
Summary of Proceedings
Creston-Kootenay Lake Community Climate Action Meeting
November 29, 2017

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1. Introduction

On November 29, 2017, the Columbia Basin Trust's Climate Action Program hosted a day-long community climate action meeting for 39 participants representing local and provincial government, business, agriculture, social, environment, and non-profit sectors in the Town of Creston and RDCK Electoral Areas A, B and C ("Creston-Kootenay Lake"). This report provides a summary of the proceedings.

The goal of Columbia Basin Trust's Climate Action Program (CAP) is to support communities in the Basin to reduce greenhouse gas emissions and adapt to the impacts of climate change. The program's objectives are to:

- help community organizations initiate and carry-out projects, at local and regional scales, to reduce greenhouse gas emissions and adapt to the impacts of climate change;
- carry out research projects that help enable effective community-based climate action; and
- improve awareness among Basin residents, communities, and businesses about climate change and what they can do to reduce greenhouse gas emissions and adapt to climate change impacts.

The community climate action meetings provide an opportunity for a diverse group of community leaders to:

- receive up-to-date climate science and climate change projections for their local area;
- engage in local, action-oriented conversations about climate change; and
- identify opportunities to initiate greenhouse gas reduction and climate adaptation projects to meet the local challenges and opportunities of a changing climate.

Funding for climate action projects is available following community climate action meetings (see Section 10 for more information).

The program's mandate also includes facilitating regional-scale climate change mitigation and adaptation projects in partnership with communities and other organizations.

2. Community Adaptation and Mitigation Scan

In preparation for the meeting, the Climate Action team completed a scan of local climate adaptation and greenhouse gas mitigation plans and activities. The following tables present a snapshot of key local plans and actions undertaken by the Regional District of Central Kootenay (RDCK), the Town of Creston and the Yaqan Nukiy Band in the Creston-Kootenay Lake area.

Table 1: Climate Adaptation-related plans and activities by RDCK

Date	Asset
2017	Inventory and risk prioritization of flood, debris-flood and debris-flow hazards
2016	Erickson Water Smart Action Plan
2013	Climate Adaptation Starter Action Plan
2013	Flooding and Geotechnical Hazard Inventory and Gap Analysis
2011	Agricultural Plan
	Bylaws addressing floodplain management, hazard lands, natural environment, fire management
	Low Flow Toilet Rebate Plan

Table 2: Greenhouse gas mitigation plans and activities by RDCK

Date	Asset
2017	Senior Energy Specialist
2016	Strategic Community Energy and Emissions Plan (SCEEP)
2014	Installed Creston landfill gas flare
2013	Comprehensive land use bylaws
2013	Kootenay Energy Diet
2010	Integrated Community Sustainability Plan – SustainABLE
2010	Corporate GHG Reduction Plan
2009-2017	Corporate Energy Conservation Reserve Fund
2009	Carbon Neutral Kootenays

Table 3: Climate Adaptation-related plans and activities by Town of Creston

Date	Asset
2017	Official Community Plan: land use policies addressing water supply, climate change, development permit areas (DPAs)
2016	Creston Wildfire Protection Plan (updated from 2006)
2016	Water Smart Action Plan
2015	Updated IDF curves to reflect projected climate changes
2015	Climate Adaptation Starter Action Plan
2013	Integrated Community Sustainability Plan
	Bylaws addressing floodplain setbacks, flood construction levels and drainage

Table 4. Greenhouse gas mitigation plans and activities by Town of Creston

Date	Asset
2017	Official Community Plan: Energy and GHG chapter
2016	Strategic Community Energy and Emissions Plan (SCEEP): <ul style="list-style-type: none"> • Target of 10% GHG reduction by 2020 (from 2007 levels) • Target of 20% GHG reduction by 2030 (from 2007 levels) Focused on land use, transportation, buildings, solid waste and increasing awareness 4 electric vehicle charging stations
2013	Integrated Community Sustainability Plan

3. Historic Climate and Future Projections

Over the last century, the average annual temperature in the Basin has increased by 0.7°C to 1.7°C, with winters warming more than summers. The amount of rain and snow has increased by as much as four percent per decade in some parts of the Basin, and more winter precipitation is falling as rain at lower elevations. By the 2050s, average seasonal temperatures could be 2.4°C warmer than in 1961 to 1990, with winters up to 15 percent wetter and summers up to 14 percent drier.

A difference of one degree in mean annual temperature may not seem significant at first glance, but it is. To illustrate, imagine a hypothetical year with temperatures 10°C warmer than usual for a period of 35 days, and temperatures that are exactly average for the rest of the year: that year would still be less than 1°C warmer than normal. Another way to understand the significance of a few degrees is in the difference between global mean

annual temperatures when global ice sheets reached their maximum during the last ice age as compared to present day. This difference is 4 °C.

Looking ahead, Basin communities can expect to experience warmer, wetter winters; hotter, drier summers; and more extreme precipitation. The historic climate and future projections for Creston-Kootenay Lake are presented in Table 6.

Table 6: Historic climate and future projections

Climate Variable	HISTORIC CLIMATE (1917-2016) FOR SOUTH CENTRAL BASIN		CRESTON-KOOTENAY LAKE FUTURE PROJECTIONS 2041 TO 2070 ¹	
	100-year trend (change per century)	50-year trend (change per century)	RCP4.5 ²	RCP8.5 ²
Mean Annual Temperature	+1.7°C	+3.2°C	+2.7°C	+3.2°C
Mean Winter Temperature	+2.2°C	+2.6°C	+2.8°C	+3.2°C
Mean Summer Temperature	+1.5 °C	+3.1 °C	+2.5°C	+3.5°C
Mean Annual Precipitation	+194 mm	+49 mm	+7%	+3%
Mean Winter Precipitation ³	+7 mm	-77 mm	+10%	+10%
Mean Summer Precipitation	+56 mm	-30 mm	-14%	-16%

1. Projected changes are relative to a 1961-1990 baseline

2. RCP 4.5 represents significant global greenhouse gas emission reductions beginning in the 2040s; RCP 8.5 represents a business-as-usual emissions scenario.

3. This includes precipitation falling as both rain and snow

Additional climate projections for Creston-Kootenay Lake:

- Annual number of days above 25°C: 29 to 36 more days above 25 °C compared to the 1961-1990 baseline period, which averaged 61 days per year (RCP4.5/8.5).
- Maximum 1-day precipitation +24-26% (RCP4.5/RCP8.5), relative to a 1961-1990 baseline of 21.5 mm.

4. Local Observations of a Changing Climate

Meeting participants were asked to share any local observations of impacts or changes that may be associated with a changing climate:

- Heat can drive increased agricultural productivity.
- 20 years ago, forest, undergrowth and brush were green and lush. Now there is more dirt and bare ground and dead under-brush...which acts as fire fuel.
- Second grain cuts are stalky - weather extremes/shifts are affecting crop quality.
- Less insects means less pollination. E.g. Empty buckwheat pods.
- Variability in timing for fruit maturation - very unpredictable timing.

