

Fishtrap Creek Integrated Stormwater Management Plan

Council Meeting

November 25, 2025

Engineering and Regional Utilities



INCLUSIVE &
CONNECTED
COMMUNITY



SUSTAINABLE
& SAFE CITY



VIBRANT &
GROWING
ECONOMY



ORGANIZATIONAL
EXCELLENCE &
INTEGRITY

PURPOSE

To present a draft overview of the Fishtrap Creek Integrated Stormwater Management Plan (ISMP) to Council.

CONTEXT



9
MASTER
PLANS



4
NEIGHBOURHOOD
PLANS

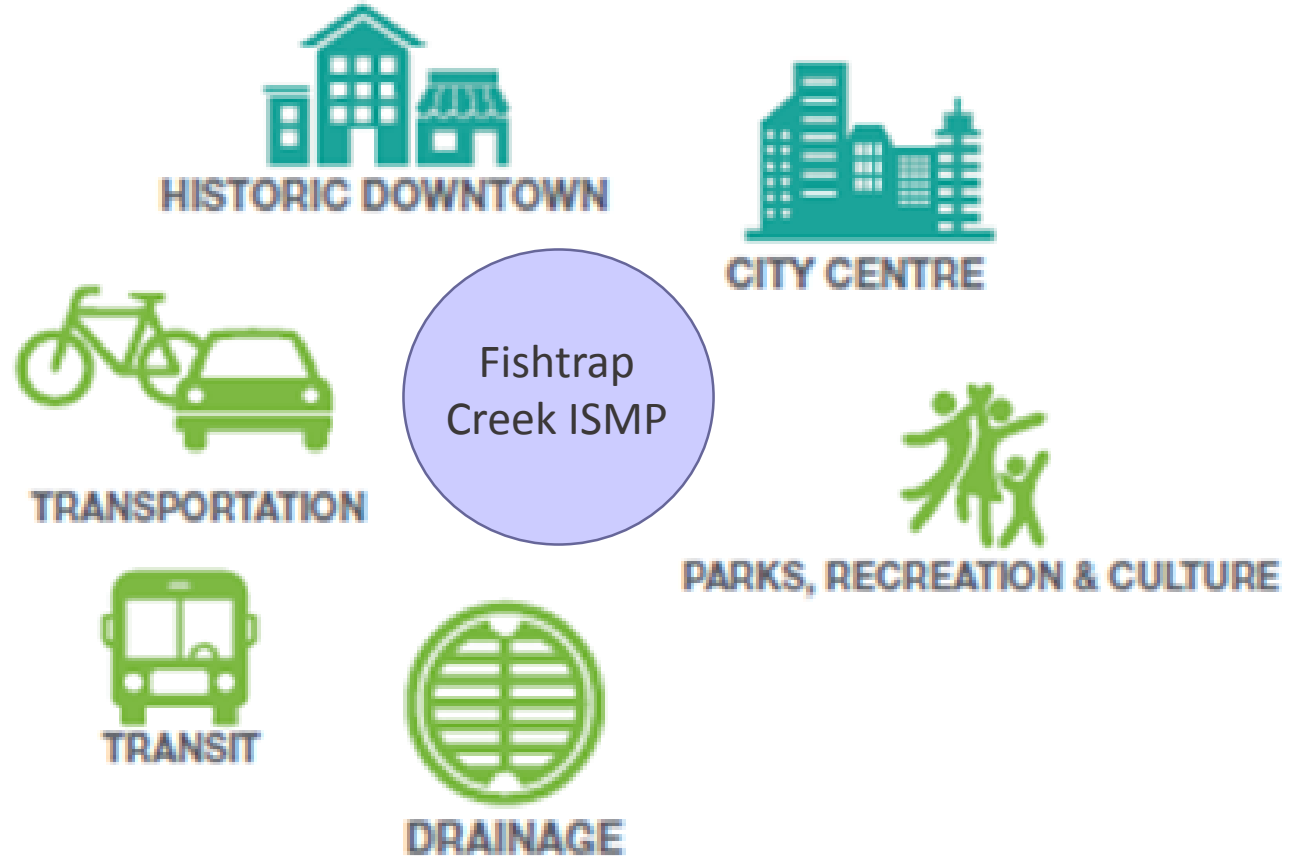


7
PLANS & STUDIES



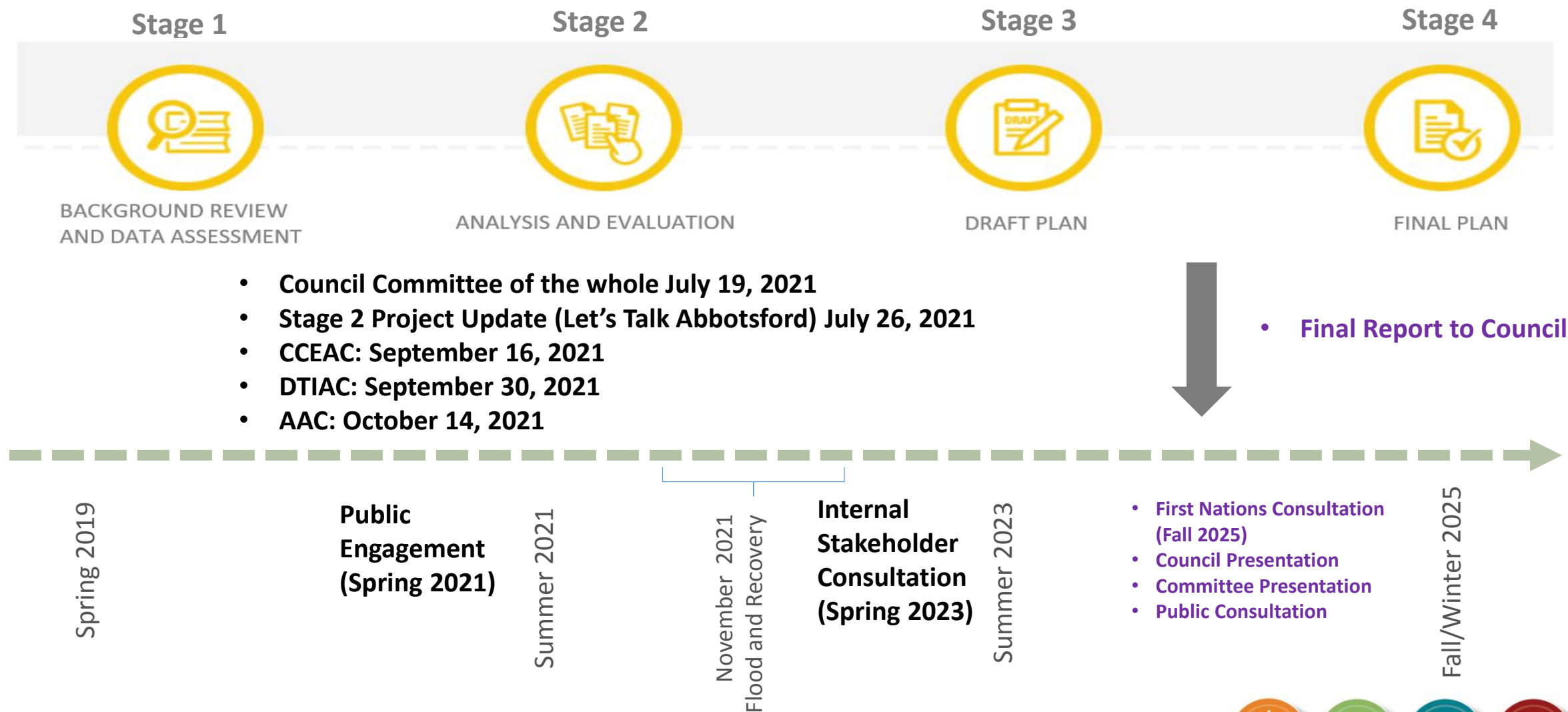
CONTEXT

ALIGNMENT WITH OTHER MASTER PLANS/STUDIES



