Our Climate, Our Community

Nelson Multi Stakeholder & Open House Consultation Comments

Thursday, December 9

The City hosted a workshop with a diversity of community stakeholders and an Open House to solicit input on a community plan to reduce greenhouse gases and advance energy sustainability. Stakeholders included representatives of businesses, community organizations, utilities, and public institutions, as well as City Council and staff. Open House attendees represented many of these constituencies as well as interested citizens. The consultations had two primary objectives:

1. *Establish a solid situational analysis upon which a meaningful vision and Plan can be built*
2. *Identify preliminary strategies to inform development of a Plan*

With further analysis, including a high level evaluation of the technical, resource, economic, and policy potential, these ideas will help shape a draft Plan. A summary precedes the consolidated comments.

Summary

Plan Expectations

Nelson will develop a Plan that makes the emission reductions necessary to contribute to global climate protection, and improves the security of residents, businesses and the public sector through more integrated, sustainable land use and design, green buildings, sustainable energy supply, solid waste management and local food systems.

The Plan will build on Nelson's complete, compact, highly-livable character, heritage building preservation, and a historic commitment to energy security that began more than a century ago in establishing its own hydro-electric utility. Urban design and transportation planning will further strengthen opportunities for active transportation and enhance community safety. The Plan will strengthen the local economy by both encouraging support for local businesses, as well as providing guidance for keeping a greater percentage of the more than $30 million the community spends annually on energy re-invested in the community.

The Plan will provide direction for how to actively engage residents, businesses and the public sector in advancing energy sustainability and deep emission reductions.

Strategic Directions

Major ideas that will be explored for potential cover every major energy sector.

Buildings

Given the nature of the community's building stock and the modest growth rate, the greatest opportunities for managing energy and emissions in this sector is by improving the efficiency of the envelope and heating systems of existing residential and commercial buildings. A tool that could help allow this to happen is enabling Nelson Hydro to finance building retrofits, which could then be paid back through customer bills.

Smaller homes, including laneway housing, could potentially be realized through land use tools and capacity building.

The rezoning process, design guidelines, and other voluntary and regulatory tools could be used to strengthen new building performance. Given the small but significant population of innovators in the community, there may be some value in examining how municipal policy could enable significant innovations while at the same time meeting health and safety requirements.

Nelson is home to a significant green building sector that can contribute to these strategies as well as export its talent.

Energy Supply

The greatest opportunity for advancing renewable energy is with building and neighborhood scale renewable heating.

Building scale opportunities include ground source, air heat exchangers, high efficiency wood stoves, and some solar thermal that could be incented through the building permit process, public education, as well as incentives that could be supported in whole or in part through offsets that would allow the City to achieve its carbon neutral commitment.

Block and neighbourhood-scale heat options include heat recovery from ground, lake, sewage as well as biomass. The potential for these opportunities would be based on land use decisions such as building mix and further analysis of the resource potential. Land use tools could be used to ensure new buildings that will be in a district energy service area meet the technical requirements, and a strategy can be put in place for converting existing buildings that are cost effective.

There is some renewable power potential in the area in the form of wind, micro hydro and lake current. Cost and technology maturity will likely mean only a few of these opportunities could be realized in the short to medium term.

Transportation

Transportation is the largest share of emissions municipally and regionally. The greatest factor is long commutes, notably into Nelson by almost half the workforce, as well as inter-community college travel. There is significant potential to build on the local ride share which is highly successful for single, longer trips, but has low take up for commuting. Improving inter-community ridership would involve greater service (routes and frequency), as it would for shifting local transportation from car to transit.

Active transportation could be strengthened within the municipality with stronger infrastructure and connectivity.

There is significant potential for improving efficiency through low emission vehicles which can be promoted through premium parking space allocation.

Social marketing was considered very important to strengthen transportation sustainability, including promotion to employees and clients through local businesses.

There are a range of relatively new City and regional transportation plans that will likely form the basis of any new directions.

Solid Waste

Sustainable waste management and emission management in the waste sector both follow the 4 R's and ultimately diverting more waste from the landfill. Ideas under these principles include:

- Reduce waste by restricting plastic bag and water bottle use where possible, constraints on flyers
- Reuse products by establishing a comprehensive re-use centre
- Recycle more waste through bins in strategic, high frequency locations, service for commercial buildings and social marketing, as well as aggressive composting in neighbourhoods and backyards and strategically in the commercial sector with large food users, and increased yard waste pick ups
- Energy recovery may have potential through wood diversion from the landfill, yard waste, sewage sludge and other safe biomass sources.

