



City of Courtenay
**Integrated Rainwater
Management Plan
Stakeholder Workshop**
Tuesday, June 4, 2019

What We Heard Summary

PURPOSE:

The purpose of the stakeholder session was to increase awareness and understanding of the Integrated Rainwater Management Planning process and timeline, to acknowledge and build community capacity for working together and to gather input on identified successes, challenges, and what data currently exists.

FORMAT:

The session was by invitation to those (approximately 40 groups) currently doing work within the Comox Valley around watershed stewardship and stormwater management. Courtenay has an active community of people and agencies working in this field who have local knowledge and history that can benefit the planning process.

The session was held Tuesday, June 4, 2019 from 9 a.m. – 11 a.m. at the Native Sons Hall. 30 people from a variety of Courtenay and Comox Valley organizations and companies attended. A list of workshop attendees is provided in Appendix A.

Attendees were invited to come for 9 a.m. to have coffee and socialize, with the formal agenda starting at 9:15 a.m. Staff from City of Courtenay, Urban Systems (engineering consultants), and Tavola Strategy Group (public engagement consultants) facilitated the event. A detailed presentation was provided by Glen Shkurhan of Urban Systems, supported by Katie Hamilton of Tavola Strategy Group. The presentation was followed by round-table discussions focusing on opportunities, challenges, desired outcomes, and data related to rainwater management in the area.

The format provided an opportunity to update everyone at one time with the approach that is being taken and the associated timelines, it also provided opportunity to build relationships between City staff, the Urban Systems team and stakeholder groups early in the process. The project team hopes to benefit from the community's perspective on what is working with regard to rainwater management, where more effort is needed, and in particular what data/information is available and can support understanding the state of the watersheds within the City.

Attendees were seated at round tables. Each table had a facilitator, flip chart and paper and pens available. An "Ideas Wall" was placed on the wall to encourage attendees to note what excites them about developing an Integrated Rainwater Management Plan and what questions they would like answered through the process.

WORKSHOP FORMAT



WHAT WAS SHARED:

The IRMP PowerPoint presentation given by Urban Systems is attached as Appendix B.

WHAT WE HEARD:

30 people participated in the round-table discussions and hundreds of comments were noted from the four tables of participants. The discussion notes are summarized below. A number of themes emerged from the discussions:

What's working well in the Comox Valley in terms of rainwater/stormwater management?

- There were several mentions of the positive relationships and collaboration that is occurring within the region and the potential for partnerships and education that exists amongst groups, schools and the community.
- Several participants highlighted specific projects that are working well, including specific properties such as Home Depot, Walmart and the hospital and areas such as Brooklyn Creek, Arden, and Kus-kus-sum. Some mentioned demonstration projects such as the new Fifth Street Rain Gardens and there were mentions of improved regulatory tools within the valley.

What challenges do you see related to rainwater management or the IRMP process?

- Participants highlighted inconsistency amongst the various jurisdictions and amongst the many roles within development and building process, including Council and staff, developers and home owners.
- Many were keen to see progress occur and some felt that rainwater management efforts have typically been postponed to future initiatives and need to be addressed.
- Several noted there is greater education and awareness needed of the overall watershed, natural systems and the downstream impacts of individual actions. In addition, several felt that the current standards are seen as the minimum requirements that need to be met and should be strengthened.
- In terms of external factors, climate change, sea level rise and flooding were identified as top of mind challenges.

What objectives/outcomes would you like to see from the IRMP process? e.g. policies, programs, infrastructure.

- Several mentioned a desire to see greater consistency amongst all agencies within the watershed in terms of standards and policies and implementation. There were specific mentions of updating the standards in the Subdivision and Servicing Bylaw, and introducing Best Management Practices to guide development activities.
- Many felt greater education and awareness is a necessary component to both watershed education and policies and standards.
- In terms of the IRMP itself, some felt it should be bound by the watershed boundary and that it should be adaptive over time.

- There were singular mentions of the need for residential incentives, increased monitoring and enforcement to ensure private and public infrastructure is in compliance.

What excites you about the Integrated Rainwater Management Plan?

- There were multiple comments about the recognition and respect for watersheds/riparian areas, and pleased with the possibility of a watershed approach to development and water management. Some comments also related to the potential for retaining functional wetlands and collecting and maintaining baseline data.

