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Clear the Air

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CVRD

Environment Commission

Twelve months. Twelve big ideas for a strong, resilient community.



Introduction from the **CVRD** **Environment Commission**



Our Region is blessed with incredible natural assets: water to drink, air to breathe, soil to grow food, and a rich and varied landscape. Properly protected, our ecosystems provide the raw materials for an enviable quality of life. As members of the CVRD's Environment Commission, it's our job to keep an eye on which assets are threatened, or in need of repair, and to develop advice for the CVRD Board so that our Region can lead the way in the responsible stewardship of our natural environment. But we also know that real change only happens when we all work together.

This newsletter tells the stories of the many people of our Region and the myriad ways that our communities are working toward a better future. We hope it will also weave and strengthen the social ties that will lead to even more positive change. We hope you enjoy these stories and find helpful information and inspiration along the way.

*Janna Jorgensen,
Environment Commission*



What's in a

Commission

We believe we must start right away to strengthen our environment and community by growing in smart ways, repair the damage we have done to our natural assets and preserve them for future generations. And we believe that local government must lead the way in this effort.

We are the Environment Commission, a group of 15 community members and politicians appointed by the Cowichan Valley Regional District (CVRD) Board. We were formed in April 2007 by the CVRD to provide recommendations to the Board on a variety of environmental issues and concerns in an integrated, systematic way across the region. Volunteer members sit on the Commission for a two-year term which can be renewed.

Our mandate is to provide advice on policy, regulations and issues related to the environment and recommend to the CVRD Board adaptive strategies to meet the present and future. We also serve an important community function by monitoring three important plans – our solid waste, central sewage system and our drinking water protection plans.

Clear the Air

In the Cowichan, we need to clear the air of the myth that our atmosphere is clean and sustainable; then we need to clear air pollution and carbon emissions from our society.

The myth of clean air is understandable, since we live in a land where benevolent weather seems the norm. But beautiful, even blissful, sunsets behind Mr. Provost hide the grim reality that our climate is being permanently damaged by unseen greenhouse gases (and our children's lungs by local particulate matter).

And here is the crux of the problem - the most dominant greenhouse gas causing these disruptions to our climate, carbon dioxide, is created by burning fossil fuels. So we must phase out the use of fossil fuels as quickly as possible.

Change in attitudes is happening. Both citizens and politicians are responding to the realization that we need to act on climate change. Many of us now understand that we need to clear the air of carbon dioxide pollution and transition away from fossil fuels. And so can you.

You and I can prevent the worst events of climate change by planning a future in which you don't buy gasoline for your car, don't use oil or natural gas for heating your home, and don't eat carbon-intensive strawberries from California Well, of course some things will take more time than others, but you need to start right away. We have the technology to phase out the burning of all fossil fuels.

You can advocate (political action) and act (personal action) to create a sustainable society.

You can go to political meetings and show your support for the need to collectively act on climate change.

You can publicly support and participate in CVRD's 12 BIG IDEAS concept which came from public input and talks about the need to reduce our collective and individual carbon emissions.

You can buy electric scooters or cars as soon as is possible for you financially. I drive an e-scooter around town and even to my old-timers hockey games -with my stick hanging out the back. And you can plan to buy electric heat-exchangers for home heating, or make your home as energy efficient as you can.

You and I can rent or build and buy houses in more dense, closely built, neighbourhoods that require far less energy to run and allow us to more easily walk or commute to work and

play. In that way, we will reduce our overall carbon emissions and create a more social, more caring society - with more time for our neighbour's well-being and less time commuting to work or driving to malls.

You can grow and buy more vegetables locally to reduce emissions used to transport vegetables from California as well as create a stronger local economy. And so on.

The City of Duncan has a carbon trading scheme which saves its taxpayer money and supports local "green" businesses at the same time. And North Cowichan has won awards for its recent Climate Action and Energy Plan - committing the municipality to reduce its carbon emissions by 80% by 2050.

The CVRD has an Environmental Commission in which you can provide input and ideas; and North Cowichan has its Climate Change Advisory Committee which is always open to the public (I am a volunteer member).

You and I can build a positive vision for the future - action on climate change offers opportunities to build a better society. For example, using solar panels to power your electric car will create a thriving local industry of electrical power suppliers selling solar and wind electricity back to the local community instead of funneling your money back to Calgary or Houston.