- Okanagan, Washington, Creston all matured at the same time this year, as well as overlap in varieties.
- New insects affecting crops (and staying/breeding).
- Water availability is more variable:
 - 2015 June flows on Arrow Creek were as low as is normal in September.
 - 2017 June flows were very high.
- Winter is driving summer water availability.
- We do have a lot of historic variability...need to be careful not to confuse weather variability and climate trends.
- Fire interface is more present...forested private lands have significant fuel load/fire risk that needs to be addressed - this is a community issue.
- Seasons are blurring from an Emergency Management perspective. E.g. Flood and fire back to back.
- Frog/amphibian population seems to be declining.

5. Basin and Community GHG Emission Profiles

A series of Basin and local greenhouse gas emission profiles are provided as a community resource. Table 7 provides insights on global, national, provincial and Basin emissions.

British Columbia emitted 60.9 Mt CO₂e¹ in 2015. BC's per capita emissions were 14 tonnes in 2014. Basin GHG emissions in 2012 were 4.16 Mt CO₂e, or 25.7 tonnes per person.

Table 7: Total and per capita GHG Emissions

	Canada	British Columbia	Columbia Basin	Global
Total GHG emissions Mt CO₂e/ (year)	722 (2015)	60.9 (2015)	4.16 (2012)	35,864 (2013)
GHG emissions per person in tonnes CO₂e/ (year)	20.1 (2015)	13.0 (2015)	25.7 (2012)	5.0 (2013)

¹ Mt CO₂e. is short for megatonnes of greenhouse gases, expressed as carbon dioxide (CO₂) equivalent.

Figure 1: GHG Emissions in the Columbia Basin (2012)² – 4.16 Mt CO₂e

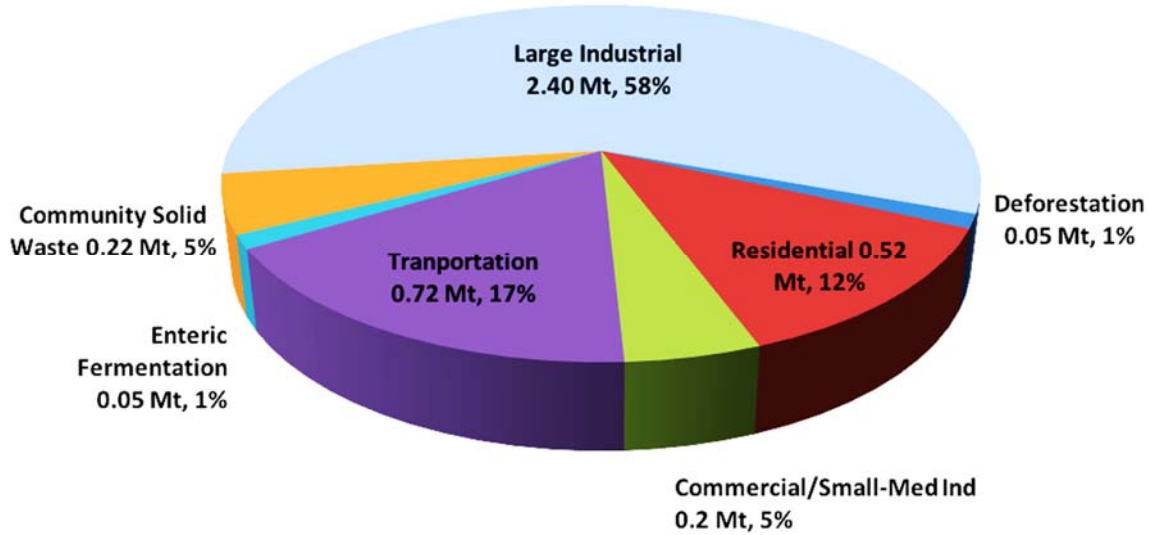
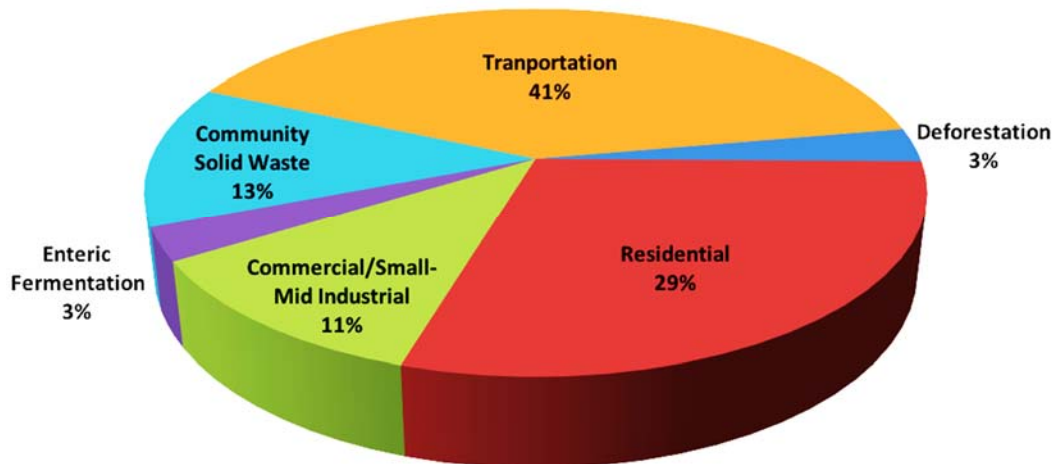


Figure 2: Community-based GHG Emissions in the Columbia Basin (2012)¹



² Primary source: CEEI 2012 (<http://www2.gov.bc.ca/gov/content/environment/climate-change/data/ceei>)

- Source for transportation emissions data: CEEI 2010
- Source for industrial emissions data: CEEI 2012, calculated for Columbia Basin Trust Region

Figure 3: Community GHG Emissions (2012) for the Town of Creston and RDCK Areas A, B and C

Creston Total Emissions: ~40,000 tCO₂e

RDCK Area ABC Total Emissions: ~46,000 tCO₂e

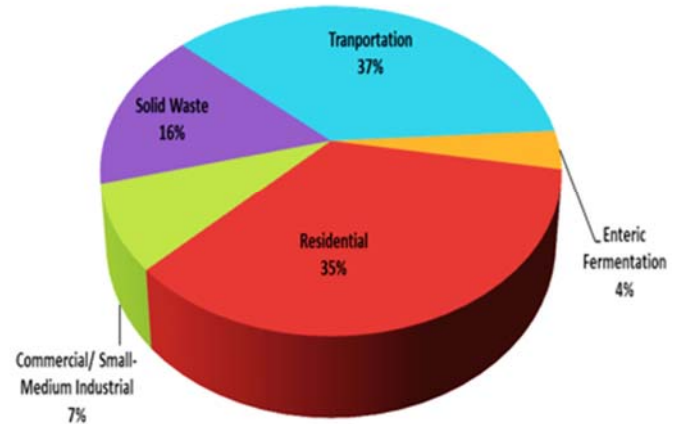
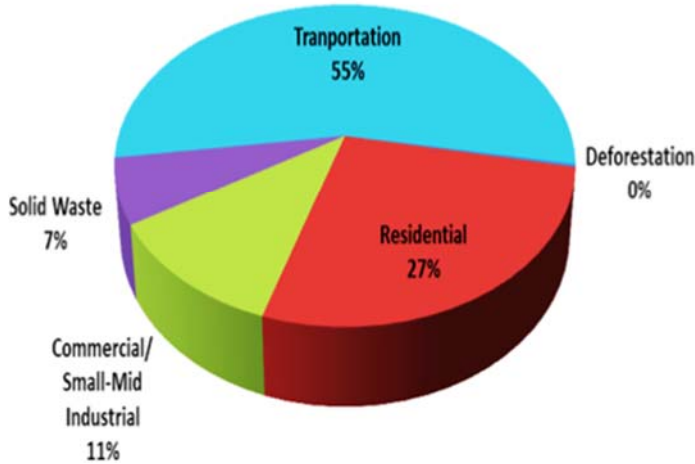


