Flow Split Design Charrette Update

Whatcom County Council

Climate Action and Natural Resources Committee

June 7, 2022

November 2021 Flood Damages:

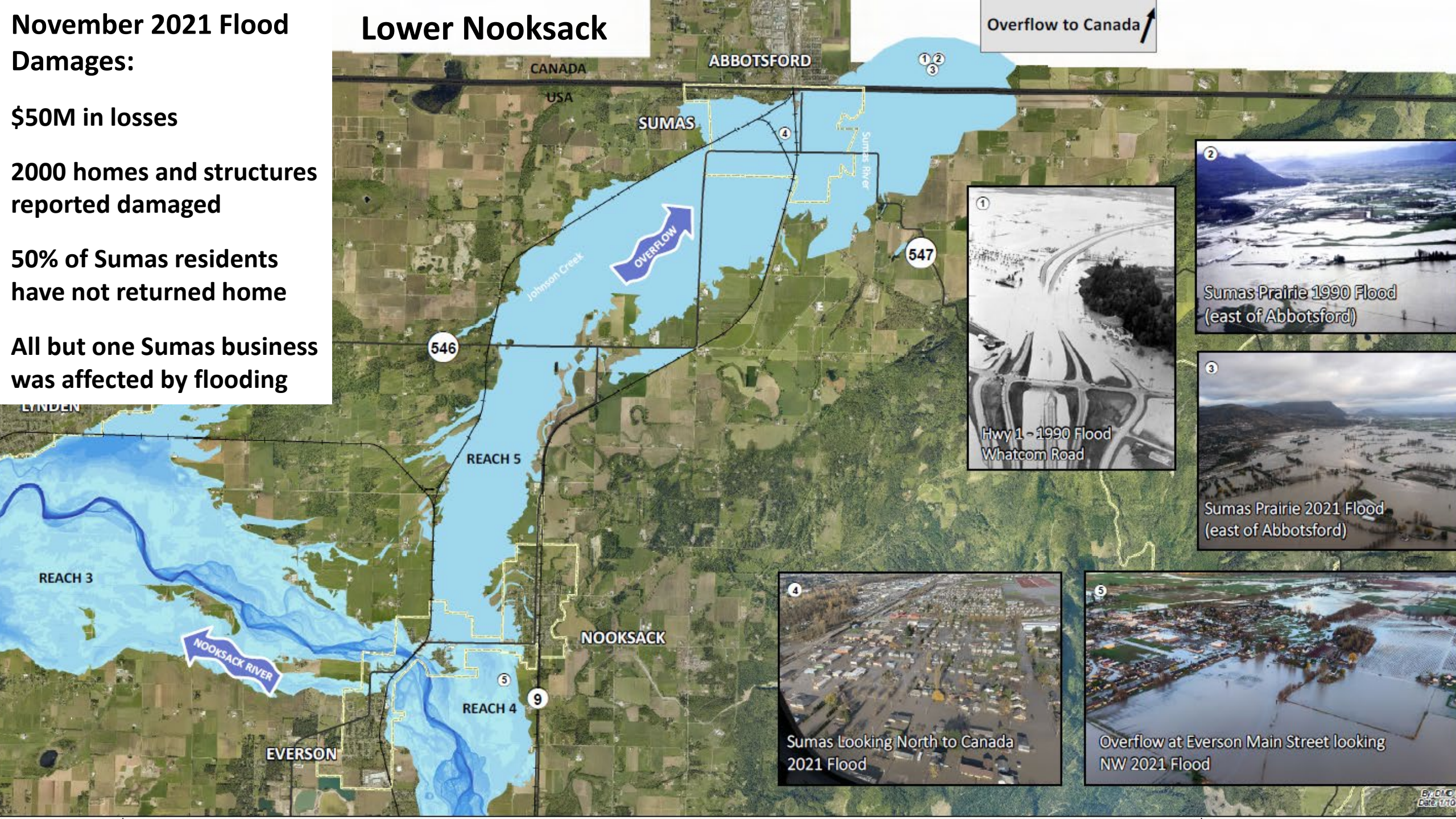
$50M in losses

2000 homes and structures reported damaged

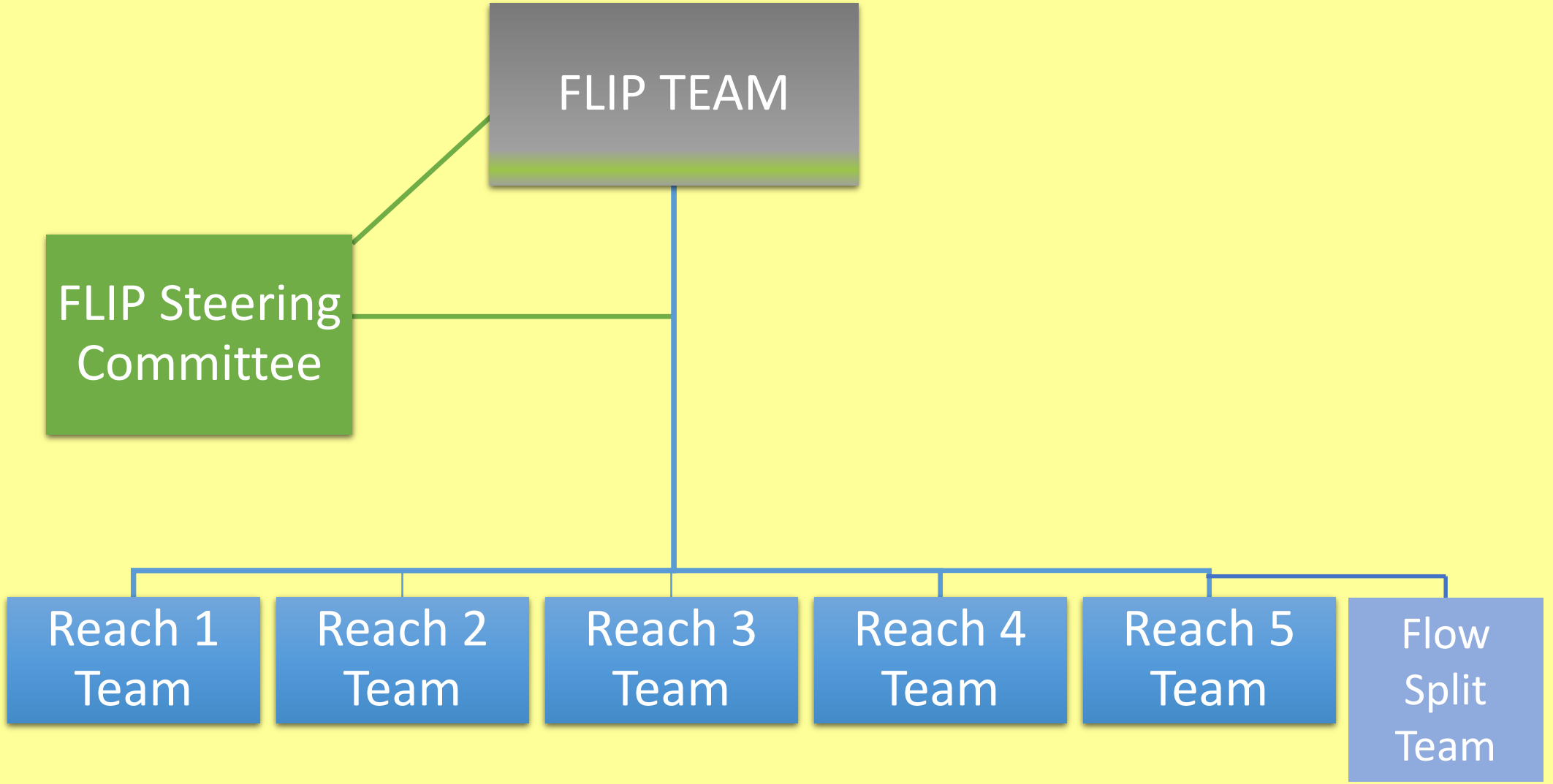
50% of Sumas residents have not returned home