And yes, your own personal sense of ethics to act against global warming and create a sustainable life for the next generation demands that you reconsider your excessive use of fossil fuels - like traveling long distances on airplanes (or gas cars) that burn up many tonnes of fossil fuel just for the pleasure of, ironically, a warmer sun.

Beyond these ethical considerations, there will be substantial financial rewards to going "green". The economic model of the North Cowichan Climate Action and Energy Plan shows that if our society reduces its carbon emissions by 80%, each household will save \$4,000 per year by 2050.

So it is rational, not radical, to phase out the burning of...well, anything. I know this is a hard message for many, and sounds somewhat arrogant and impossible. But this change is possible, and it is necessary.

Let's clear the air of fossil fuel pollution - and leave our kids a good life.

*Peter Nix,
Environmental Scientist, retired
Cowichan Carbon Buster, self-appointed*

12 BIG ideas

If we carry on thinking for today and not thinking about tomorrow, we run the risk of losing some of our natural assets forever. This is why we put together our list of big ideas for making our region more sustainable. This list is made up of small, medium and large decisions we need to make and actions we need to take to build a strong, sustainable Co-

wichan. Here are our 12 big ideas on which to build a sustainability plan for the Cowichan region, and some examples of what our big ideas would look like 'on the ground'. Some of these things you could do personally and some we could do together as a community and through local government.

1 Lead the Way

by making real change at the personal and local government levels.

Lead the Way by making real change at the personal and local government levels. We all have role to play in creating a sustainable Cowichan, including encouraging government to embed a sustainable future in every rule and regulation and supporting them to make real changes. You can help by joining a committee, volunteering or donating toward environmental stewardship, and voicing your concerns and priorities.



2 Be Energy Smart

and conserve wherever possible.

We have to get smarter about how we generate and use energy in our region, in order to ensure that our demand does not outweigh our supply. We can do this by lowering thermostats, shutting off and unplugging electronics, switching to low energy street lights, using industrial and household waste to produce power, supporting geothermal, wind and solar projects and developing a regional energy plan.



3 Audit and Protect our Assets.

We need to figure out what we have so we know what to protect and how quickly we have to act. This means documenting and assessing things like sensitive areas, species at risk, wetlands, watercourses and air and water quality. It also means undertaking a connectivity analysis to ensure we protect and allow for species migrations.



4 Revive Biodiversity

We need to immediately start restoring and protecting valuable habitat and ecosystems. We can do this by getting rid of invasive species, allowing only low impact or restorative development (where no critical habitat is destroyed), acquiring or protecting ecologically significant tracts of land, building birdhouses to reduce -support native species, working with and supporting stewardship groups and working with forestry operators to better manage operations in concert with community values and ecology practices.

5 Eat Local

because food security matters.

We have some of the best agricultural land anywhere! Let's maximize this potential and establish food security for our region. We can do this by supporting small-scale agriculture, and our regional agriculture plan as well as developing creative support tools and mechanisms to assist local agriculture production.

6 Get Up to Speed

on the new green economy.

We need to quickly change how we do business in our region by promoting green business development (agro-forestry, alternative energy, eco-tourism), consuming less and applying full cost accounting to determine the true costs of products and services.



7 Don't Hog

the water so there is enough for all, and replenish our groundwater.

We need to make sure there is enough water for everyone and everything, including other species and ecosystems. We can do this by measuring and pricing water accordingly to ensure conservation, locating industry and development away from the aquifer's sensitive areas, using drought resistant landscaping, using low flush toilets, and encouraging 'green infrastructure' development that takes the natural water cycle and rain water into consideration.



8 Get Real

about climate change and the impact it will have on our region.

Some of the ways we can do this are: by planning for the uncertainty ahead; protecting infrastructure and communities from increased winter rains, summer drought and violent winds; and developing a comprehensive drought plan for the region.



9 Be Carbon Neutral

We can achieve carbon neutrality by doing things like ensuring our homes are as efficient as possible (and lowering our costs) increasing the efficiency of our own personal and community transportation systems (light rail, bike lanes, more buses), making recreation carbon free, and reforesting our communities and watersheds to capture carbon and create jobs.

10 Grow Up Not Out

by putting people, jobs, and transportation closer together.