Figure 4: Transportation Emissions (2007) for the Town of Creston and RDCK Areas A, B and C

Creston
Total Emissions: ~22,000 tCO₂e

RDCK Area ABC
Total Emissions: ~17,000 tCO₂e

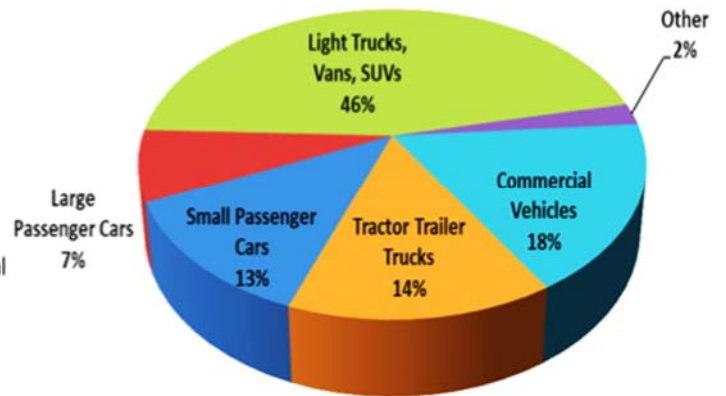
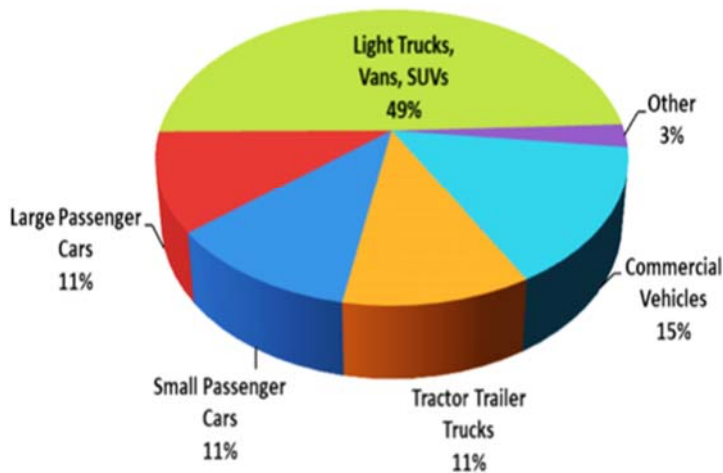
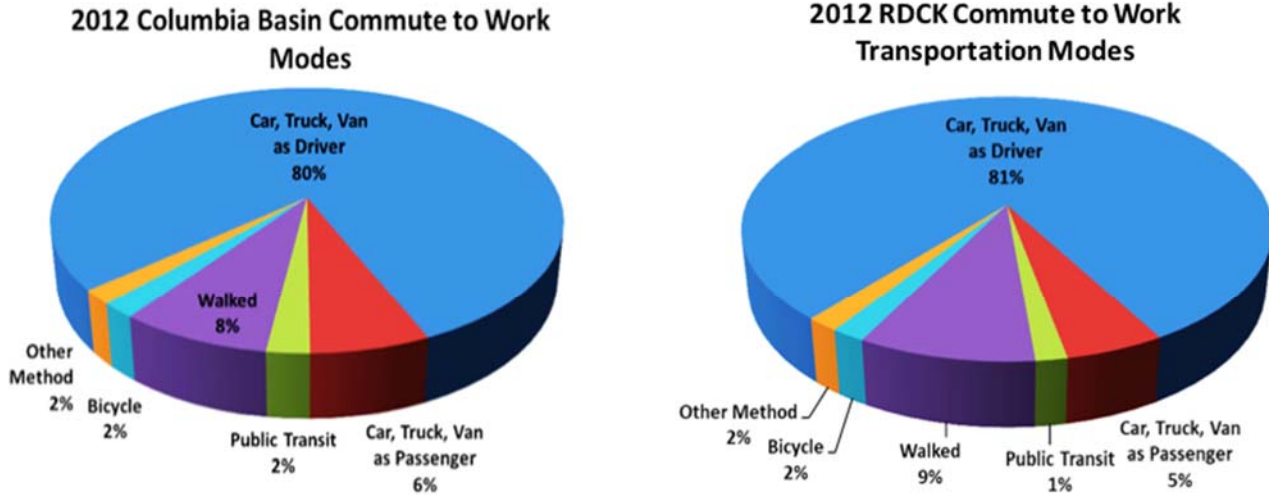
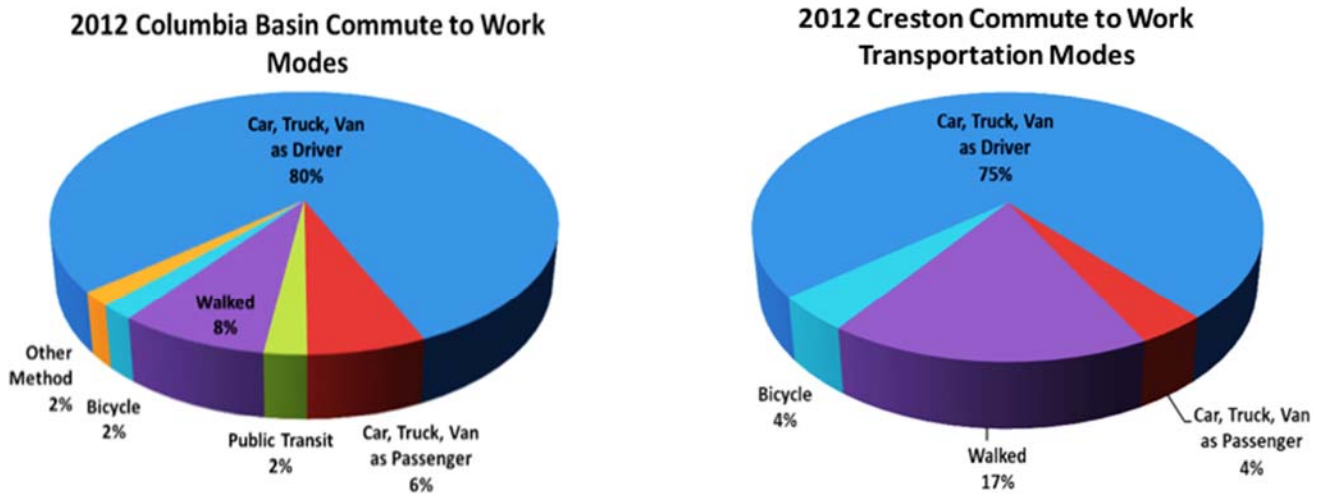