All but one Sumas business was affected by flooding

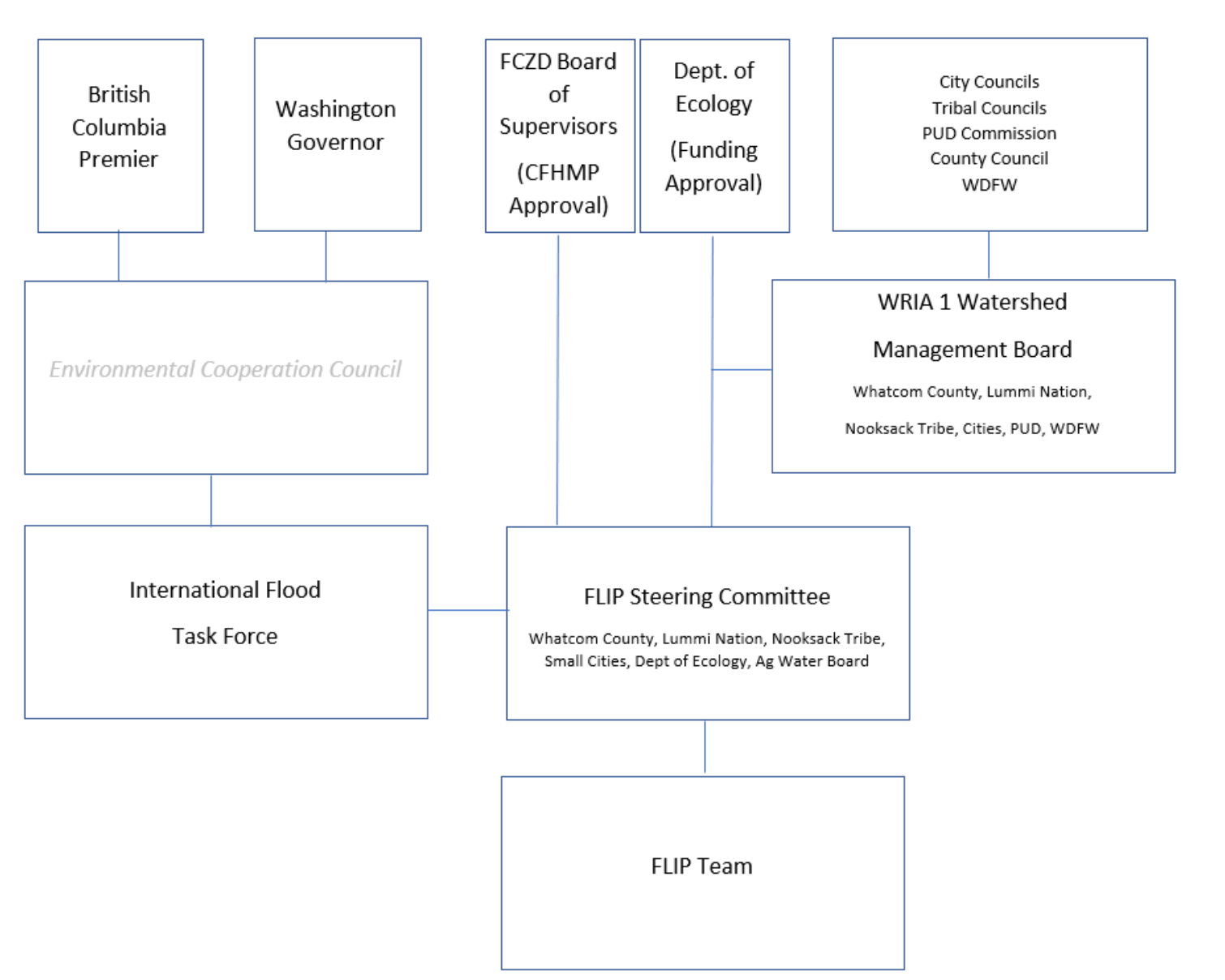
Lower Nooksack



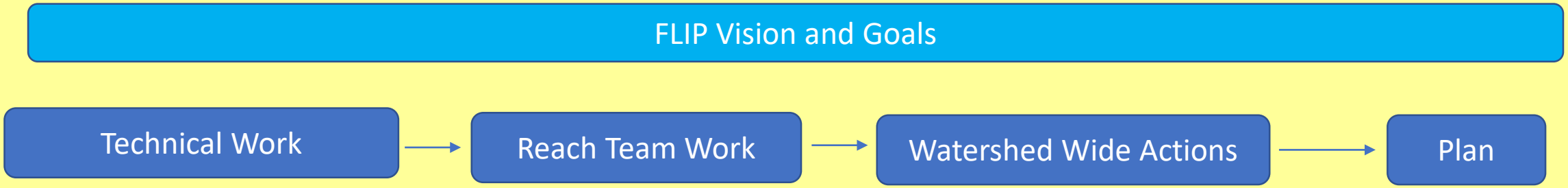
FLIP Planning Process Structure



Integrated Floodplain Management Structure



FLIP Planning Process
Updated Comprehensive Flood Hazard Management Plan
(Updated CFHMP – In Progress)