We need to lower our development footprint and live in denser, more compact communities. This means doing things like enforcing urban containment boundaries (no more 'sprawl'), developing creative ways to get added natural values within this boundary (like ecosystem pockets, trees for shade and birds, rain gardens, etc.), and adopting a green building code.



11 Clear the Air

to reduce carbon emissions.

We need to immediately reduce our local carbon emissions by doing things like planting carbon fixing vegetation, upgrading wood burning stoves, reducing our reliance on fossil fuels, passing air quality bylaws, and monitoring and enforcing our air quality.



12 Get Serious

about zero waste.

We need to rethink how we handle our sewage, garbage, and other waste to make use of unused resources and minimize their impact on the environment. We can also do this by saying no to plastic, avoiding excessive packaging and exploring 'cradle to cradle' opportunities.



Cowichan Cob Oven Project

City of Duncan Council recently adopted a Wood Burning Appliances and Air Quality Bylaw to begin to address air quality issues in Duncan. The Bylaw is intended to protect the health of individuals, as well as to reduce emissions from wood burning appliances. Wood smoke can pose a health risk to individuals, particularly those vulnerable to breathing or heart problems, as it can be high in particulate matter that can affect lung function. The new Bylaw includes the following regulations:

- Wood (or pellet) burning appliances being installed must be CSA approved
- All new construction with wood burning appliances must contain a secondary heating system
- No person shall use a wood (or pellet) burning appliance when an Air Quality Advisory is in effect
- No outdoor solid-fuel combustion appliances are permitted, except for cob ovens in City Parks

In the fall of 2013, Cowichan Community Kitchens, with the support of City staff, a City Grant in Aid and outside funding, completed the first outdoor community cob oven in a park utilizing rocket stove technology.

Lead natural builder on the project, Pat Amos explains, "Rocket stoves are highly adaptable devices that readily

convert wood scraps, branches, or other plant material into immediately available heat for cooking, heating and drying. Utilizing technologies dating back over 5000 years, they are a superb way to create heat by efficiently burning locally available, carbon neutral and readily renewable bio-mass. Unlike most cooking/heating fires which send much of their smoke into the atmosphere, rocket stoves employ a unique process to achieve optimal combustion efficiency."

In a rocket stove, sticks of wood are fed into a fuel feed tube where they mix with oxygen in a combustion chamber. The combustion chamber is also the beginning of the heat riser, the combined shape of which optimizes the mixing of volatile gases. The combustion is further enhanced by a powerful upward draft through the heat riser – which serves also to draw all of smoke/gases being released from the wood into the combustion process.

The oven in Centennial Park contains 3 rocket burners; one for a convection/radiant oven, another to heat a BBQ griddle and warming deck, and another to heat an open burner for pots and woks. This is an exciting collaboration and demonstration project that will continue to bring the community together. Interested in trying it out? The oven is available for rental through Cowichan Community Kitchens at ck.hof@shawcable.com.

Michelle Geneau, Duncan City Planner

Pat Amos, Natural Builder



Want to upgrade your woodstove?

...The CVRD can help...

Want to upgrade your woodstove? To help improve local air quality, the CVRD, with the aid of funding awarded by the Ministry of Environment and the BC Lung Association, is pleased to administer a regional Woodstove Exchange Program. The program allows qualifying residents to receive a rebate towards exchanging their old, uncertified woodstove (pre-1994) for a new, EPA emission-certified wood, pellet, or gas heating appliance. The 2013 Regional Woodstove Exchange Program has sold out. However, there are ten rebates, worth \$1,000 each, available to qualifying low income applicants only. To qualify, applicants must meet the necessary requirements. Download the application forms:

2013 Regional Woodstove Exchange Brochure

2013 Low Income \$1,000 Rebate Application

Did you know, 70% of woodsmoke is eliminated when you burn dry, seasoned wood?

Making your woodstove work smarter heats your house better and saves money. Plus, a hotter burn means less pollution. Be a good neighbour and burn it smart! Reduce the smoke coming out of your chimney, and don't burn when weather conditions trap pollution.

As the Cowichan Region has grown over the years, population densities have resulting in a high urban-rural interface in many areas. Smoke complaints have become common in these areas as temperature inversions, poor burning techniques, and air drainage restrictions influenced by topography prevent wood smoke from being dispersed. This means smoke lingers in the air where citizens live and breathe, polluting neighbourhoods for days or even weeks.