Figure 5: Commute to Work Modes for Columbia Basin and RDCK Areas A, B and C



Source: 2012 CEEI data

Figure 6: Commute to Work Modes for Columbia Basin and the Town of Creston



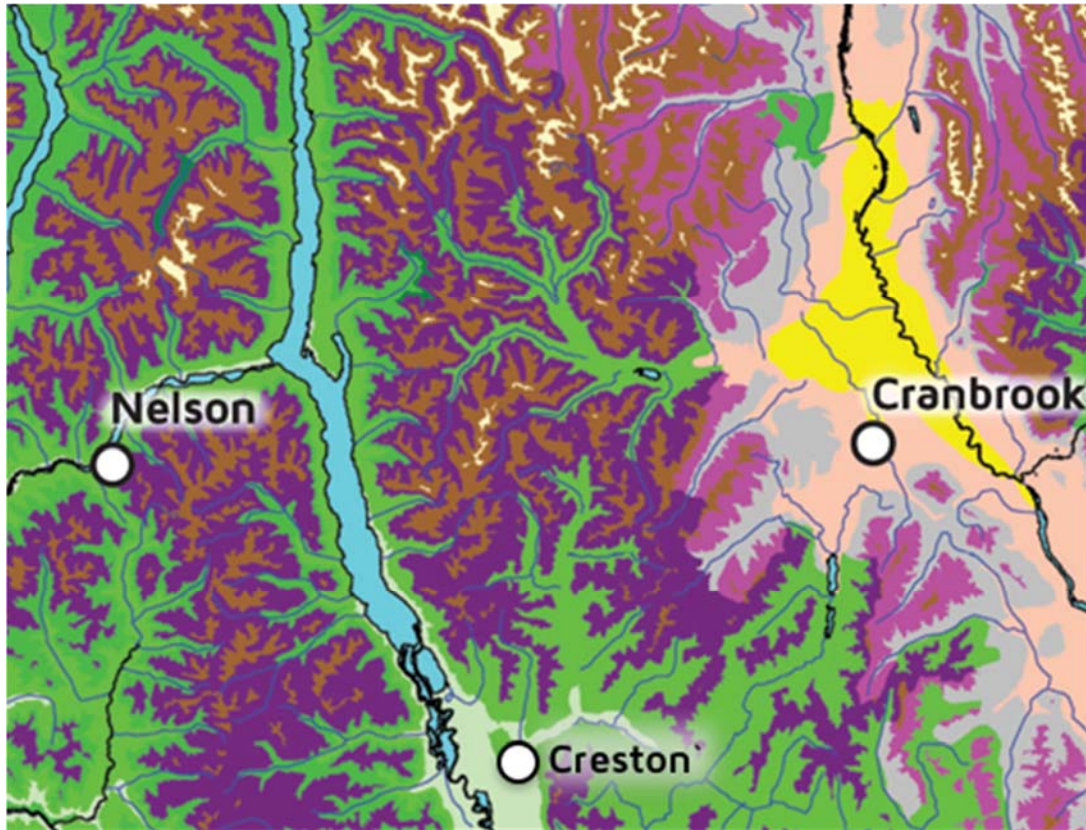
Source: 2012 CEEI data

6. Current Ecosystems and Future Bioclimates

Climate change directly impacts current ecosystems and species distributions. Bioclimate modeling has been completed for the Basin based on three possible scenarios of climate conditions in the 2080s.³ The scenarios provide insights on the types of ecosystems that may be supported under future climate conditions. These are illustrated in Figures 7 and 8. Current ecosystems have evolved in response to long term historic climate conditions and will not change quickly or seamlessly from one bioclimate regime to another. It can be expected that significant departures from historic climate conditions will cause significant stress on existing ecosystems.

³ Utzig G. et al. 2012. West Kootenay Climate Vulnerability and Resilience Project. See www.westkootenayresilience.org for more information.

Figure 7: Current ecosystems and bioclimates in Creston-Kootenay Lake area



Credit: G. Utzig, Kutenai Nature Investigations Ltd.

Ecosystem Legend for Figures 7 and 8



















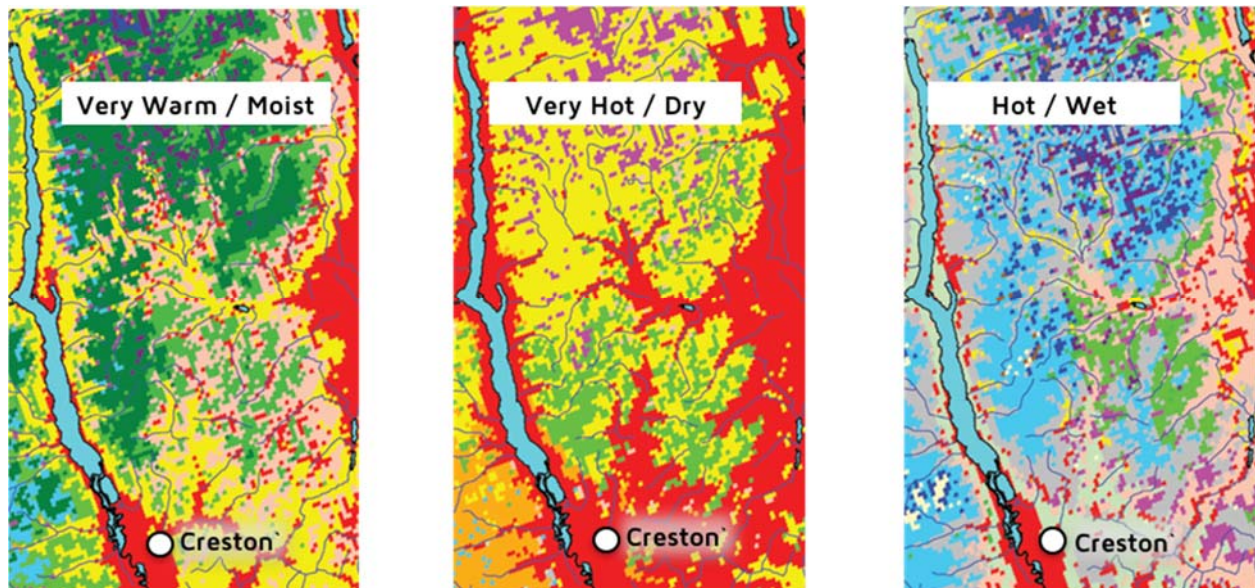
 Alpine	 Coastal western hemlock	 Dry interior cedar-hemlock
 Alpine parkland	 Transitional coast/interior hemlock	 Grand fir/Douglas-fir
 Boreal low elevation	 Wet montane/sub-boreal spruce forest	 Wet Douglas-fir
 Wet subalpine forest	 Dry montane/sub-boreal spruce forest	 Dry Douglas-fir
 Dry subalpine forest	 Wet interior cedar-hemlock	 Ponderosa pine savannah
 Coastal mountain hemlock	 Moist interior cedar-hemlock	 Grassland/steppe

Figure 8: Three scenarios for future bioclimates in the 2080s for Creston-Kootenay Lake area



7. Growing Together on Climate Action in Creston-Kootenay Lake Area

Meeting participants shared the following visioning ideas in a brief plenary conversation in which we asked how a low carbon future might enhance quality of life in this region:

- If we have enough water, we'll be able to grow more food.
- Our optimism is beneficial, and supports action.
- Increased population health (cleaner air, more active)
- Innovation and leadership are attractive qualities in a community.
- We are being forced to get more value out of forestry.
- We have to be collaborative and innovative to have a secure forestry future.
- Doing things on a personal level equals more optimism which equals a healthier community (we need to "chat it up").
- More integrated local economy and job development.
- 80% of chronic disease in lifestyle related.
- Active transportation etc. supports a healthy community.
- Climate change is a social challenge. Communication and outreach builds awareness. Material change starts with mental change.