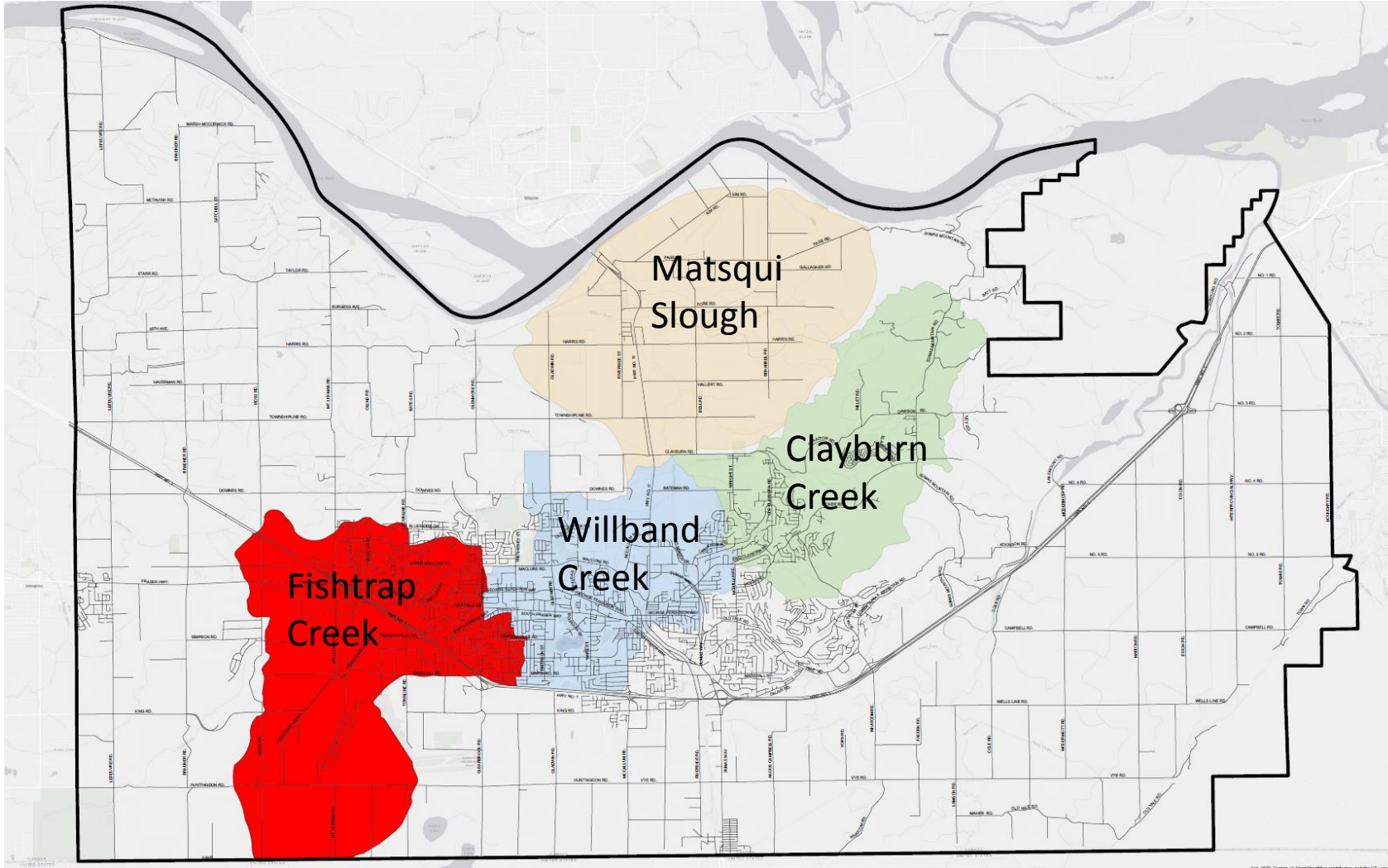
CONTEXT

TIMELINE



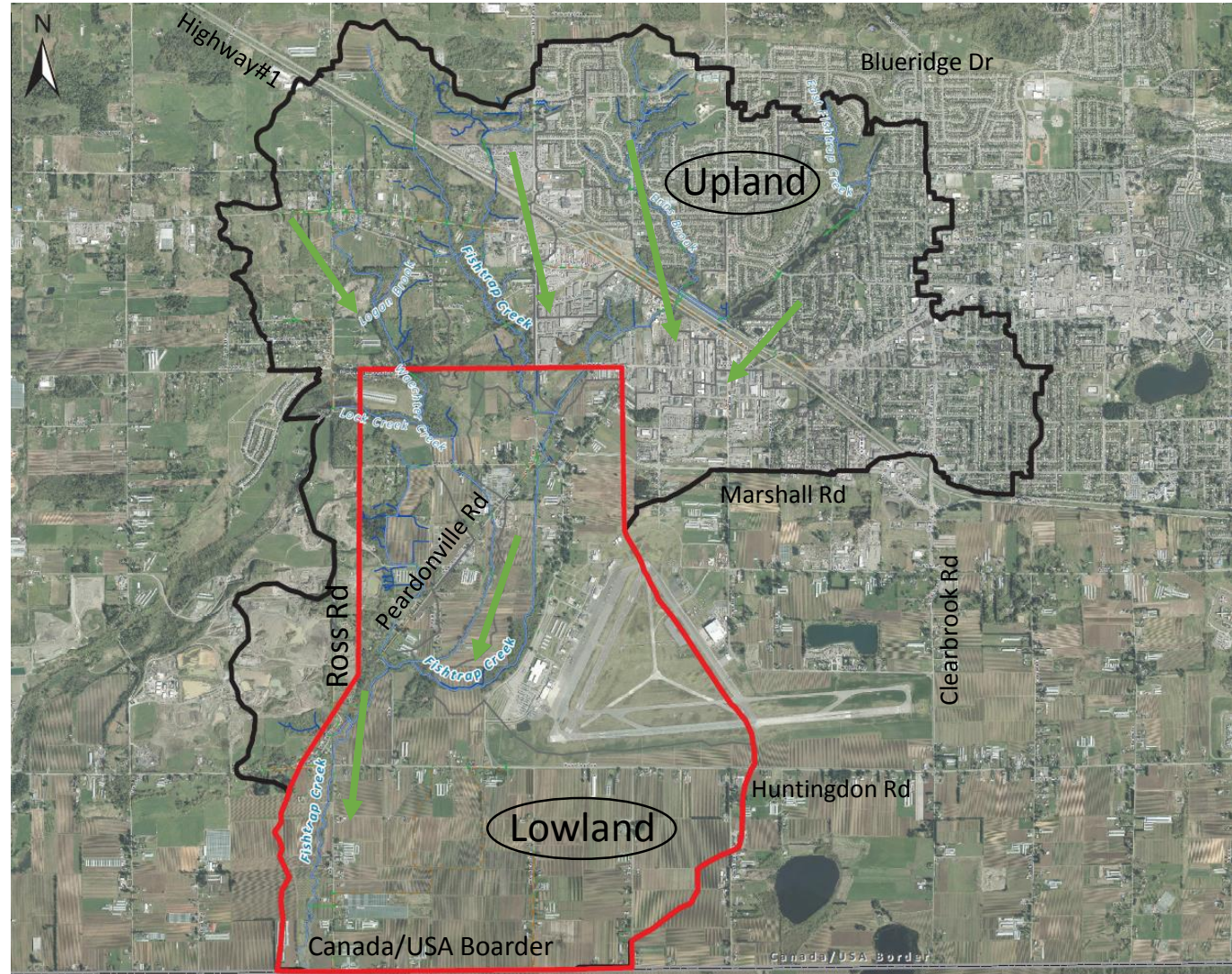
CONTEXT

FISHTRAP CREEK WATERSHED



CONTEXT

Fishtrap Creek ISMP Study Area



DISCUSSION

IDENTIFIED ISSUES

- Poor water quality - creek channels and ponds
- Overgrown vegetation, beaver dams, sediment depositions, and reduced capacity in - Lower Fishtrap Creek and in-line detention ponds
- Invasive plant species in uplands near urban development
- Species at risks - fish and wildlife
- Channel erosion - Enns Brook and Fishtrap Creek mainstem
- Localized flooding - parks, trails, roads, Charlotte Avenue and agriculture fields near channels/ ponds