Do you have any remaining questions or comments about the Integrated Rainwater Management Plan?

- The importance of having representation and data from the Brooklyn Creek Watershed Group was noted, as was the need for broad community awareness about the project objectives and schedule.
- The need for specific involvement from private land holders including forestry and agriculture was highlighted, and a request for ongoing meetings with stream keepers after the printed data is available.

The detailed notes from the table top discussion are included as Appendix C.

WHAT'S NEXT:

All input will now be considered in more detail and will inform further refinement of the integrated rainwater management planning process.

Throughout the summer and early fall, the project team will be pulling together information that is available and relevant to the scope of this study, and filling data gaps by conducting additional data collection. Together, this information will provide a comprehensive understanding of the current state of the watersheds within the City of Courtenay.

Another stakeholder session is planned for late Fall of 2019, to share an update based on information collected.

Further data analysis and development of strategies to maintain and improve watershed health is planned for 2020, subject to funding approval.

Information about the Integrated Rainwater Management Plan can be found at www.courtenay.ca/irmp

APPENDIX A: Workshop Participants

1. Dianne Hawkins, Comox Valley Chamber of Commerce
2. Erin Nowak, Comox Valley Conservation Partnership/Land Trust
3. Jim Boulter, Comox Valley Naturalists Society
4. Murray Little, Comox Valley Naturalists Society
5. Robyn Holme, Comox Valley Regional District
6. Darry Monteith, Comox Valley Regional District
7. Howie Siemens, Comox Valley Regional District Emergency Response
8. Rick Waldhaus, Crown Isle
9. Meaghan Cursons, Cumberland Community Forest Society
10. Dusty Silvester, Current Environmental
11. Rupert Wong, Current Environmental
12. Sandra Viney, Downtown Courtenay Business Improvement Association
13. Tanis Gower, Fernhill Consulting
14. Richard Cave, Koers + Associates
15. Monty Horton, K'ómoks First Nation
16. Carol McColl, K'ómoks First Nation
17. Chris Durupt, McElhanney
18. Bob Hudson, McElhanney
19. Steve Williams, Millard Piercy Watershed Stewards
20. Jill Hatfield, Ministry of Agriculture
21. Kathryn Clouston, Morrison Creek Streamkeepers
22. Tim Ennis, Nature Conservancy
23. Shelly Ashfield, Town of Comox
24. Marvin Kamenz, Town of Comox
25. Craig Perry, Town of Comox
26. Caroline Heim, Tsolum River Restoration Society
27. Pam Kumar, Vancouver Island Health Authority
28. Rob Crisfield, Village of Cumberland
29. Ken Roger, Village of Cumberland

Staff and consultants:

1. Lisa Butler, City of Courtenay
2. Chris Davidson, City of Courtenay
3. Ryan O'Grady, City of Courtenay
4. Angela Spence, City of Courtenay
5. Katie Hamilton, Tavola Strategy Group
6. Tim Lutic, Urban Systems
7. Jody Rechenmacher, Urban Systems
8. Glen Shkurhan, Urban Systems

APPENDIX B: PowerPoint Presentation

Integrated Rainwater Management Plan

Presentation to Stakeholder Group (June 4, 2019)



LINKAGES TO OTHER DOCUMENTS AND INITIATIVES

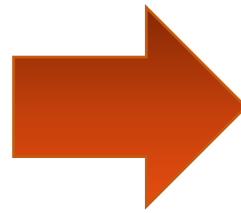


RELATIONSHIP BETWEEN LAND USE, INFRASTRUCTURE, AND ENVIRONMENT





Runoff
Conveyance



Holistic management of
systems and processes
(built and natural)



“ *historic-drainage solutions are insufficient and transfer problems downstream to the detriment of our environment and water resources* ”

1970's 1980's 1990's 2000's 2010's

drainage

Puget Sound
starts to
innovate

ecological push;
EPA laws

dawn of IRMPs

IRMP 2.0



why

do an IRMP?