Success in this sector would depend on effective social marketing and be guided – in part – by the recent Regional Solid Waste Management Plan.

Food & Agriculture

While not a traditional emission "sector," there are significant emissions embedded in food due to fertilizer inputs, farming. processing, storage and transportation. There is potential for *some* emission reductions through strategic local production and processing. There is even greater benefit to *local food* as a risk management strategy with the projected increases in the price of both food and energy (oil). A modest increase in local food production could

happen through backyard and community garden education and outreach, including program integration into the school system and food bank programs.

Consolidated Comments

Plan Expectations

The following Plan expectations were identified:

Social Priorities
- ...improve their health behaviours and outcomes
- *...support a liveable community where the citizens care, are safer, feel valued* and the overall result has reduced environmental and social impacts
- ...end result is an improved quality of life for all
- ...contributes to active transportation *which creates positive and well being*

Energy & Emissions
- ...carbon neutral / energy self sufficient by 2030-2050
- ...help to promote energy efficiency and conservation
- ...create a plan for reducing GHG for Nelson area which has targets and concrete strategies
- ...plan for energy self sufficiency using renewable sources all generated by the City of Nelson rather than purchased from Fortis or other companies
- ...reduce GHG's by 50% by 2020 in the Nelson area

Engagement and Capacity Building
- ...specific objectives the public will buy into
- ... inspire and energize community members to take actions to build a healthy, resilient community- no carbon
- ...innovative and specific to our community, that involves and engages all sectors
- ...specifically engages school district
- ..youth engagement and understanding of what they can do to reduce GHG
- ...produce actionable items that can empower individuals of the community

Economic
- ...keeps $ reinvested in the community
- ...identify energy savings opportunities that will reduce GHGs and will be a new source of revenues for the community for future generations
- ... shop local campaign

Integrated Sustainability
- ...integrate household level and commercial food production into the scope and vision

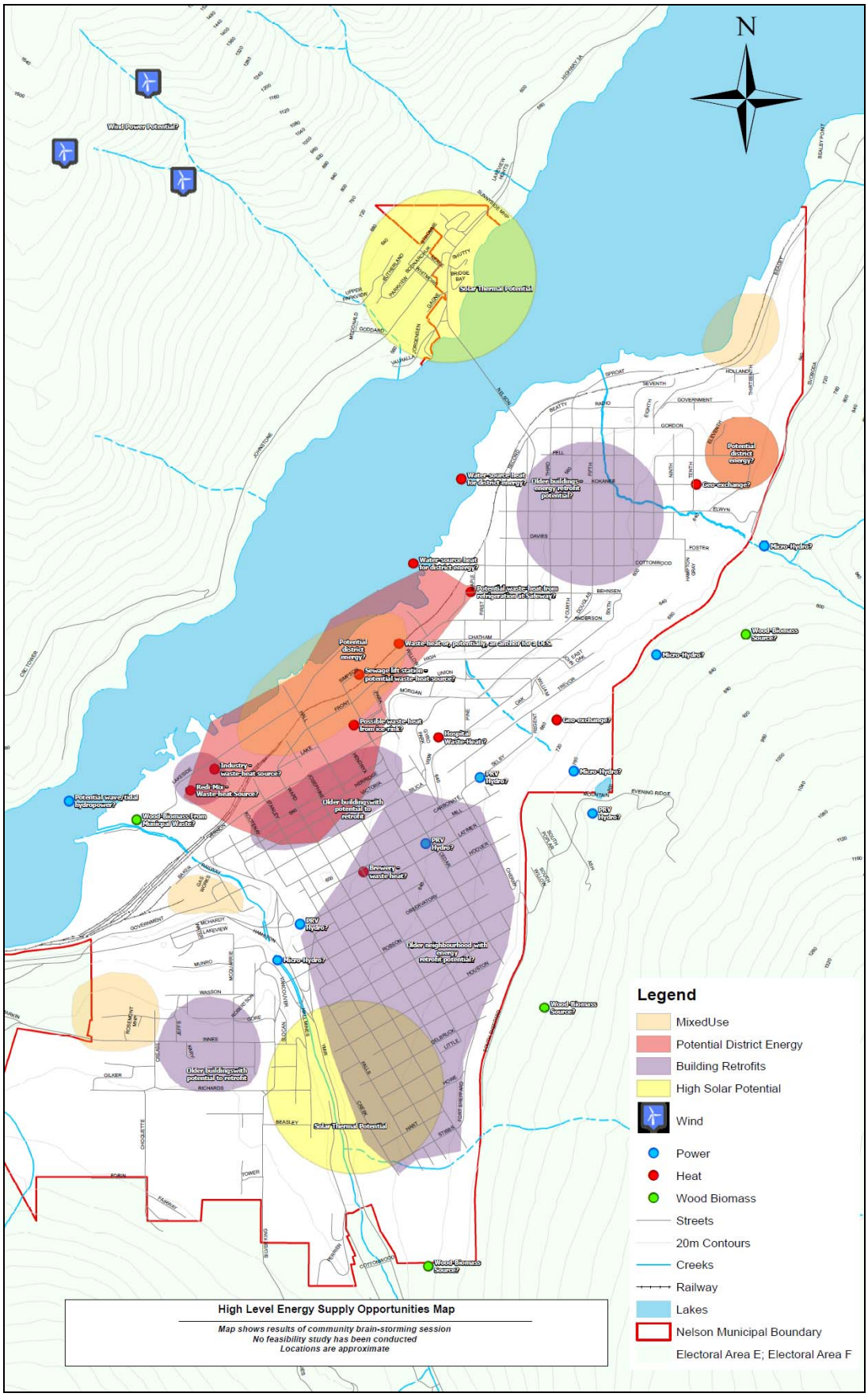
Transportation
- ...contributes to active transportation which creates positive and well being
- ...learn how the city can reduce its carbon footprint by doing projects like converting to buses to bio diesel and expanding the electric street car as a transportation system