8. Summary of Climate Adaptation Opportunities by Sector

Meeting participants were invited to identify local climate opportunities, actions and strategies to adapt to a changing climate in the Creston-Kootenay Lake region. Participants hosted their own conversation organized by sector, and were asked to focus on action in the areas of wildfire, flooding, community water supply, and “other topics related to your sector”

a. Agriculture

Opportunities
Wildfire
Need emergency preparedness <ul style="list-style-type: none"> • livestock
FireSmart <ul style="list-style-type: none"> • individual level • landscape level
Community education <ul style="list-style-type: none"> • priorities
Hobby vs commercial - assistance level available
Community Water
Efficient irrigation and water storage (personal, farm and community).
Using what we have more effectively. E.g. waste water separate water for agriculture
Separate water system: <ul style="list-style-type: none"> • agricultural • treated water
Snowpack variability
Metering water
Education
Incentive program
Flood
Diking <ul style="list-style-type: none"> • maintenance • construction
Flood plain mapping development
Land use planning
Use agricultural land differently (flood land agriculture)
Run off protection
Mudslides (erosion) <ul style="list-style-type: none"> • prevention • planning
Planning for flooding <ul style="list-style-type: none"> • evacuation • relocate crops
Wetlands for capturing flood waters
Other topics
Need communication and education in all areas.
Pest control <ul style="list-style-type: none"> • pest resistant crops • early detection

Drought resistant crops
New crop opportunities
Solar for farm energy
Capture sunlight to meet energy demands
Infrastructure to protect crops from climate extremes.
More accurate weather forecasting.
More heat seasonal shift.
Farming is at the leading edge of climate change.
Adapting cropping plans to longer term climate change.
Opportunities from temperature increases may be outweighed by variability.

b. Natural Resources, Tourism & Recreation, Environment

Opportunities
Wildfire
Update KBLUP (Kootenay Boundary Land Use Plan) to allow for wildfire mitigation and strategic fire-breaks at a landscape level. <ul style="list-style-type: none"> • accept significant changes or fractures to landscape • Big fire breaks
Need to develop existing and new markets for wood waste.
Need value of wood waste <ul style="list-style-type: none"> • options on existing markets vs creating new markets
FireSmart <ul style="list-style-type: none"> • use insurance as incentive for property owners • individual homes and properties • regional chipper to chip and spread
Regional chipper for wood waste.
Landscape level wildfire mitigation plans - RDCK
Community Water
Education - share knowledge between sectors
Education - knowledge of who has access to each other's water source and how activities affect each other.
Adapt regulations to a changing climate.
Planning phase must incorporate climate change projections
Restoration of vegetation wherever possible <ul style="list-style-type: none"> • sites that have potential to be re-vegetated
Flood
Update hazard maps
Update existing infrastructure: <ul style="list-style-type: none"> • culverts • decommission roads
Dike plans/regulations/maintenance to be updated
Revisit dike maintenance act: <ul style="list-style-type: none"> • addresses where people can live
Need to protect/enhance ecological storage to mitigate flooding.
Construction of small wetlands on private property
Update response plans
Retain absorbing surfaces in properties

Replace old culverts and pipes with larger sized ones.

c. Infrastructure and the Built Environment

Opportunities
Wildfire
FireSmart principle <ul style="list-style-type: none"> • promote • educate
Replanting of non-fuel based plants. E.g. juniper is a fire starter.
Plant species choice program (like invasive species)
Constructed wetlands as fire breaks, water supply
Communication - yard and garden waste and truck pick up
Link to insurance
Community Water
Water and water supply: <ul style="list-style-type: none"> • respond at different scales, e.g. regional to neighborhood to residential • more education and skill development for water retrofits in homes.
Non-potable irrigation
Finding alternate water sources (surface and groundwater)
Residential grey water catchment and diversion
Water metering (meters publicly funded)
Asset mapping of existing water resources, e.g. duck lake.
Larger storage facilities to support Arrow Creek
Protecting Arrow creek watershed
Flood
Storage of water <ul style="list-style-type: none"> • amount of impermeable surfaces • support homeowners to understand flooding
Need storage of liquid water for emergency purposes <ul style="list-style-type: none"> • Built wetlands for flood, fire, drought
Decrease permeable surfaces
Constructed wetlands to handle extreme storms/flooding. Link to farm land for irrigation.
Disconnect roof leaders from storm system.
Manage stormwater as a utility - charge it to the percentage of permeable surface on a given property.
Other topics
Truck sharing
Curbside pick up
Need collaboration among solid waste service providers. <ul style="list-style-type: none"> • E.g. waste/resource recovery ambassador. • to reduce confusion
Good communication about waste events at recycling depot
Twitter feed: <ul style="list-style-type: none"> • impact of garbage/recycling contamination • good news stories • upcoming events • services

Biodiesel - collect waste oil to refine as biodiesel <ul style="list-style-type: none"> • Creston grows its own fuel • Clean fuel
Reduce contamination - education program

d. Community, Economy and Quality of Life

Opportunities
Wildfire
Think outside the box and look at value added opportunities, e.g. job creation.
Biomass plant in Creston Valley
Collaboration - big picture not just money. It's jobs/tax base etc.
Community Water
Use financial link, e.g. water meters
Harvest water e.g. from floods.
Flood
Tree harvest - can create/exacerbate floods
Water meters
Harvesting water for later use.
Creston Wildlife <ul style="list-style-type: none"> • wetlands area • flats snowmelt now • tourism potential
Policy regulation <ul style="list-style-type: none"> • tree harvest equals flooding potential
Other topics
Need to address communication challenge - support shift from short-term to long-term thinking.
Progressive means attractive for residents.
Job creation - sacrifice vs opportunity is economic transition.
K-12 curriculum <ul style="list-style-type: none"> • start here to foster the mind-shift. • to be always state of mind. E.g. littering, reduce, participation
Biomass plant in Creston Valley
Need to create a collaborative vision (shared narrative) that is future orientated.
Age friendly communities <ul style="list-style-type: none"> • need to be aware even with preparedness • designing for all
Economic recovery strategy needed <ul style="list-style-type: none"> • learning from: High River, Caribou • vulnerable people
Personal <ul style="list-style-type: none"> • taking action • tangible implications • short memories, e.g. fire season
Patience - good things take time
Changing social perceptions <ul style="list-style-type: none"> • e.g. education and ownership of the issues/tangible.

- communication challenge - think differently how you live.