1999 CFHMP Recommendation: maintain flow split at Everson

Everson Flow Split Charrette
April 25-26, 2022

- ½ Day Field Tour and Full Day Workshop
- 43 Attendees
  - Ag representatives – Diking Districts, Subzones, WIDs, WFF
  - City representatives – Everson, Sumas, Nooksack, Lynden, Ferndale
  - Tribal representatives – Nooksack Tribe and Lummi Nation
  - County representatives
  - State and federal agency representatives
  - Pipeline representative
  - FLIP Steering Committee

AGENDA		
WHO WE ARE	8:30 – 9:20	**Opening remarks, overview of the day** (Mark Ewbank) **A welcome message** (Whatcom County Executive Satpal Singh Sidhu) **Perspectives of the Nooksack Indian Tribe** (Trevor Delgado) **Introductions by all attending** **FLIP purpose and outcomes** (Paula Harris) **Roles and resources** (Mark)
WHAT WE VALUE	9:20 – 9:30	**Shared values and givens** (Steve Moddemeyer) • Why shared values? • Individual values exercise
WHAT WE FACE	9:30 – 10:35	**Technical presentations** • Nooksack River geomorphology (Karin Boyd) • Flooding characteristics past and present (Todd Bennett) • Fish use and habitat conditions (Ned Currence) • Potential flood reduction solutions previously defined (Paula Harris)
	10:35 – 10:50	**Break**
WHAT MIGHT WORK	10:50 - 11:20	**Ideas generation** (Steve)
HOW WE WILL JUDGE OUR WORK	11:20 – 11:30	**Values as success criteria** • This group's values and commonalities in them
HOW WE WILL WORK TOGETHER	11:30 – 12:00	**Break out into small table groups** • Select ideas to develop • Familiarize with others in your group and begin coordinating the work
	12:00 – 1:00	**Lunch**
TURNING IDEAS INTO CONCEPTS	1:00 – 2:00	**Develop concepts with break out groups**
CONCEPTS FURTHER REFINED	2:00 – 2:30	**Strengthen concepts with break out groups**
SWEET IDEAS AND SNACKS	2:30 – 2:45	**Break, while browsing other groups' work to consider additional ideas**
FINAL CONCEPTS	2:45 – 3:30	**Complete concepts with break out groups**
PRESENT CONCEPTS	3:30 – 4:35	**Each group presents concept(s) they developed**
CLOSING	4:35 – 4:50	**Closing thoughts and summary of next steps**

Solution Concepts from Tables for Next Steps

- Social Solutions for Flooding
- Maximize Floodplain Storage
- New Flood Infrastructure
- Modify Flow Split
  - Raise Emerson Rd, enlarge Everson dry bridge, and widen mainstem corridor width
- Rezoning
  - Shift communities out of harms way
- Habitat restoration
  - Develop/reconnect side channels, setback levees, in-stream wood structures to store sediment, restore habitat
- Overflow Corridors
  - Evaluate options to meter flow