Whether you heat your home with wood or burn yard waste in your backyard, there are many tips and techniques that you can follow to "Burn It Smart" and reduce the impacts of smoke pollution on your neighbours. When burning yard waste, only burn dry, unprocessed



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wood sticks and branches, to keep smoke and air pollutants to a minimum. Better yet, remember that wet grass, leaves and other materials can be dropped off at CVRD Recycling Depots for free, and garbage can also be dropped off for a small fee. Check the Venting Index before you burn to make sure that any smoke that you do produce during ignition will be rapidly dispersed and won't negatively affect your neighbours.

If you use a woodstove to heat your home, remember to "Burn it Smart" by always using properly seasoned firewood (meaning wood that has been seasoned for at least six months); building small, hot fires; and not burning or using your woodstove when weather conditions are hazy, foggy or windless, as these conditions tend to trap smoke in the area. If possible, upgrade your woodstove to an EPA-certified appliance, and don't forget to check your chimney for smoke! This is a great way to gauge how efficiently your stove is working.

For more information and tips for smart burning, visit our Resources and Reports page at cvrd.bc.ca/index.aspx?NID=1466.

Let's Clear the Air!

Open burning is considered one of the greatest air pollution problems in the province. Here in the CVRD, smoke particulate from outdoor burning poses serious health risks to the community. According to the BC Ministry of Health's report *Every Breath You Take... Air Quality in British Columbia, a Public Health Perspective (2003)*, Wood smoke can contain over 100 different chemicals or compounds, many of which have been associated with adverse effects on health. Open burning can also impact ecosystems by adversely affecting plant and animal health and contributing to climate change.

No Smoking in the Garden!

Chipping and composting your branches & leaves is a great way to help clear the air, add nutrients to your soil, attract beneficial insects and birds to your yard, and reduce sum-

mer-time watering & weeding! Leaves and small branches can be spread under existing trees and shrubs - smothering weeds, retaining moisture, and creating rich compost as it breaks down. Larger branches & stumps can be chipped to create excellent, instant mulch for native trees and woodland gardens. Rent a chipper or hire a local crew to chip, and you will be rewarded with a lovely pile of wood chips. Wood chips can be used to create winding pathways through your gardens, and added (sparingly) to the compost. Large stumps can be left in the ground to slowly decompose and turn into mossy, natural landscape features. As the stumps break down, they help create a perfect backyard habitat for native plants and birds. So don't start a fire - start a woodland garden!

Priscilla Brewer, CVRD Environment Commission Member

If you have garden debris you would like to get rid of, don't burn it. The Cowichan Valley regional District provides **FREE** drop-off yard and garden material year-round at all of its community recycling depots.

- **Bing's Creek Solid Waste Management Complex**
3900 Drinkwater Road, Duncan
- **Peerless Road Recycling Drop-off Depot**
10830 Thicke Road, Ladysmith
- **Meade Creek Recycling Drop-off Depot**
8875 Youbou Road, Lake Cowichan
- **Central Landscape Supply**
1345 Fisher Road, Cobble Hill

Accepted materials include branches (up to 3"), leaves and grass clippings. The material is then locally recycled into compost for gardens in the community.



Before You Burn, Consider HUGELKULTUR



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At this time of year plumes of smoke blanket the Valley – evidence of controlled backyard clean-up fires. Hugelkultur is an alternative to these fires which send unnecessary emissions into the atmosphere.

Pronounced “hoogle-culture”, this low-tech approach to building raised garden beds utilizes excess woody debris and garden waste, diverting it from the burn pile. You simply build a large rough compost pile, cover it with soil and plant into it.

Here’s how to build this innovative and earth-friendly garden bed in Spring:

- Dig a shallow trench in a sunny spot in the shape you wish your garden bed to be (10’ long by 4’ wide is a good starting place).
- Then roughly pile old logs or stumps (avoid wood with natural toxins, such as cedar, black walnut, and eucalyptus), tree limbs, and yard and garden clippings into the trench, starting with the largest diameter on the bottom of the pile.
- Stack it up to approximately 4 - 6 feet high, layering with compost and good topsoil, watering between layers. Cover the finished pile with good quality soil.