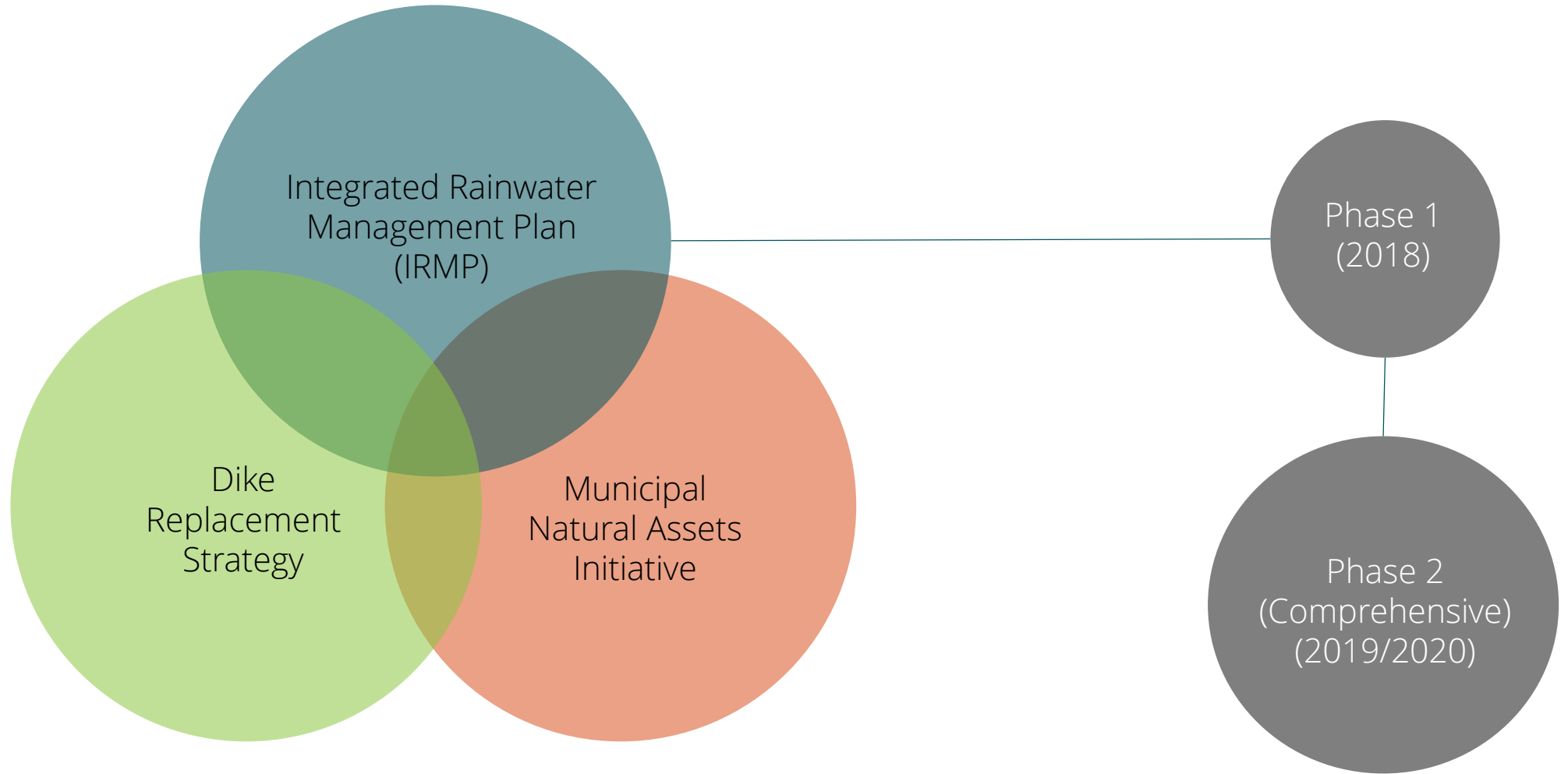
Satisfy municipal responsibility for *sustainable* service delivery

Satisfy Provincial and Federal regulations for habitat protection

A response to community *values, needs, and priorities*



LINKAGES TO OTHER DOCUMENTS AND INITIATIVES



International Council for Local Environmental Initiatives (ICLEI)
Climate Change Adaptation Strategy - Stormwater



WHY DO AN INTEGRATED RAINWATER MANAGEMENT PLAN?

“ENACT PERFORMANCE-BASED BYLAWS TO PROTECT WATERSHEDS AND RIPARIAN HABITAT AREAS, AND TO CONSIDER ALTERNATIVE STORMWATER MANAGEMENT PRACTICES.”