Waste
- ...waste: find reuse for Styrofoam packaging

Strategic
- ...actions that individuals can take which are in line with policies created, and for citizens to be informed more thoroughly and comprehensively
- ...fulfill requirements of Green Communities Act (Bill 27)
- ...educate citizens on accessing finding for EE opportunities and ideal opportunities

Sustainable Energy and GHG Reduction Opportunities

Stakeholders identified the following opportunities to reduce GHGs and advance sustainable energy:



High Level Energy Supply Opportunities Map:
This map shows results of a brain-storming session.
No feasibility study has been conducted. Locations are approximate.

Buildings

Energy Retrofits

- Bring attention to energy retrofit potential in large institutions, including Interior Health Authority/hospital, College, and School Board
- there are many older buildings in the city - these would greatly benefit from energy efficiency upgrades
- engage in dialogue regarding Heritage Buildings – the current perception is that they "can't be touched' but this is not the case

Financial Tools

- Nelson Hydro and Fortis could front the capital (loans) for energy retrofits and be repaid through energy bills the City could offer low-interest loans for a win-win opportunity

Land Use Tools

- Already a good secondary suite policy in place
- Smaller buildings should be encouraged
- Laneway housing may be challenging - snow isn't removed and few lanes are paved - design solutions like street access from laneways could overcome this
- rezoning is an opportunity to encourage mixed-use buildings and perhaps solar thermal
- Given the small but significant population of innovators in the community, there may be some value in examining how municipal policies and processes could better encourage significant innovations while at the same time meeting health and safety requirements.

New Regulations

- Use innovative building standards and policies to promote energy efficiency
- Develop / promote codes for alternative construction practices, such as straw bale and cordwood construction - standardized codes and practices would reduce costs associated with engineering and insurance

Renewable Energy

- Buildings could be made District Energy Ready through Service Area Bylaws and Design Guidelines
- Potential for heat recovery from grocery store refrigeration and reduced air space through lower ceilings (demand reduction)

Design

- Encourage "low tech" solutions like shutters and reflective blinds to reduce solar heat gains and air conditioning

Lifecycle

- Recycle local materials into energy efficient products
- Local glass is not being recycled, but rather separated, crushed and landfilled; it could instead be used for fibreglass insulation