9. Summary of Emission Reduction Opportunities by Theme

Meeting participants were invited to identify local opportunities, actions and strategies to reduce greenhouse gas pollutants in the Creston-Kootenay Lake region. Participants had the opportunity to participate in discussion at each of the three topic tables. Their comments are summarized below.

a. Low Carbon Transportation

Opportunities	Potential Partners
Compressed natural gas - renewable	Fortis
Walking <ul style="list-style-type: none"> • cost benefit • health benefit • connectivity 	CBT finding commuter trails Interior Health
Rail <ul style="list-style-type: none"> • lobbying for commuter trains • cargo - safer roads 	
Active transport <ul style="list-style-type: none"> • bottlenecks - footbridge • connectivity • old railroad • safe routes • cycle lanes - driver education 	Trail Society Rotary Wildsight LKB
Rideshare	
Car share <ul style="list-style-type: none"> • insurance industry 	
Decentralized services	
Public Transport - more	
Biofuels <ul style="list-style-type: none"> • option for burning clean fuel • vegetable oil • crops for fuel 	
Change behaviour <ul style="list-style-type: none"> • Education • What is cool • Reward incentive - carrots and sticks 	
Monster truck mentality <ul style="list-style-type: none"> • see above regarding "change behaviour" • education • money • truck share • engine tax • micro insurance 	

• mobility policing	
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b. Towards Zero Waste

Opportunities	Potential Partners
Communication about waste diversion "where does it go?"	
Education - make the easiest thing to do, the right thing to do.	
Pay money for convenience. E.g. plastic and garbage bags.	
Existing waste diversion services aren't being used to full potential.	
Need to consider risk of dumping. What's the incentive not to dump?	
Innovative waste collection and monetization.	
Inventory of waste products to support re-purposing.	Mills, brewery, agriculture, industry, etc.
Turn waste into jobs. Innovation by employment.	
Construction waste diversion and "picking" should be encouraged and allowed	
Don't reinvent the wheel. E.g. Swedish sawmills.	
Encourage town of Creston to invest in innovative waste treatment.	Town of Creston
Commercial scale composting	
Industrial waste, e.g. vehicle waste, needs to be sorted.	
Ban plastic bags	
Turn plastic waste into products. E.g. plastic fence posts.	
Re-mat (mattress recycling company)-> mattress diversion	
High tech app to identify waste from phone (McGill University)	
Gleaners <ul style="list-style-type: none"> • E.g. non-recyclable toys • need to expand recycling of complex materials 	
Weekly recycling, bi weekly garbage	
Waste screening	
Curbside or other models for composting	
Municipal waste diversion	
Consider decentralized composting	
Recycling as a function of emergency preparedness.	

More sustainable "BHU" during times of crisis.	
Livestock mobile compost <ul style="list-style-type: none"> • emergency - farm animals mass carcass disposal plan 	

c. Clean Energy Leadership

Opportunities	Potential Partners
Natural gas to biomass-based fuel <ul style="list-style-type: none"> • use chips, shavings, sawdust • creating a market for local/regional wood waste 	Canfor Mill
Full life cycle analysis of wood waste needs to take into account cost of wildfire.	
Communications and education on clean energy, options, and easily available expertise.	
Increase visibility of solar, ground source heat pumps.	
Renewable energy scan for area: <ul style="list-style-type: none"> • more solar installations (residential and commercial) • Remove barriers • Create power source parity • Disincentives to net metering (advocacy) • Use landfill gas to produce energy (and wastewater treatment plant flare) • Diversity energy sources -> localize solutions, distributed energy. 	

10. Climate Action Project Ideas

The following ideas were identified during the meeting's final plenary session. The project ideas are organized according to "readiness" for action and potential eligibility for funding under the Climate Action Program.

If you are a champion for one of the projects identified below as potentially eligible for funding through the Climate Action Program, please contact Meredith Hamstead to discuss is as soon as possible: climateaction@cbt.org

**Organics Diversion projects may require engagement with the RDCK in the context of the ongoing Resource Recovery planning process.

***Eligible wildfire related projects would require a community wildfire risk mitigation outcome.

Timeframe	Projects that may be eligible for Climate Action Program funding	Other Projects
Ready for action in 2018	<ul style="list-style-type: none"> ● Water Smart 	<ul style="list-style-type: none"> ● BC Non-Profit Housing Association / CBT energy retrofit program for non-profit housing ● Energy Conservation Assistance Program (ECAP) low income home energy assessments for East Shore (CEA/RDCK) ● Sign board at recycling depot advertising next HazMat pickup day ● Regional Residential retrofit program ● Residents invited to communicate interface fuel treatment priority areas to Community Forest or to Canfor
Ready for action in 2019	<ul style="list-style-type: none"> ● Wayfinding for municipal, and sub-regional low carbon commuting ● Trail connectivity to north-west part of Creston (Glacier Drive) (for low carbon commuting) ● Create Trail connection from Canyon north ● CBSM for rideshare, low carbon transportation ● Development of a model Idle reduction bylaw and education strategy ● Foot bridge over the Goat River connecting Canyon to Erickson cut trip length by 2/3 (if supportive of low carbon commuting) ● Supporting alternative/water conserving irrigation practices in the agricultural sector 	<ul style="list-style-type: none"> ● Creston Wastewater Treatment Plant biogas flare – Fraser Basin Council Partnership ● Develop and distribute information about local climate action opportunities ● Renewable energy scan for Creston Valley-Kootenay Lake area ● Bike to work incentive by employers
Ready for action in 2020+		<ul style="list-style-type: none"> ● Bio Diesel Program, ● Large (community) and small (residential) scale water storage programs, bylaws, incentives (RDCK/Creston)

		<ul style="list-style-type: none"> • Transit service for rural areas and East Shore
<p>No time frame identified</p>	<ul style="list-style-type: none"> • Assessing cultivars best suited to projected climates changes (*eligibility for CAP funding TBD) • Regional mobile wood chipper to chip and spread harvested timber from interface fire and agricultural work etc. • **Compost: Yard waste and food waste • **Large scale composting – agriculture, industry etc. • Constructed wetlands for ecological water storage and/or flood risk mitigation • Fire Smart related projects (***)CAP eligibility TBD) 	<ul style="list-style-type: none"> • East Shore Car share • Help farmers change practices to carbon farm • New drought and pest resistant crops • Livestock emergency preparedness planning (fire, flood, drought) • Local food hub • Compost: Yard waste and food waste • Large scale composting – agriculture, industry etc. • Utilize food waste in nutrient cycle for crops • Livestock composting • Municipal composting and other waste diversion • Food recovery program • Renewable energy scan for the area • Gas flare at landfill and WWTP • Street Trees for shade/cooling • Better coordinated recycling between service providers; Waste Ambassador • Inventory of waste products in the sub-region to support re-purposing/monetization <ul style="list-style-type: none"> ○ Ag, brewery, forestry, industry etc. • High-tech app to identify waste diversion options for products by scanning with phone (example: McGill University) • Weekly recycling collection, bi-weekly for garbage • Recycling and zero waste as a normal function of emergency preparedness – the old BAU of high waste emergency situation rooms is not acceptable.

11. CAP Focus Areas and Funding Roadmap

The Climate Action Program is a three-year initiative that provides funding and support to develop local and regional climate action projects in the following focus areas:

Reducing greenhouse gas emissions: low carbon transportation, organic waste diversion, community emissions plan implementation, and other projects that will result in significant and measurable reductions to greenhouse gas emissions.