- The City of Courtenay's OCP

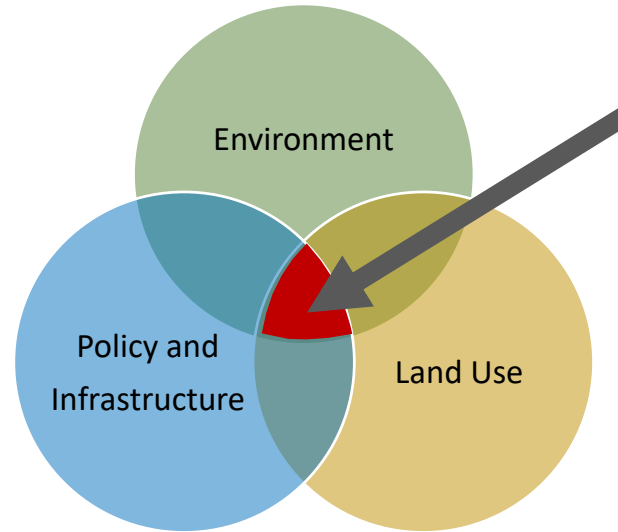
“GREEN INFRASTRUCTURE PROVISIONS SUCH AS RENEWABLE ENERGY, GREEN ROOFS AND/OR INNOVATIONS IN STORMWATER MANAGEMENT THAT COULD CONTRIBUTE TO BOTH GHG REDUCTIONS, PILOTING OF TECHNOLOGICAL INNOVATIONS AND COMMUNITY EDUCATION”

- 2010 OCP amendment



what

is an IRMP?



A comprehensive look at policy, procedures, regulations and infrastructure to guide community growth in an environmentally respectful and sustainable manner.



Must be pragmatic and achievable -
grounded in realities of implementation.

Consider implementation and operations
throughout IRMP process.



Need champions and stakeholder buy-in.

Education.

(people often don't support what they don't understand)

A living document.



how

to do an IRMP?

DATA AND INVENTORIES OF AN INTEGRATED RAINWATER MANAGEMENT PLAN



Hydrometric



Rainwater infrastructure



Hydrogeology / geotechnical



Land use



Water quality and benthic
community sampling



Riparian corridor



Biophysical
(Aquatic / Terrestrial)



ANALYSIS AND EVALUATION OF AN INTEGRATED RAINWATER MANAGEMENT PLAN



Hydrologic and hydraulic analysis



Ecological health



Natural hazard assessment



Land use alternatives



Erosion potential



Rainwater management alternatives



INTEGRATED RAINWATER MANAGEMENT PLAN PROCESS

STAGE 1

What
does
Courtenay
have?

Data
Collection

STAGE 2

What
does
Courtenay
want?

Analysis

STAGE 3

How does
Courtenay
put the
IRMP into
action?