Capacity Building

- Identify local expertise for energy efficient retrofits and green building

Energy Supply

Financial Tools

- Create an offset strategy for furnaces

Renewable Heat

- Possible opportunity to use heat captured from sewage treatment plant and use it at Pacific Insight
- Solar energy (thermal) available in some parts of community - need data on operations and tool for evaluation
- Solar hot water potential for the carwash, Laundromats, hotels, hospital, and salvation army
- Encourage wood-stove replacement to improve air quality and reduce emissions - Invemere has a great "top-up" incentive for replacements
- Potential to link Civic Center with surrounding buildings through District Energy

Heat & Power

- Small scale / residential scale waste incineration, gasification, or plastics to oil technologies

Energy Storage & Transportation Solutions

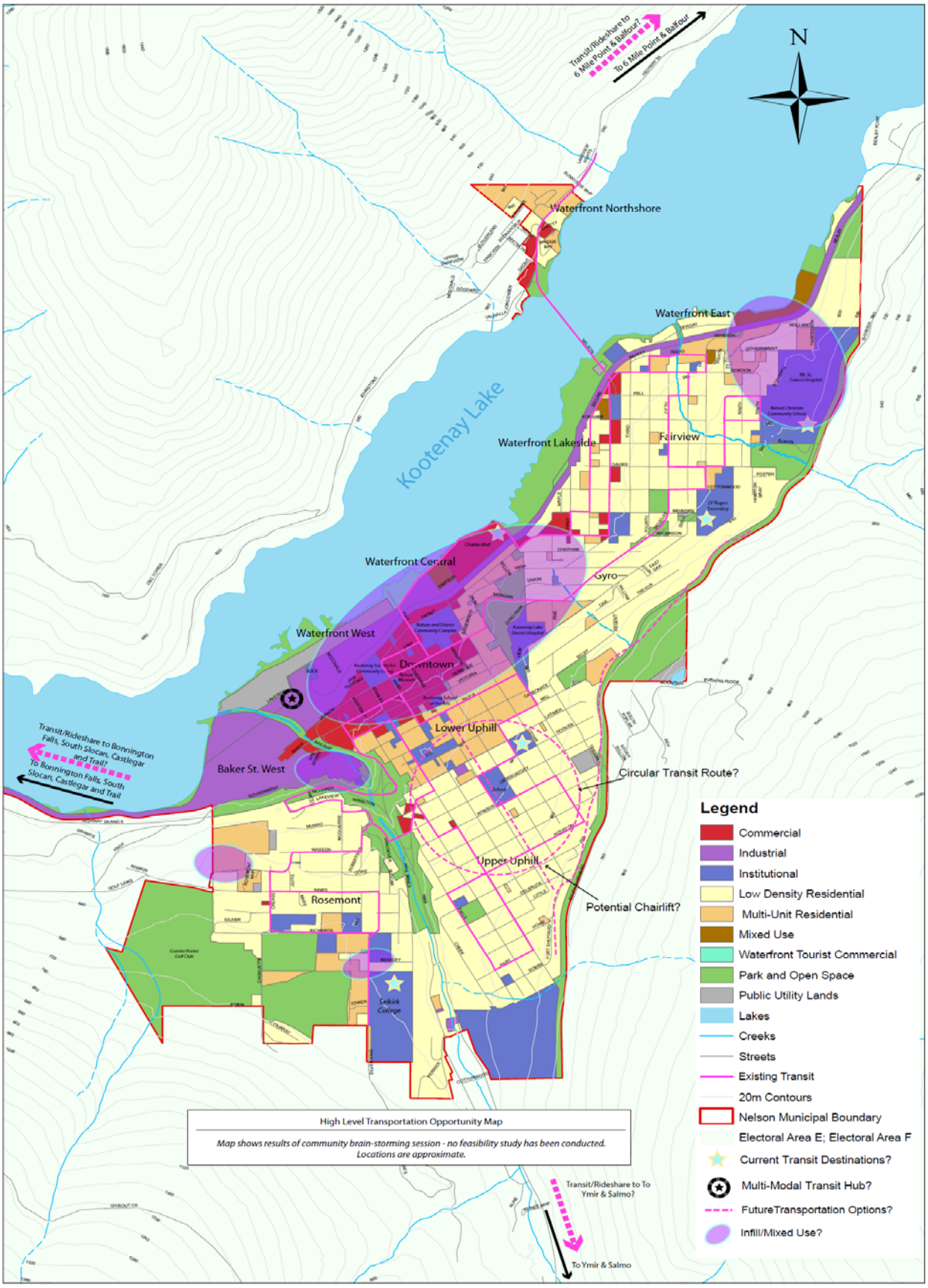
- Electric and hybrid vehicle connection to the grid to provide large, distributed battery storage