- Climate change impacts
- Capacity of drainage system



DISCUSSION

ENVIRONMENTAL FINDINGS

- 17 fish species, including 5 salmon & trout species, 8 native species and 4 introduced species.
- Two endangered species are present: Salish sucker & Nooksack dace
- Fish habitat is moderate to low quality.

Watershed health

POOR

FAIR

GOOD

EXCELLENT

- Historic development impacts
 - Increased hard surface & peak flows
 - Runoff pollutants
 - Channel erosion & sedimentation
- Lack of watershed forest cover & invasive plant species



DISCUSSION

ENVIRONMENTAL FINDINGS

Erosion Sites



- Large portion of the watershed are well drained and offer good opportunity for infiltration

DISCUSSION

DRAINAGE ASSESSMENT FINDINGS - INFRASTRUCTURE

- Conveyance systems perform reasonably well against historic criteria; however, deficiencies exist especially for future development and with climate change
- Many detention systems
- Flooding
 - Upland Flooding
 - Lowland Flooding



DISCUSSION

MITIGATION

- Upgrade drainage system conveyance capacities and improve detention deficiencies.
- Lowland channel improvements
- Rehabilitate and stabilize instream erosion sites
- Maintain creek flows to existing levels or move toward pre-development flows; mitigate impacts of future land development
- Clean out detention ponds
- Environmental restoration and enhancement opportunities



DISCUSSION

ISMP RECOMMENDATIONS (DRAFT)

- A draft Integrated Stormwater Management Plan was developed.
- Works were prioritized into categories: 5-year Plan, Long Term Plan, End of Life, and At Time of Development

Flood Management

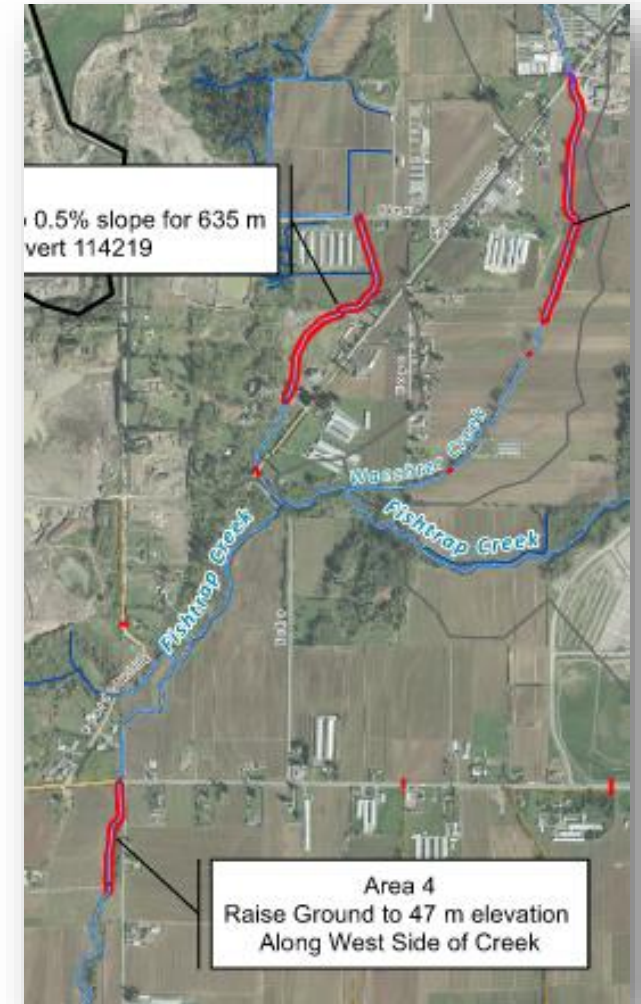
1. Upgrade culverts, storm sewers
2. Improve detention facilities
3. Enlarge lowland channel & berm bank to convey 10-year flow