Strategy

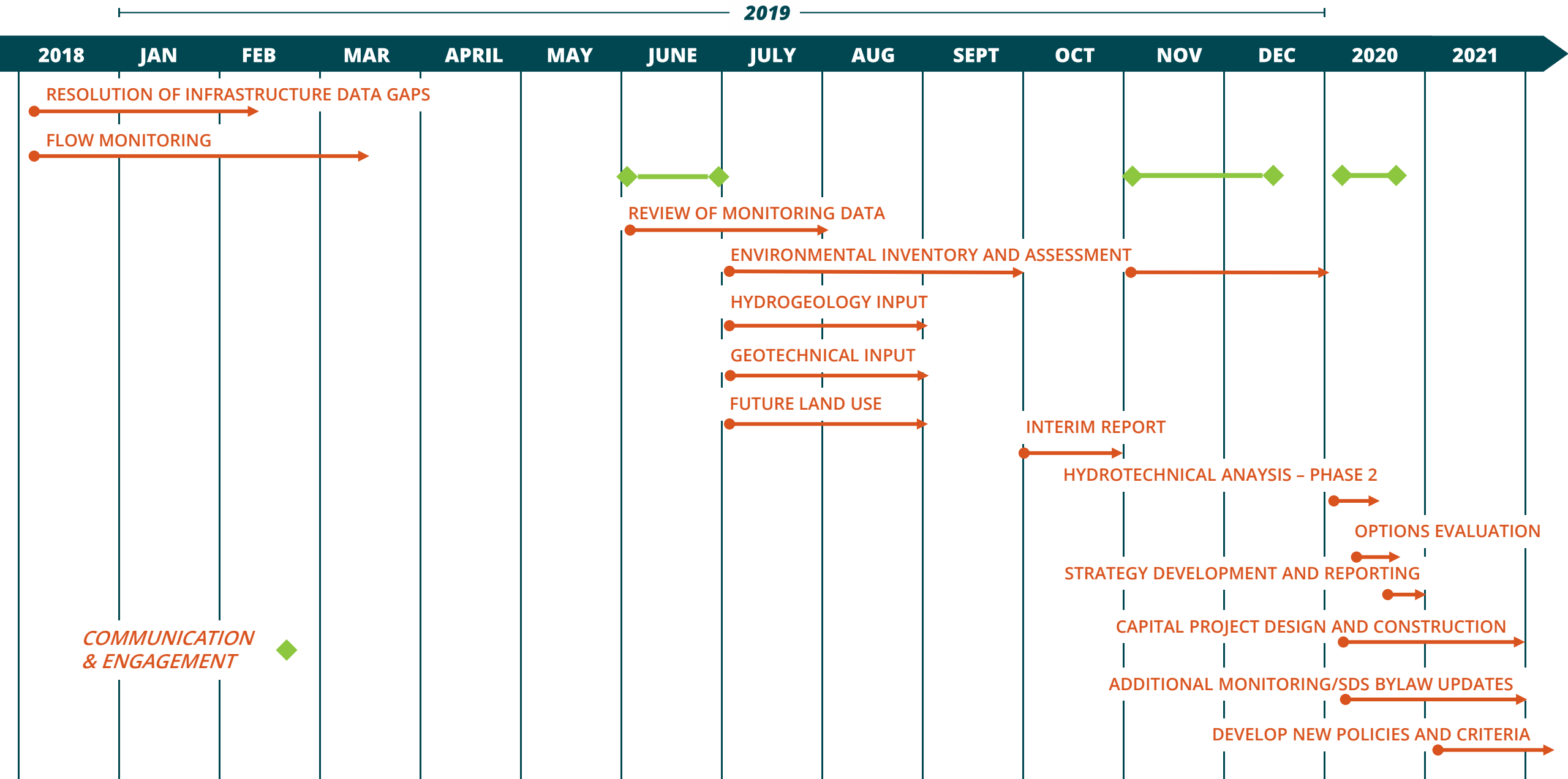
STAGE 4

How does
Courtenay
stay on
target?

Adaptive
Management



SCHEDULE AND MILESTONES



Communication and Engagement

Communications and engagement plan will engage stakeholders and public to **understand values, current issues and potential actions** that will inform an Integrated Rainwater Management Plan for Courtenay.

Consultation is integral to ensuring that an Integrated Rainwater Management Plan **meets the needs of the community**.

The engagement strategy outlines how the City will engage **community groups, key stakeholders, City staff, other governments, institutions, First Nations and the public** in the planning process.



Early engagement of 34 stakeholder groups occurred to help inform the design of the engagement process. 18 responses were received.

- 1. What are your organization's top priorities?*
- 2. How do you/your organization want to be engaged?*
- 3. Who else should we talk to?*



What We Heard

- Strong interest in better understanding condition and capacity of Courtenay's infrastructure
- Need for cross-connections with sewer system to be identified and addressed
- Place priority on health of watershed and aquifer, and marine health including source control methods
- Desire to see clear, simplified and transparent policy and guidelines regarding stormwater management on private land
- There is high interest in partnership and working together.
- Working groups, open houses and workshops were common suggestions for engagement, and a number of groups invited the Courtenay team to attend one of their meetings and present.



Questions?

What is working well in
Comox Valley in terms of
rainwater/stormwater
management?

What challenges
do you see?

What objectives/outcomes
would you like to see?

E.g. : Policies, programs,
infrastructure

What data is being
collected and where?

Thank-you

APPENDIX C: Notes from facilitated table-top discussions

TABLE #1

What's working well in Comox Valley in terms of rainwater/stormwater management?

- Stronger relationships between industry/municipalities and streamkeepers/stewardship groups
- Town of Comox – good understanding of storm infrastructure
- Brooklyn diversion working well to address erosion + protect fish habitat
- Crown Isle Shopping Centre – bio swales, permeable pavers. Seems to be working well through collaboration with Crown Isle + City of Courtenay
- Home Depot + hospital
- 5th street complete St. rainwater gardens
- Anderton corridor flooding mitigation

What challenges do you see?