Infrastructure

- Water conservation and the role decreased water consumption plays in reducing the energy required for pumping, water treatment and sewage treatment

Transportation Fuels (energy supply)

- Potential collection of used oil for vehicle fuel



High Level Transportation Opportunities Map:
This map shows results of a brain-storming session.
No feasibility study has been conducted. Locations are approximate.

Transportation Demand Management
- Reduce single occupant trips (mostly commuter trips)
- Reduce single-occupant car trips by increasing cost of parking and reduce parking options – currently parking is "easy" in Nelson
- Place a toll on major access routes into the City to encourage ride sharing/fund sustainability projects
- Adopt anti-idling bylaw
- Encourage vehicle right sizing in businesses, use smaller vehicles for police, fire and government work
- Promote electric/low emission vehicles through free/reduced parking and charging stations
- Encourage employers to promote car/ride sharing, bike use, bike facilities, transit, employee parking limitations

Social Marketing
- Social perceptions a barrier - this requires a change in mindset of the community

Transit
- There are opportunities to adjust transit routes, services, and frequency to better meet demand
- There is a lot of capacity and few riders in town
- Increase Nelson/Castlegar-Trail frequency and service to Blewett
- Partner with school boards for transit
- Offer free ridership days on the bus to help with orientation to scheduling and add signage regarding bus schedules to every stop
- Use bus as courier to make better use of low passenger trip
- Improve bus stops on rural routes – covered, heated
- Establish a water taxi
- Re-establish passenger rail in the region

Multi Modal
- Develop chairlift and improve up hill connections to help overcome the topographical challenges of walking or bicycling in the City

Ride & Car Share
- Create Park and Ride
- Improve pedestrian and Public Transit connections between Baker St. and Waterfront
- Extend Streetcar along waterfront and add Baker Street run
- Promote car-share and ride-share programs – significant untapped potential
- Ride share could benefit from an in-region free Parking Pass and the use of new technologies (GPS, smart phones, etc) to improve communication and convenience
- The City could use the car share to reduce fleet requirements
- Improve sense of community to encourage sharing: when neighbours don't know each other, they're much less likely to ride share, or pick up items for each other while running errands

Active Transportation
- Snow/ice removal is a barrier to walking - a "sidewalk strategy" is needed
- Improve pedestrian and cycling infrastructure
- Add bicycle parking on Baker St. and at Youth Center, and require bike storage facilities at commercial buildings
- Add pedestrian access to Baker St from parkade. Build new parkade btwn Salvation Army & Vernon St Video Store

Misc
- Find ways to phase-out 2-stroke motors - use Lake Invemere as example of good stewardship
- Assess impact of increased electric vehicles on electricity demand; will this require greater supply?
- Build on existing transportation plans
- Look at new regional transit plan.

Solid Waste

Reduce
- To reduce bottled water use, can provide more water fountains downtown and improve the quality of drinking water/promote the use of city water
- Ban plastic bags disposable and water bottles where possible

Reuse
- Address building code requirements prohibiting the reuse of building materials
- Regional district could host a re-use center at transfer station, including used lumber, appliances, and furniture
- Map houses participating in Trash to Treasure days

- Packaging reduction can only be affected at senior government level, but source-separation can be encouraged through bylaws and enforcement, mandating clear garbage bags, education of youth, etc.

