead multi-benefit restoration projects.
3. Barriers to fish passage are removed; we are the standard for the world in fish-friendly infrastructure.
4. Riparian zones are improved.
 - Setback dikes;
 - Incentives/education for farmers.
5. Increased water storage helps with aquifer recharge.
6. Food security in relation to wetland and aquatic species is supported
7. Benefits of nature-based approaches are understood by the government, farmers, infrastructure owners, residents etc.

Potential actions discussed:

1. Analyze options, quantify risk, understand benefits of more room for the river (flood risk reduction PLUS habitat, traditional plants, groundwater recharge, green space and well-being). Include First Nations knowledge in this process.
2. Build the case for how working with nature and giving rivers more room is an effective and efficient path to multiple goals/benefits.
3. Build First Nations-led partnerships for identifying sites, co-designing restoration/ risk mitigation projects.
4. Restore/enhance traditional uses and culturally sensitive areas.
5. Increase education and awareness through training and collaborative projects.
6. Acquire land for protection/restoration in high risk areas.
7. Develop incentive programs for landowners to adopt fish and flood friendly land practices.
8. Mandate fish friendly options for new and replacement infrastructure, and incentivize them for existing structures.
9. Learn from examples in Washington and other jurisdictions.

10. Bring together federal and provincial funds for flood mitigation and restoration (to support First Nations, local governments, farmers & environmental non-government organizations collaborating).

PRIORITY D: Food security

Forum guests said this was a priority for the region because:

Much of the floodplain in the Lower Fraser has been converted to agricultural land, yet it remains the traditional territories of the First Nations of the Lower Fraser, who hold the relationships with land, water and other species that are the essence of their spirituality, culture and economies. Guests at the forum discussed food security from these different perspectives, and noted that it is important to build greater understanding in order to move forward with understanding risks and opportunities to food security for the region in a changing climate.

There was interest in further dialogue between First Nations and farmers, in learning more about multi-benefit approaches to flood risk management like the Floodplains by Design model, and in exploring on-the-ground projects. There was also recognition of the need to get a better picture of food systems (from multiple perspectives) and exposure to flood risks in the Lower Fraser region.

Objectives brought forward by the Tables:

1. Food security in the region is understood from both First Nations and agricultural perspectives.
2. Impacts on food security are considered when evaluating risks related to flooding, including changing climate-related factors.
3. Opportunities to increase water storage, restore habitat and diversify existing food systems (for flood/drought conditions) on farm lands are identified & implemented.
4. Farmers in the Lower Fraser are educated about multi-beneficial flood management approaches, including practices that support freshwater ecosystem health and connectivity.
5. First Nations and farmers have opportunities for dialogue and relationship building.
6. Farms in the Lower Fraser operate effectively/profitably without damaging salmon habitat and ecosystems.
7. Supply chains and transportation corridors in relation to food security in the Lower Fraser are identified, and risks from flood events are assessed.
8. Food systems in the Lower Fraser are resilient/adapted to flood events in a changing climate.

Potential actions discussed:

1. Complete mapping/inventory of existing uses of farming lands and food systems, including First Nations food systems, to explore opportunities for water storage, habitat restoration, diversifying existing food systems (flood/drought resistant crops etc.). Include an inventory of existing agricultural capacity and supply chains.
2. Find and develop projects that support flood safety, fish and food security simultaneously, by partnership between government, First Nations, farmers, ENGOs, etc.
3. Provide more educational resources on nature-based measures on farm lands that increase flood resilience (e.g. Farmland Advantage for Lower Fraser, peer learning from Floodplains by Design).
4. Relationship building activities for First Nations and farmers to:
 - Build shared understanding of food systems from different perspectives; and
 - Work on building resilience to flood events in ways that reflect the 5 principles.
5. Explore amendments to ALR legislation and regulations to make it easier to develop nature-based flood resilience measures and to support First Nations traditional food practices, noting that each First Nation should have access to places to hunt/gather their traditional foods and medicines.

PRIORITY E: Regional planning, policy and decision-making

Forum guests said this was a priority for the region because:

Guests strongly agreed that the way we do the work is important. They had specific ideas about how to move forward in a better way. Despite some impatience around the perceived slow pace of progress on action in the region, the need to plan for long-term resilience was affirmed.

The interconnectedness of the Lower Fraser should be reflected in planning processes and decision making, with both regional and sub-regional processes that bring together governments (First Nations, local, provincial and federal) and stakeholders. This type of regional and sub-regional process is important to build shared understanding of different perspectives, to build relationships and trust, to work on actions that don't leave anyone behind, and don't solve one set of problems at the expense of creating new ones or exacerbating old ones for others, and to work at a scale that reflects ecosystem connections and also opens up space for solutions to problems that cannot be solved locally. Developing a shared understanding of risks in the region was seen as an important first step as well as developing protocols for sharing data, keeping data up-to-date, and respecting OCAP principles.