Erosion Management

1. Manage beaver dams, creek sediment, channel vegetation
2. Rehabilitate and stabilize instream erosion sites

Sediment Management

1. Remove sediment & detritus from ponds & sediment traps



DISCUSSION

ISMP RECOMMENDATIONS (DRAFT)

Environmental Restoration and Enhancements

1. Improve fish passage
2. Restore in-stream habitat and wildlife corridors
3. Restore riparian areas and planting
4. Identify water quality pollutant sources and treat before discharge to creek
5. Investigate/improve low summer baseflow

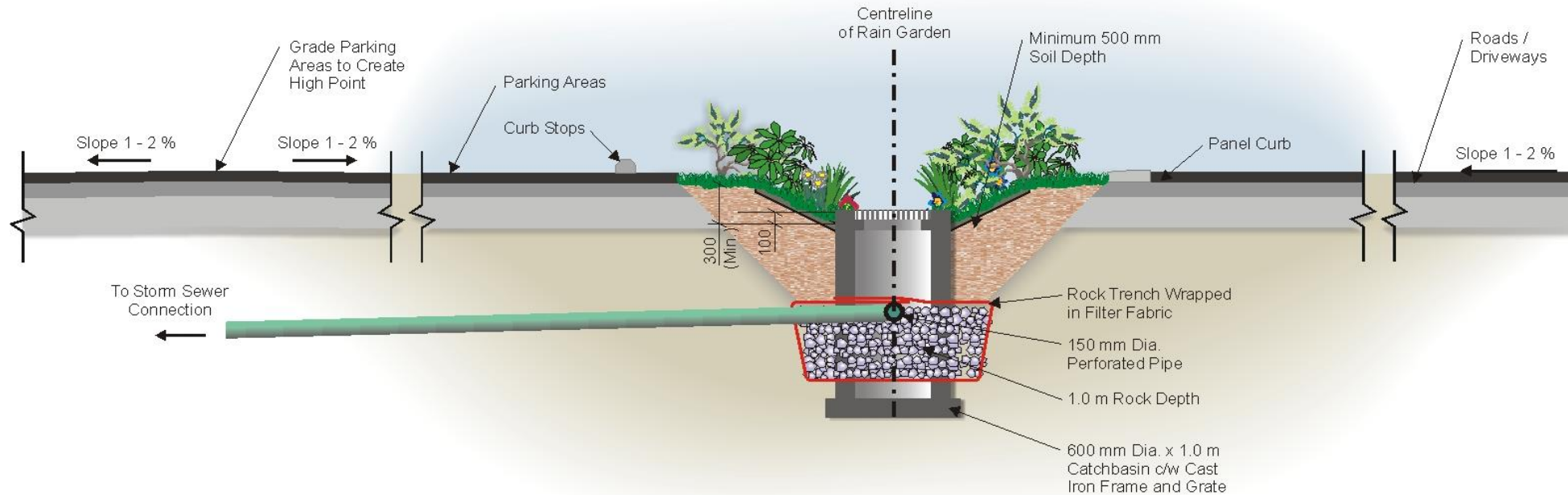


DISCUSSION

ISMP RECOMMENDATIONS (DRAFT)

Mitigate Impacts of Future Development

1. Protect Riparian, Ravine and Wildlife Areas
2. Maximize low impact development techniques
3. Construct Stormwater Quality Treatment Measures
4. Construct detention facilities



Section

DISCUSSION

ISMP RECOMMENDATIONS (DRAFT)