- Revision to engineering standards – line up to actual goals of Integrated Rainwater Management Plan (IRMP)/other water plans
- More monitoring needed
- Linkages with other plans (city-wide and within the region)
- Better understanding of natural systems
- Changing bylaws + guidelines with the understanding that things will continue to change – realistic and achievable
- Understanding of downstream impacts/ impacts of implementing new technologies
- Continual adaptation – goal post always moving
- Change + uncertainty for development community
- Tendency for these plans to be too far reaching – focus on areas that need storm water management, realities of implementation
- Division between sub divider, developer, individual home owners – rules need to apply across the board
- Sea level rise – hard time draining water/problems with outfall function

What objectives/outcomes would you like to see? e.g. policies, programs, infrastructure

- Capital projects related to storm water infrastructure
- Residential incentive programs to encourage residents – water barrels, rain gardens
- Disconnecting roof leaders (comes with challenges)
- Consistency throughout jurisdictions on managing stormwater (bylaws, incentive programs, etc) – specifically in overarching objectives
- Consistency in Intensity Duration Frequency (IDF) curves across jurisdictions?
- Consistency in assumptions used in stormwater modeling/development of stormwater plans
- City to publish pre-development flows for various watersheds
- Town of Comox – get Brooklyn creek back to predevelopment flows – requires coordination with City of Courtenay
- Recognition that historical existing issues are expensive/extensive to address – impact to developers to fix retroactivity

What data is being collected and where?

- Brooklyn Creek – Ministry of Environment is collecting data
- Ministry of Transportation and Infrastructure collecting regional data (culverts, etc)
- Airport no longer collecting hourly rain data

- City needs more rain data
- IslandWeather.ca (elementary schools collect rain data – can download 1 min rain data)
- Flow data + rain data – priority for development community
- Town of Comox – future development in North East – coordinate equipment/monitoring with other jurisdictions?
- Data accessibility – OPEN DATA – each local gov.t making data easily accessible (website?) to developers/interest groups

TABLE #2

What's working well in Comox Valley in terms of rainwater/stormwater management?

- Collective interest
- Input from active stewardship groups – full coverage coordinated, funding from Real Estate Foundation of British Columbia (REFBC)
- Hydro dam to control flows
- Future initiatives (Kus-kus-sum) – airport lagoons, Brooklyn creek
- Future development providing opportunity to deal with issues
- Detention pond at Walmart (functional)

What challenges do you see?

- Shellfish poisonous
- Ideas for stormwater management often not implemented to save costs (bare min)
- Cumulative impacts
- Historic legacy of inappropriate plan development
- Channelization of river – flooding
- Lag in implementing best management practices (BMPs) from engineering – previously restricted by bylaws (outdated) and design standards
- Use of historic IDF curves
- Challenges in requiring home owners/private property to maintain onsite systems
- Lack of public knowledge of watershed function

What objectives/outcomes would you like to see? e.g. policies, programs, infrastructure

- Edible shellfish
- Enhanced buffers on riparian areas
- Update Subdivision and Development Servicing (SDS) bylaw with BMPs – not just bare minimum
- Consistency in policy and activities between jurisdictions (sub-basin plans/coordination)
- Bylaw enforcement and ensuring proper maintenance of infrastructure (private + city)
- Adaptive IRMP that can use new info as it is improved
- Focus on infiltration rather than detention
- Land acquisition to protect key assets

What data is being collected and where?

- Morrison creek – headwaters flow data
- Upper Millard Piercy – flow data
- Comox Valley Regional District (CVRD) – Comox lake watershed
- Weather station on school in Cumberland
- Habitat assessments by stewardship groups (most watersheds)
- CVRD – grant funding to collect data on aquifers
- Eel grass mapping – protect watershed
- Water turbidity (Vancouver Island Health Authority (VIHA)) and reported illness

- Migrated salmon (in/out) – Department of Fisheries and Oceans (DFO), stewardship, K’ómoks First Nation (KFN)
- Hydro – flow, fishery

TABLE #3

What’s working well in Comox Valley in terms of rainwater/stormwater management?