- Use smaller branches to stake or pin the sides in place.
- Next plant fruit or nut trees along the center of the mound, berry bushes and perennial herbs on the sides, and freely scatter vegetable seeds everywhere else. Mulch around the plantings with straw or dry leaves, water, and watch it all grow.

This tall garden bed will settle over the next couple of years as the contents decompose and become a rich bed of soil. The benefits of hugelkultur beds are surprising: they retain moisture due to the large organic matter content, soil fertility is increased as the wood decomposes, and the mound can provide improved drainage to a wet area of your landscape.

A worthwhile resource is: Sepp Holzer’s *Permaculture: A Practical Guide to Small-scale Integrative Farming and Gardening* available from VURL. Also, take the time to visit www.cleartheaircowihan.ca for tips, techniques and rules that help reduce smoke pollution.

Nora Arajs manages Ceres Edible Landscaping for the Cowichan Green Community, a permaculture-based social enterprise.



Know the Rules!

CVRD Bylaw No. 3716 Smoke Control Regulation Bylaw 2013

In order to improve local air quality and to address health impacts linked to smoke pollution, a bylaw restricting backyard burning within CVRD Electoral Areas A, B, C, D and E has been enacted and will be effective immediately. Please note that a resolution to implement this bylaw within CVRD Electoral Areas F and G has been referred to their respective Area Planning Commissions for review.

CVRD Bylaw No. 3716 was developed in response to the CVRD Board's request that a burning bylaw be prepared for Electoral Areas A, B, C, D, and E, modelled after the Municipality of North Cowichan's burning bylaw. Bylaw No. 3716 is a nuisance bylaw that seeks to regulate open burning for the purpose of reducing smoke pollution and its impacts on human health.

Backyard burning is banned completely in other local municipalities, including the City of Duncan, the Town of Ladysmith and the Town of Lake Cowichan. While CVRD Bylaw No. 3716 mirrors the Municipality of North Cowichan's bylaw, it also aligns with the intent of those in place in these surrounding jurisdictions, in order to keep with the fact that smoke pollution knows no boundaries.

Additional provisions are as outlined in CVRD Bylaw No.3716. Please refer to the Bylaw in its entirety for further regulations and the definition of "open burning".

Campfires are still permitted under this Bylaw, but must abide by the set out regulations as to not constitute a nuisance (see section 5 of CVRD Bylaw No.3716). Open burning of large quantities of land clearing debris will continue to be regulated by CVRD Bylaw No. 2020 – Land clearing Management Regulation Bylaw, 2009.

Many CVRD residents already recognize the impact of smoke from open burning and choose to take yard and garden material to a CVRD Recycling Drop-off Depot for free recycling. You are encouraged to be a good neighbour and do the same.

Stay Informed

Upcoming meetings

CVRD Environment Commission meetings:

Thursday, Nov. 27, 6:00 pm

Board Room at 175 Ingram Street, Duncan

Duncan Environment Committee meetings:

Thursday, Nov. 27, 10:00 am - 12:00 pm

Committee Room, City Hall, 200 Craig Street, Duncan

North Cowichan Climate Action Committee:

Thursday, Nov. 27, 2:30 pm

Large Committee Room at the Municipality of North Cowichan, 7030 Trans Canada Highway

- Several restrictions outlined within CVRD Bylaw No.3716 will impact all backyard burning activities in the specified CVRD Electoral Areas. Key features of the Bylaw include the following: Open Burning is permitted from March 15 through April 15 and from October 15 through November 15 only;
- Open Burning must be located at least 10 metres from all property lines (generally restricting burning to parcels 1/2 acre in size or larger);
- The size of Open Burning must not exceed 2 metres in diameter; and 2 metres in height;
- Open Burning may occur only when the BC Venting Index is rated as “good”
- Check the BC Venting Index
- Burning material must be smaller than 8’ (200 mm) in diameter OR be burnt within 72 hours (no new material can be added after 5 pm)
- All burning must occur between 7:00 AM and sunset



Stay Tuned

In the next issue of 12/12:

Get Serious About Zero Waste



Sign up for the “12 Months of 12 Big Ideas” e-newsletter
and find more information at:

www.12things.ca



Share your feedback, email 12things@12things.ca

Editorial Team:

Priscilla Brewer, Managing Editor

Roger Hart

Peter Nix

Keith Lawrence

Kate Marsh

Jennifer Rowell

Lynn Wilson

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