Adaptive Management

Monitor



Assess



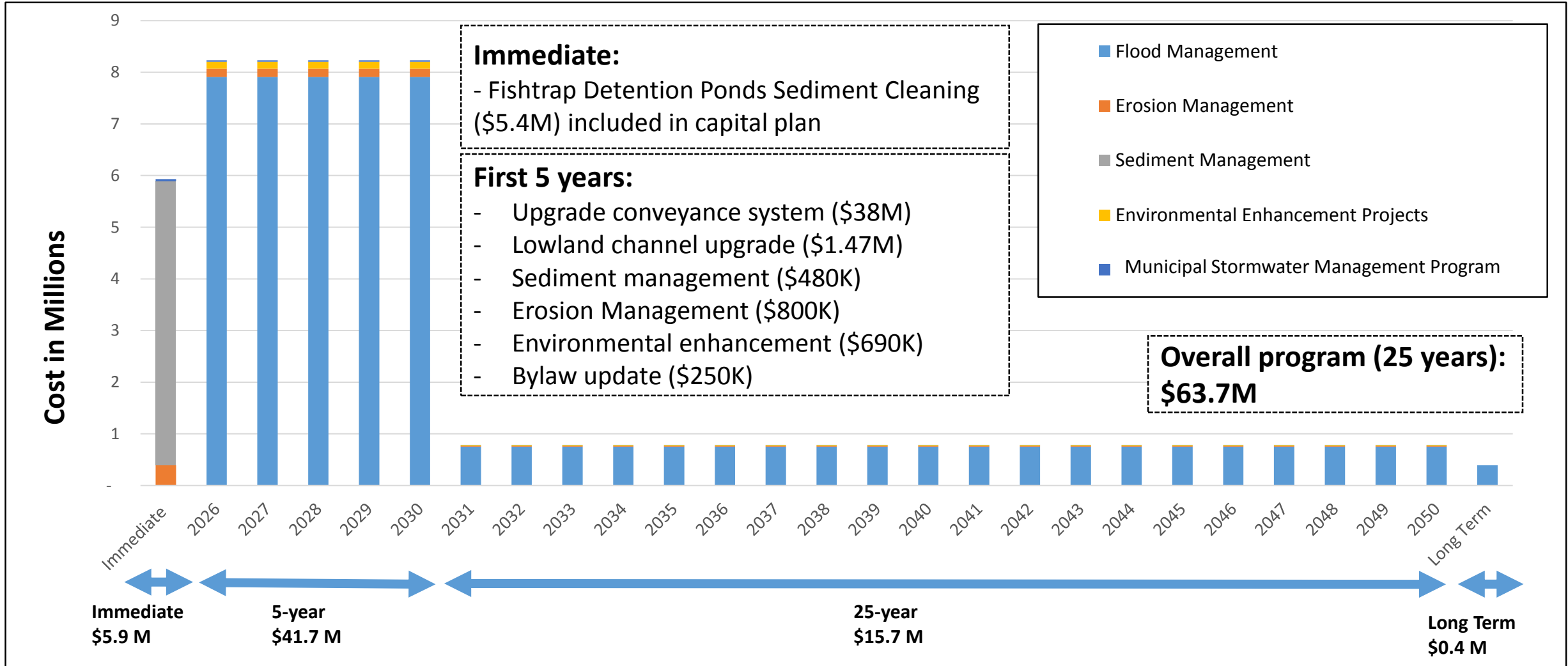
Adapt



FINANCIAL IMPLICATION

FINANCE AND TIMELINE

*Finance/Timeline of projects will be incorporated into the upcoming overall Drainage MP Update for prioritization



DISCUSSION

NEXT STEPS

- **Fall/ Winter 2025:**
 - **FN Consultation**
 - **Presentation to Council Committees**
 - **Public Consultation**
- **Winter/Spring 2026: Final Report to Council**



RECOMMENDATION

1. That Council direct staff to undertake public consultation for Stage 3 of the Fishtrap Creek Integrated Storm Management Plan (ISMP); and
2. That Council direct staff to proceed to Stage 4 of the ISMP following completion of Stage 3.