Identified an Early Action – Everson Side Channel Pilot Project

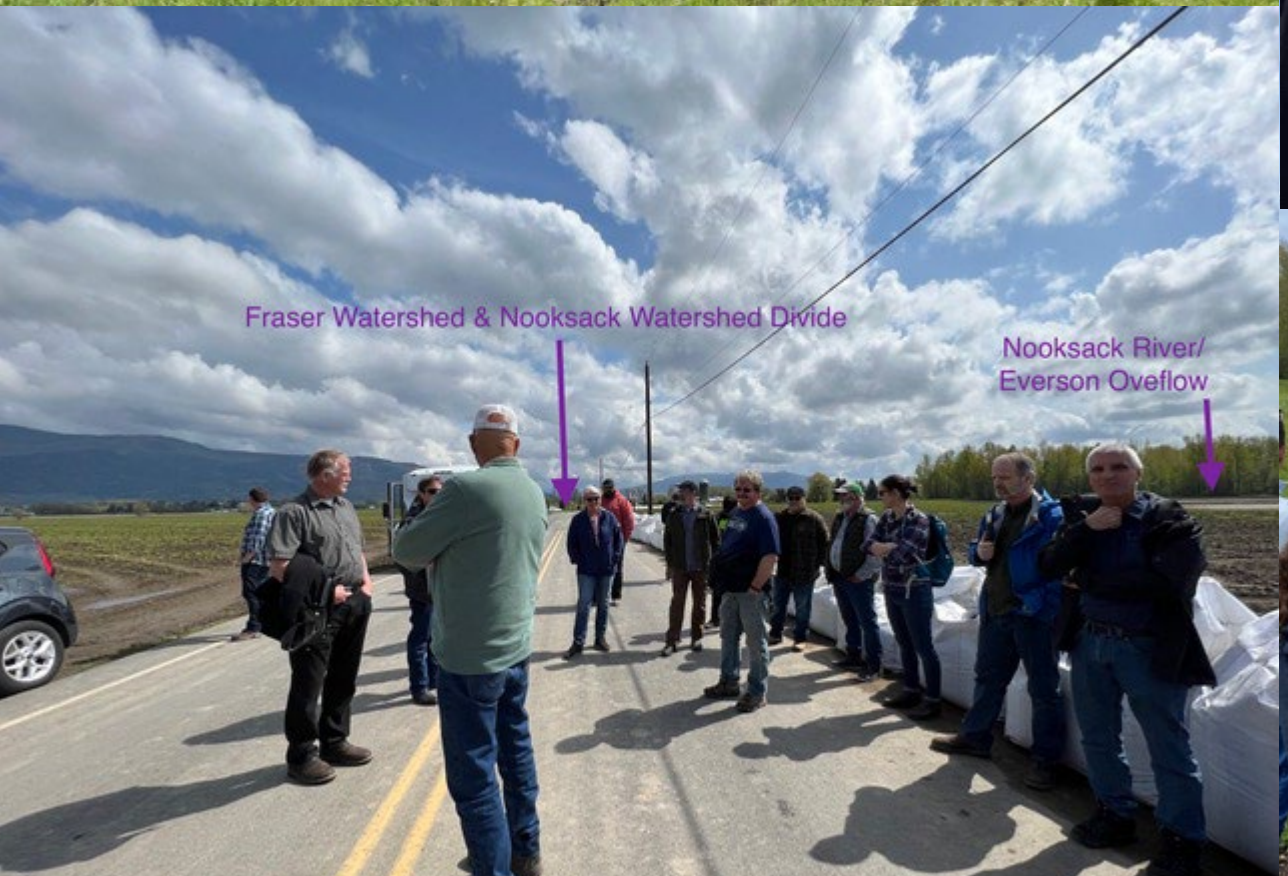
- Field meeting at Twin View Levee – outcome of charrette
- Pilot project: goal is to take a series of steps to reduce flood impacts
- First step - implementable this summer
- Learn and inform longer-term solutions

Next Steps

- Define ‘buckets of actions’ from the table solution concepts
- Develop technical understanding of what is necessary to advance solution concepts
- Reconvene Flow Split Team (charrette group)
- Remaining steps yet to be determined

Reach 2 Example – Buckets of Actions

Maintain/Modify	Improve	Collaborate	Maintain or Reduce	Create Program
Maintain or Modify? existing ag levees with overtopping segments and incorporate mainstem habitat improvements •Largely retain existing levee alignment (?) •Consider localized levee setbacks (?) •Incorporate riparian, bank and instream habitat improvements	Significantly improve floodplain and tributaries for salmon	Work with farmers to identify measures and project components to improve agricultural viability	Maintain or reduce flood risk in the Reach 2 floodplain area, focusing in Ferndale	Create incentive program through drainage-based management planning to develop pilot projects to integrate issues like water rights, habitat improvement, ag viability and flooding


Fraser Watershed & Nooksack Watershed Divide
Nooksack River/
Everson Oveflow