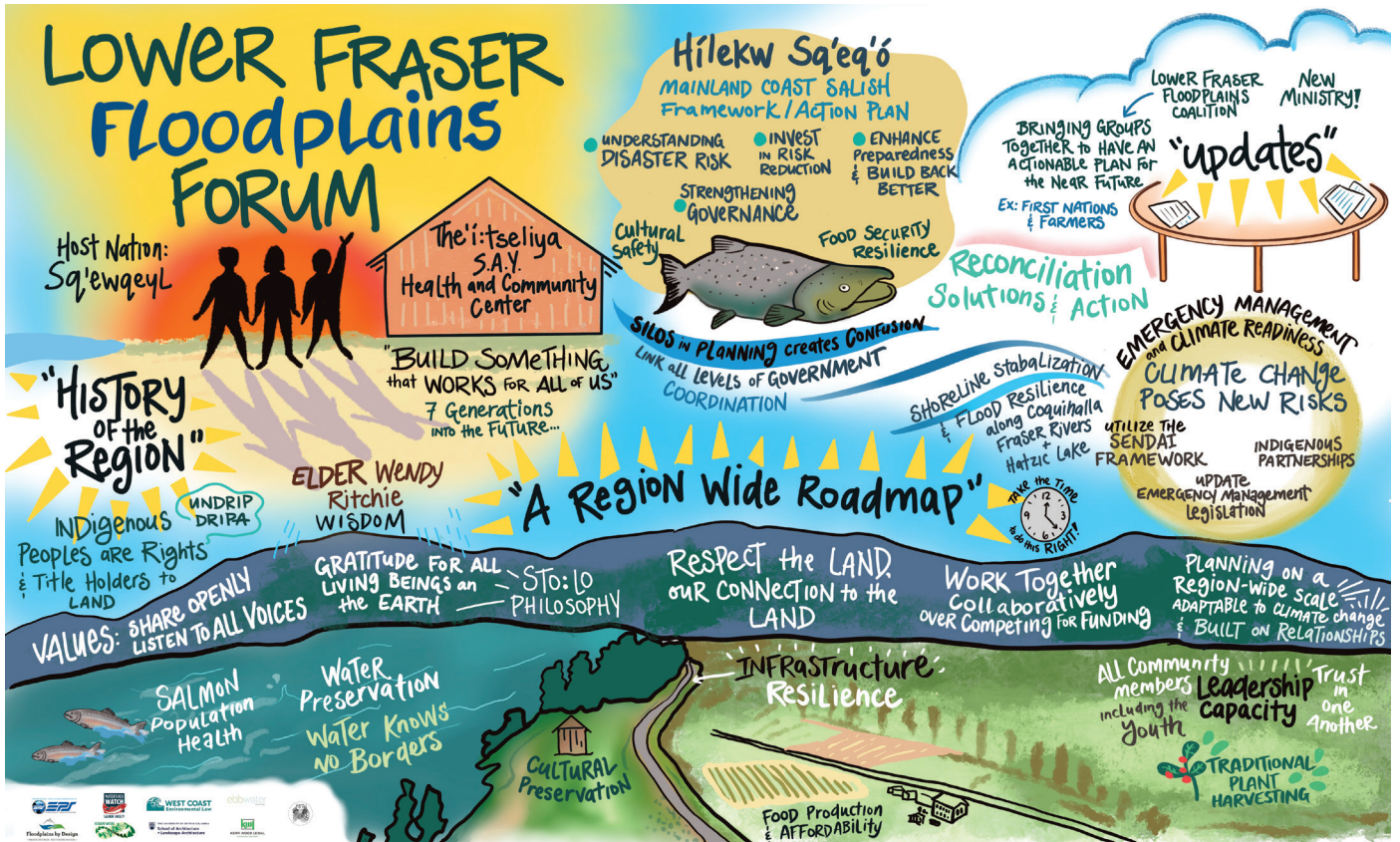
Finally, the foundation for relationship building going forward must be the recognition of First Nations title and rights, and decision making as set out in DRIPA/UNDA/UNDRIP, and in particular UNDRIP articles 18, 19, 29 and 32. The Stó:lō teaching of “Letsemot,” working together with one heart and one mind, was shared.

Objectives brought forward by the Tables:

1. Risk for the region is mapped out by sharing data regionally and creating a whole picture of the problems.
2. Reconciliation is advanced, ensuring First Nations involvement at all stages including decision making and policy development (see UNDRIP articles 18, 19, 29 and 32).
3. There is clarity re: UNDRIP/DRIPA/UNDA application to regional governance, and government-to-government relations.
4. First Nations are leading conversations as a policy/practice, instead of being “consulted.”
5. Regional plans/policies for flood mitigation are developed collaboratively and protect salmon/ecosystems.
6. A simplified/coordinated/fully resourced system addresses permitting approvals across multiple levels of governments (provincial, federal, First Nations).
7. Funding timelines and permitting timelines are aligned.
8. Sub-regional/reach level tables are set up for planning and project initiatives.
9. The public is informed about flood risks through clear and accessible communications.