Climate change adaptation: community wildfire and flood risk reduction, community water supply and demand actions, community climate adaptation plan implementation and other projects that will tangibly support communities to adapt to a changing climate.

Trust staff will review project ideas generated at your community climate action meeting to identify those that may meet Climate Action Program funding criteria. The Climate Action Program Coordinator will follow up directly with proponents to invite submission of a funding application. Various funding mechanisms may be used, ranging from grants to financing, as deemed appropriate by the Trust on a project-by-project basis.

The Trust will consider the following criteria when reviewing funding applications:

- To what degree does the project advance climate adaptation and/or greenhouse gas reductions?
- Does the project fall within one of the Climate Action Program focus areas?
- Has other funding been secured for the project?
- What degree of community support is there for the project?

For more information or to discuss a climate action project idea:

Meredith Hamstead
Climate Action Program Coordinator
climateaction@cbt.org
250.688.1150

Visit the CAP webpages:
ourtrust.org/climateaction

Appendix 1: Meeting Participants

***some meeting participants requested their contact information not be listed in this document. If you would like to reach someone who attended the meeting but is not listed below, please email climateaction@cbt.org and we will ask them to contact you.*

Organization	Name	eMail
Creston Valley Chamber of Commerce	Mark Wolfe	President@crestonvalleychamber.com
Creston Valley Chamber of Commerce	Mark Saunders	vp@ crestonvalleychamber.com
Creston Community Forest	John Brace	bracejohn69@gmail.com
Creston Valley Wildlife Management Area	Carla Ahern	cahern@crestonwildlife.ca
Wildsight Creston Valley	Brian Churchil	churchil@pris.ca
RDCK	Alanna Garrett	agarrett@rdck.bc.ca
RDCK	Paris Marshall Smith	PMarshallSmith@rdck.bc.ca
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Yasodhara Ashram	James Gates	james@yasodhara.org
Yasodhara Ashram	Elizabeth Quinn	bhakti@yasodhara.org
Yasodhara Ashram/ Community Connections	Molly Goldsbury	molly@yasodhara.org
College of the Rockies, Creston	Kim Garety	kgarety@cotr.bc.ca
Ministry of Agriculture	Kevin Murphy	Kevin.J.Murphy@gov.bc.ca
Kootenay Employment Services	Hugh Grant	hg@kes.bc.ca
Economic Action Partnership	Heidi Germann	hng@kes.bc.ca
Community Energy Association, Senior Energy Specialist, RDCK	Trish Dehnel	pdehnel@communityenergy.bc.ca
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Town of Creston	Joel Comer	Joel.comer@creston.ca
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RDCK Director, Area A	Garry Jackman	Gjackman@rdck.bc.ca
RDCK Director, Area C	Larry Binks	lbinks@rdck.bc.ca
Community Connections Society of SE BC	Sophie Larsen	kitchenmanager@ccssebc.com
Canfor	Matt Maddess	matthew.maddess@canfor.com
Canfor	Tim Powell	tim.powell@canfor.com
Resident	Jack Bates	jack@nottheoilrig.com
Food Policy Council/ Columbia Brewery	Dobriła Braunstein	dobriła.braunstein@gmx.com
Wloka Farms	Barb Wloka	bwloka@hotmail.com
Kootenay and Boundary Farm Advisors	Rachael Roussin	coordinator@kbfa.ca

Appendix 2: Climate Action Worksheet Responses

The following is a direct transcription of meeting participant responses to the climate action worksheet questions.

Round 1: Visioning – How can our community’s response to climate change support and enhance our quality of life?

- Better quality water and air
- Clean air
- Cleaner air and environment = better health.
- Cooler, cleaner, more efficient, more considered.
- Higher quality foods grown here
- Local food, active transportation = healthy.
- Focusing on lower GHG can supply healthy local food, active recreation, integrated neighbourhoods.
- More moderate variability in climate I hope
- A future here for families
- Leave a ‘better’ place for our children.
- this can lead to an increase in population as others want to move here to be part.
- Innovation = attracting best and brightest
- Innovation is or can be exciting and bring a feeling of pride to the community.
- To create models that are innovative and holistic.
- Create healthier, more integrated and connected communities
- Basically, the more we can do, the better off the community/area will be as we move forward. It seems Creston is doing a lot but...is it enough?
- Many of the actions we can take may cost money in the short term but result in considerable longer-term benefits. Understanding this will encourage buy in, reduce anxiety over the future and unify our community as opposed to the older “believers” and “deniers” discourse.
- Bring communities together to support ideas and actions.
- Better relationships - more face to face interactions, more intimacy and connection.
- More whole and complete communities.
- Working together towards a shared goal or goals can build a stronger sense of connection with each other.
- Bring a positive “can do” attitude which will bring optimism and subsequently energy.
- We need to be leaders in affecting and motivating change. Enough talk, more action and true leadership is needed, which in turn will motivate others and lead to positive behaviour change.
- Quality of life may not be correlated with our response if the rest of the world does not respond. But we must respond because it is the right thing to do. We will be more aware as a result of how we are part of the solution.
- We have the ability to be on the cutting edge and leaders in our community, region, province etc.
- Empower us, recognize responsibility and encourage us to work together to respond.

- A community with raised awareness of climate change issues will be a small footprint community, a healthier one, and hold more promise for future.
- Community through education.
- Live more in sync with natural rhythms/natural world which will in turn feed our souls.
- FireSmart and WaterSmart programs lead to community resiliency.
- Creating fire suppression and flood control systems are making our community a safer place to live.
- Healthier population due to less use of combustion energy sources.
- Encouraging healthy lifestyle choices -> a healthier population = happier population.
- Doing nothing could lead to an unlivable community.
- More walkable environment.
- Less congestion on roads.
- Efficient traffic more livable community.
- More economic improvement due to need to reduce transportation cost, driving demand for more local food and products.
- Economic - shift to businesses that will prosper in the new climate and shift away from those that will struggle.
- We can support local businesses and ideas.
- Allow growth in the community.
- Create jobs for the locals through clean sustainable jobs.
- MRA strategies can lead to a more self-sufficient community, and possibly a more integrated local economy.
- Reduce energy demands of community through conservation and adaptation of more efficient systems (e.g. heating).
- More local-organic food
- One can be more prepared to face change.
- By providing projects and education to prepare for extreme conditions = safety.
- Safety/security - help mitigate natural disasters (fire, flood, erosion).
- By expediting the transition to renewable energy systems and making that a brand opportunity for the region - both nationally/internationally. Support independent communications firms - print, video, online - in building out that narrative.
- More stay at home services/public transit (re health)
- Better recreation for "stay at home holidays"
- Less light pollution
- Network of green space.

Round 2: What GHG emission reduction projects and actions would benefit our community?

- Transportation action obviously
- Improving infrastructure for safe active transportation
- Safe connections are needed between town and surrounding areas. For example, there used to be a foot bridge over the Goat River connecting Canyon to Erickson, reducing trip length by 2/3rds. Many roads in Creston could be upgraded to make the community more active transportation friendly.
- Better/safer bike system would reduce GHG emissions. This would improve health as well.