Recycle

- Packaging reduction can only be affected at senior government level, *but source-separation can be encouraged through bylaws and enforcement, mandating clear garbage bags, education of youth,* etc.
- Add curbside recycling pickup for Commercial buildings
- Add additional recycling bins and stations at Mall
- Investigate ways to deal with problem items such as flyers and unaddressed advertising, Styrofoam reuse

Recycle: Composting

- Composting can be encouraged and promoted
- Increased education, including mentorship programs from master composters and composting in schools – a major barrier is teacher constraints (already overloaded) so this may require financial and/or volunteer support
- Increase composting neighbourhood-scale, backyard-scale, sr centers, and schools, e.g. Rosemount School Garden
- Composting and local food production could be integrated into Rec. Depts, daycamps, and school curriculums
- Target commercial food-waste - Hume Hotel and Tofu Silverking have good composting programs as models
- City-subsidized compost bins (below-ground models)
- Yard waste pickup happens only two times per year - could be more frequent
- Establish demo project using composting, greenhouses, and aquaculture to produce local food
- *Localization* of recycling industry, such as wood recycling
- Require mandatory recycling – put garbage in clear bags and use recycling bins rather than bags

Energy Recovery

- Establish yard waste gasification facility rather than simply piling
- Divert sewage sludge from land fill and use for gasification
- Investigate waste to energy possibilities, see www.energycities.org

Misc

- Build on new SWMP

Other

Shop Local

- Develop a shop local campaign emphasizing local products

Community Food, Gardening & Agriculture

- Consider floating gardens to provide additional land space for food production
- Add green roofs and rooftop gardens
- Local food production, canning
- Integrate food insecurity: work with food bank, see Edible Garden in North Van, community kitchens Nanaimo

Integrate Climate Change Adaptation with Mitigation

- Recognize risks and opportunities from the forest equilibrium shift occurring due to climate change - higher tree mortality leads to higher fire risk and GHG emissions, but could also be a potential energy source

Social Marketing

- Promote simple behavioural changes like lowering the thermostat and efficient driving habits

Participants: Stakeholders

1	Alton, John	West Kootenay Eco Society
2	Angel, Renee	Interior Health
3	Boston, Alex	HB Lanarc, Nelson Climate/Energy Action Plan Project Manager (consultant)
4	Brynne, Abra	Brynne Consulting, Agricultural Area Plan for RDCK
5	Charlesworth, Kim	Councillor, City of Nelson, Environ Cttee; Climate/Energy Steering Cttee
6	Cherbo, Robin	Councillor, City of Nelson
7	Cormack, Kevin	City Manager, Climate/Energy Steering Cttee
8	Galbraith, Fiona	Corporate Climate Action Coordinator, City of Nelson
9	Hill, Peter	Terasen Gas
10	James, Adam	Community Energy Association, Facilitator (consultant)
11	Johnson, Dallas	City, Planner, Climate/Energy Steering Cttee
12	Klassen, Kim	Working Group # 5 Member (Path to 2040)
13	Lack, Jeremy	Kootenay Local Agricultural Society
14	Love, Alex	Nelson Hydro; Climate/Energy Steering Cttee
15	Macdonald, Donna	Councillor, City of Nelson, Environ Cttee; Climate/Energy Steering Cttee
16	Moore, Pam	Interior Health
17	Nissen, Monica	School Board
18	Popoff, Ron	Interior Health
19	Reasoner, Mel	WKES; Climate/Energy Steering Cttee/ Working Group # 5 Member (Path to 2040)
20	Schmidt, Christine	Nelson and District Youth Centre
21	Sellers, Kirt	Interior Health
22	Shaw, Freya	Kootenay Local Agricultural Societ
23	Sobie, Paula,	Kootenay Local Agricultural Society
24	Weston, Blair	Fortis; Climate/Energy Steering Cttee
25	White, Richard	Working Group 2 Member, Path to 2040

Participants: Open House

1	Brewer, Greg	Citizen, Business Owner
2	Boston, Alex	HB Lanarc, Climate/Energy Action Plan Project Manager (consultant)
3	Charlesworth, Kim	Councillor, City of Nelson
4	Dooley, John	Mayor, City of Nelson
5	Delfiner, Gary	Local Business Owner/Builder (Speedy Auto Glass Building)
6	Flemming, Lindsay	Youth
7	Johnson, Dallas	City, Planner, Climate/Energy Steering Cttee
8	Kaup, Steven	Studio 9 Architecture and Planning
9	Munn, Dawn	Citizen
10	Packham, Laura	Carbon Management
11	Precious, Russell	Agricultural Area Plan for RDCK
13	Southam, Theresa	Working Group # 5 Facilitator(Path to 2040)
14	Southam, Kormack	Youth
15	Woolsey, V.	Planner
16	Zeigler, Nathan	Engineer

Prepared By

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