Potential actions discussed:

1. Create a regional table (First Nations, federal, provincial, local representatives) to carry out a risk assessment for the region.
2. Formal working agreements with First Nations, local governments, the Province, federal government, and, possibly, industry and NGOs.
3. Develop protocols for data sharing and common data across the region.
4. Employ a “multiple accounts” approach to understand the costs of inaction to economies, ecosystems, people vs. benefits to all of these through bold investments in resilience.
5. Understand and address the cost of updating zoning and loss of tax base and development revenue.
6. Consider housing needs.
7. Identify and support sub-regional/reach-level tables for planning and projects.
8. Establish new, needs-based funding models to support short- and long-term action.
9. Support cross-cultural learning and information sharing.
10. Streamlined funding/support for flood mitigation projects that implement the five principles.



Lower Fraser Floodplains Forum, Skowkale, June 9, 2023

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Recommendations and Next Steps

BASKET 1: Build the knowledge foundation needed for regional planning and investment in flood risk management in the Lower Fraser

Three-year objective: Develop a regional flood risk assessment and a suite of mitigation options.

Steps to move us forward:

- Prepare flood vulnerability studies that address the range of concerns across the region, informed by the 5 principles. EPS and LFFC have begun work on a high-level flood vulnerability study for the region, drawing on priorities and issues of concern for Lower Fraser First Nations, including critical infrastructure. Non-sensitive information from this study can be shared with the region.
- Develop a technical understanding of how the river and the waterways of the Lower Fraser function (and functioned historically), how this may be impacted by climate change, and how re-connecting waterways can provide multiple benefits.
- Complete mapping/inventory of existing uses of farming lands and food systems, including First Nations food systems, to explore opportunities for water storage, habitat restoration, diversifying existing food systems (flood/drought resistant crops etc.). Include an inventory of existing agricultural capacity and supply chains.
- Understand drivers of risk (e.g. climate change, inadequate planning, existing flood control structures, land use, forestry practices, wildfires, drought) to identify risk management options.
- Assess risk and risk management options for linear critical infrastructure (e.g. Highway 1, 7, 99, railways, hydro and cell towers) in the floodplain, building on existing work.
- Develop and evaluate different risk management scenarios, guided by the 5 principles.
- Develop protocols for data sharing and common data across the region.

BASKET 2: Build a framework for regional planning and investment in flood risk reduction, guided by the 5 principles

Three-year objective: Set up an interim Floodplain Advisory Committee and develop relationships and process to prioritize investments in regional flood risk reduction.

Steps to move us forward:

- Identify/invite Committee participants in accordance with UNDRIP (e.g. Articles 18, 19, 29, 32): First Nations, local government and Provincial and Federal Crown responsibilities and jurisdiction (taking into account the Sumas River Watershed Flood Mitigation Collaborative Framework, and scoping the work of the Committee appropriately and respectfully).
- Establish a Terms of Reference through facilitated dialogue and relationship building.
- With appropriate technical support, Committee participants identify critical infrastructure and priorities for the region and investigate flood risk and risk management options, guided by the 5 principles.
- Liaison with sub-regions to identify priorities for essential services.
- Support relationship building and good process at the Committee with legal/cultural education.
- Capacity funding for First Nations participation to support equitable, legitimate process.

BASKET 3: Unlock a steady flow of flood and ecosystem resilience projects in the sub-regions of the Lower Fraser.

Three-year objective: Build relationships and processes at sub-regional scales that support priorities and project development around flood resilience, reconciliation, river recovery, salmon habitat restoration, and community well-being for everyone.

Steps to move us forward:

- Convene sub-regionally to support relationship building, identification of further technical needs, and exploration of opportunities for multi-benefit flood risk reduction with buy-in across communities and stakeholders.
- Capacity funding for First Nations to fully participate as decision makers and lead projects at all stages.
- Continue Farmer and First Nations dialogue & relationship building through site visits, place-name tours, and ongoing discussions.
- Adjust federal and provincial funding programs to support collaborative project design processes at sub-regional level in addition to project implementation.
- Prioritize projects that work with nature and implement nature-based projects already identified in the Lower Fraser, including build back better opportunities.
- Explore ways of working together that focus on solutions, e.g. visualization and design workshops.
- Establish a simplified/coordinated/fully resourced system that streamlines permitting approvals across multiple levels of governments where projects embody the 5 principles.
- Peer-to-peer learning opportunities for professionals, farmers re: nature-based measures.

Lower Fraser Floodplains Coalition

We are a collaborative group of BC-based organizations and experts with the shared goal of helping BC's upcoming flood recovery and management efforts achieve the best possible outcomes. We offer support from a diverse range of interests, experience and networks, including Indigenous groups, conservationists, farmers, environmental legal specialists, researchers and natural resource professionals. We hope to see BC move towards a more holistic, collaborative approach to flood management that benefits people and other species, like salmon.

Includes: Emergency Planning Secretariat (Indigenous-led); UBC Coastal Adaptation Lab, School of Architecture and Landscape Architecture; West Coast Environmental Law; Ebbwater Consulting; Sto:lo Tribal Council; Watershed Watch Salmon Society; Resilient Waters Project; and Kerr Wood Leidal.

LFFC SCOPE OF ACTIVITIES:



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