- Bike and walking trails
- Cycling route through town, extending the library circuit along the highway
- Rideshare/car share
- Car share along East Shore
- Rideshare
- Rideshare
- Rideshare (transportation is a huge issue in our valley - Yahk to Riondel)
- Develop community rideshare and adoption of public transit only policy (for the Ashram). Develop measurable system and build out into the adjacent communities and Area A.
- Provide ridesharing/transit and reduce single person trips.
- We need to get people out of their cars; too much single occupant vehicle usage.
- Lower emission transportation - let's be on the forefront of the electric revolution.
- Subsidize electric car purchases, trade ins.
- Community rideshare
- Transit service for rural areas and East Shore
- More public transit routes.
- Local bus service
- Improvements to public transportation. Regional bus service?
- Transportation is a big deal here - a small town, very little in the way of public transport but still quite spread out. Cycling and walking are great but time consuming and difficult to haul items back and forth to work.
- Active transportation
- Bike to work schemes, cutting cost of bicycle purchase.
- Walkable services
- Walk, don't ride programs.
- Signage for non-idle zones.
- No idling - park and walk infrastructure.
- Personal inventory/measurement of emissions. I would like to do a project that looks at how I can personally meet the 2050 targets - 15% by 2020, 30% by 2030...first I need to know how much I'm consuming/emitting - how can I do this? Partnership with Fortis to do personal emissions inventories? Aggregate data at the neighborhood level?
- Biodiesel implementation
- Biodiesel school buses
- Looking at diversifying our fuel B20 (Biodiesel) as so many producers use diesel vehicles with will be difficult to convert to electric but are huge pollutants. This could service the whole Basin from Creston.
- A green fueling station (biodiesel)
- An oil press plant for making local fuel.
- Biomass
- Increase efficiency of homes
- Solar hot water
- Retrofit houses to improve energy efficiency
- Major push on residential energy efficiency upgrades - our demographics (in particular further away from Creston) show a higher number of services, many with limited income. As energy costs rise their ability to heat their houses becomes a challenge, resulting in a less healthy environment. This is a symptom of our older housing stock which is not being upgraded or replaced.

- Incentives/assistance for homeowners to adopt geothermal heating. I would have at the time I built but it was cost prohibitive.
- Further solar enhancement systems would be of benefit.
- Solar
- Solar panel addition to residential and commercial rooftops.
- Help sourcing local building materials
- Waste reduction in terms of emissions
- Decrease/stop refuse burning.
- Reduction of forestry waste burning.
- Organics waste programs to reduce that waste stream from the landfill.
- Organic waste diversion would be a benefit to Creston. Not just food wastes but also yard waste, which is commonly burnt now.
- Same goes for recycling programs.
- Green burial
- Organize pilot - supporting a business to reclaim fruit for products like camping/hiking meals.
- Compost waste diversion
- Compost, recycle programs
- Composting on a large scale.
- Utilize all food waste in nutrient cycle for crops/landscaping.
- Industrial composting (use of residential compost).
- Blue box collection
- Local recycling Twitter feed: where to take stuff, upcoming changes, successes.
- Local recycling
- Zero waste
- Garbage tax - 'pay for what you throw away' removal, pay per lb or kg weight.
- Taking visible leadership on normalizing lifestyle changes to reduce GHG on a governmental/business level using community based social marketing.
- Incentivize innovation in reducing energy consumption.
- Housing retrofitting to decrease heating and cooling.
- Help industry/hospitals/schools to reduce GHG.
- Help farmers to change practices to carbon farm.
- Water conservation
- Awareness of low hanging fruit generally.
- Some 'pie-in-the-sky' projects some gradual movement to resilience/GHG emissions reduction.
- Plan and implement landscape level fuel mitigation projects - will reduce anxiety, reduce costs of disaster response, reduce grief and loss.
- We need political directors to work collectively to pool their funding resources (such as community works funds) and put them collectively towards making GHG emission reduction projects. We need to move away from small piecemeal funding of gas tax money to projects that have little impact and fund some high visible, high bang for your buck projects that people pay attention to and then reflect on and think critically about their own behaviour.
- Measurable behaviour changes.
- Education with a focus on changing behaviour and vehicle use.
- Education programs build community.
- Carbon tax
- A resilient local food system - local food hub to reduce kilometers traveled.

Round 3: What climate adaptation projects and actions would benefit our community?

- Reforestation
- Watershed protection!
- Certainly, water usage needs to be addressed. The Water Smart program has started this but continuing education is needed - both at the community (residential) and agricultural level.
- Water (domestic and commercial) reduction
- Water storage for individual and district water systems.
- Investigate water storage capacity to level out supply winter-summer. We may not be able to rely on the snowpack to hold our water for summer.
- Water harvesting large scale
- Capture stormwater runoff
- Stormwater management would provide buffering of severe rainfall events and in the case of wetland/retention ponds allow for groundwater recharge. This is a cycle that could potentially be short circuited by increased intensity rainfall causing surface erosion vs infiltration.
- Having all diking districts collaborate and become 1 rather than several. (All are different which causes barriers).
- Kootenay River diking assessment/planning. Are they sufficient?
- Greywater capture/use
- Greywater storage
- Management of agricultural water use for efficiency.
- Creating more firm buffers and flood diversion routes and water storage systems.
- Wildfire mitigation
- Fire interface planning
- Looking at wildfire mitigation along with value added products context.
- Carpooling, waste reduction in terms of recycling, "circular economy"
- Improving infrastructure for safe active transportation.
- Bike paths for recreation and transportation
- Develop walking/hiking opportunities
- Rideshare/car share
- Pedestrianization in areas of downtown. Reducing traffic, improving atmosphere
- Burning biofuel:
 - creates jobs
 - boots economy
 - releases a clean fuel
 - no cancer-causing exhaust
 - reduction in pollution (visibility), carbon, heavy metals
- Rehab of ecosystems ("Ecosystem restoration") - wetlands, forests, etc.
- More trails and rec areas to increase physical activity and decrease illness and decrease driving/hydrocarbon emissions.
- Changing people's mindset.
- Working K-12 to prime awareness of issues and strategies going forward.
- Help farmers to change practices to carbon farm.
- Food growing in new climates.
- Resilient food system projects to support local farmers

- Assessing cultivars best suited to climate change patterns.
- Drought resistant food crops
- Accentuating the amount of plant growth in “greenspace” like parking grounds.
- Research into safer, integrated methods of pest control.
- Agriculture:
 - Irrigation efficiency projects
 - Pest research and solutions to (new) pests
 - Flooding and drainage - store water/divert water - water storage
- Incentives/help to install rain catchment systems, rain gardens.
- Rooftop gardens - food, water conservation, cooling.
- Landscape architecture: flood, swales, carbon mitigation.
- Street trees, rain gardens, dyking improvements
- Retrofit houses to improve energy efficiency.
- Help sourcing local building materials
- Organics waste programs to reduce that waste stream from the landfill.
- Compost waste diversion and a community rideshare and better/safer bike system would reduce GHG emissions. this could improve health as well.
- Help industry/hospitals/schools to reduce GHG
- Solar/PV installation
- Resilience in water systems, electrical, communication networks.
- Support community engagement efforts around climate awareness and mindset shift. Material change starts with mental change.
- Adaptation will provide jobs.
- Junk food project - redirecting food toward those who need it.