- Anfield Apartments
 - Underground infiltration galleries
 - Car park runoff
 - i) managed on-site
 - ii) estuary border
 - Watershed group had interaction with developer
- Hospital
- Water storage underground
- Demonstration projects
- Getting groups together (Communications + Engagement)
- Using knowledge of groups
- Riparian buffers acquired around Arden Area – positive
- Tree Bylaw – related to Urban Forestry – true that it exists – need to revisit to be effective on private land
- Revisiting strategies
- Walmart outlet to estuary – Wet land before estuary – 2 stage

What challenges do you see?

- Arden area west Courtenay new developments surrounding Piercy Creek
- Non-functional storm water/fish habitat, Piercy Creek
- Planners + developers to work beyond the site
- Front loading of engagement prior to development, no follow up
- Council not understanding on what’s on ground
- Effectively communication challenges (staff, council)
- Municipality planning- big picture- before developments happen
- Municipal needs to get infrastructure in place before development occurs
- What is bare minimum – not adequate
- Lack of capacity- municipality to review/implement
- Issue keeps getting passed to next initiative- i.e. SDS- not address – will be Official Community Plan (OCP)
- Source control- list of options needed
- Ponds need to be planned out
- City needs to know where infrastructure is/maintenance
- Lack of design criteria
- Timeline- slow to implement

What objectives/outcomes would you like to see? e.g. policies, programs, infrastructure

- No backcheck/monitoring for success of development/storm water strategies- need to implement post development
- More interaction back with check designer/developer/streamkeepers/municipal – on an ongoing basis
- Water programs for steward to implement- i.e.: Nanaimo- feed into provincial database
- Plan laid out macro + micro scale – certainty

- Monitoring pre + post development
- Watershed boundary for IRMP
- Collaboration - don't duplicate process
- 30 metre riparian buffer
- All urban streams with function riparian areas
- Big picture – updated SDS with clear standards that maintain nat. hydrograph from pre development
- Discuss what pre-development means
- Impervious targets

What data is being collected and where?

- Province hydrometric station between Willemar and 1st Street
- Flow monitor request list has been sent to the City's Public Works Department - streamkeepers put problem areas on map and identified where stream health needed monitoring
- Streamkeeper data – Comox Valley Land Trust requested 10-12 monitoring locations from Public Works
- Desperate need for central data repository - follow Regional District of Nanaimo strategy for working with stewardship groups for data collection and compilation
- Morrison Creek - work in headwaters veg + aquatic species
- Invasive species person in town (prov)
- Air park invasive species - 20 years data on website – Comox Valley Nature
- Some stations through CVRD measuring water quality data
- Timeline info circulated to group, ie: no input in flow stations (2018)

TABLE #4

What's working well in Comox Valley in terms of rainwater/stormwater management?

- Awareness + education
- Importance of water sheds
- Development Permit Areas + regulatory tools – Cumberland
- Water balance model
- Shared watershed-inputs
- Puntledge park
- Watershed model – schools
- Partnership + collaboration

What challenges do you see?

- Existing buildings – grey water usage
- Multi-jurisdictional watersheds
- Private forestry
- Lack of water in streams
- Maintenance – Ministry of Transportation and Infrastructure responsibility?
- Poorly done development – retroactive
- Where water goes – why?
- Flash/drought – Climate Change
- Water quality – perspectives
- Lack of awareness
- Agricultural lands – can be part of solution
- Addresses future growth per Regional Growth Strategy

What objectives/outcomes would you like to see? e.g. policies, programs, infrastructure

- Watershed mapping as public education tool
- Implementation – multiple levels
- Beyond Courtenay
- Integrated watershed protection – Regional function
- Public engagement monitoring – informal tracking
- Greater awareness + education of public
- Water security – retention
- Story telling + place making
- Standardization of data collection – integration of knowledge holder data

What data is being collected and where?

- Tsolum temp + groundwater monitoring – flows, fish migration
- Proper functioning condition – upper watershed
- River forecast
- CVRD water demand model
- CVRD coastal hazards – SLR, flood construction, coastal erosion, mapping
- Snow/rain monitoring – upper watershed. Aquifer impacts, wells, wetlands, ponds..., CVRD, HAKAI Institute, Vancouver Island University (VIU)
- LiDAR – GeoBC- August
- Wetland performance – Cumberland
- Look to other successes