

DATE: July 5, 2017

FILE: 5280-02

TO: Chair and Directors
Committee of the Whole

FROM: Russell Dyson
Chief Administrative Officer

RE: Air Quality – Wood Stove Exchange Incentive Options

Purpose

This report presents next steps for air quality management, including implementation options for a wood burning appliance top-up incentive program.

Policy Analysis

At the May 30, 2017 meeting of the Comox Valley Regional District (CVRD) board, the following motions were carried:

THAT a three year (2017-2019) air quality education program be implemented as described in the staff report dated May 10, 2017, funded with the Island Health Community Wellness grant received by the Comox Valley Regional District in 2016.

THAT a letter be sent to the provincial Ministry of Environment expressing the Comox Valley Regional District Board's support for the proposed changes to the Open Burning Smoke Control Regulation.

Also at this meeting, the issue of a wood stove incentive program was referred to the board's strategic priority session on June 20, 2017.

Executive Summary

Air quality management has become a recent citizen concern due to temperature inversions and particulate matter emissions associated with wood heating and open burning activity in the region. Recent CVRD actions to address air quality concerns has included offering wood stove exchange rebates and smart burning education through the provincial wood stove exchange program, working with the BC Ministry of Environment to complete an emissions inventory for fine particulate matter sources in the Comox Valley, and hosting an air quality focussed elected officials forum with presentations from multiple experts in the air quality field.

At the May 10, 2017 meeting of the CVRD committee of the whole, a three-year air quality education and incentive program was proposed, to be funded by a Community Wellness grant received from Island Health in 2016. While the education program was approved by the board, the incentive program was referred to the board's strategic priority session held in June.

Based on the strategic priority session staff have revised the proposed top-up incentives to the provincial wood stove exchange program. The recommended incentive program would provide top-up incentives only to participants who are exchanging their wood stove for a cleaner (ie. non-cordwood) heating source (e.g. natural gas stove, heat pump). This will be combined with a targeted education program focussed on wood smoke impacted neighborhoods identified by mobile monitoring.

Recommendation from the Chief Administrative Officer:

THAT staff be directed to implement the wood stove exchange top-up incentive program, as described in the staff report dated July 5, 2017

Respectfully:

R. Dyson

Russell Dyson
Chief Administrative Officer

Background/Current Situation

Air quality management has become a recent citizen concern due to temperature inversions and wood smoke in the winters and smoke from open burning activity in the area. The Georgia Strait air zone reporting for 2011-2013 ([link](#)) identified local exceedances of annual and 24-hour CAAQS for fine particulate matter (PM_{2.5}), suggesting management actions are needed to improve Comox Valley air quality in order to achieve the national standards. The Comox Valley was also prominently featured in the latest 2017 State of the Air report ([link](#)) from the BC Lung Association.

Citizen concern regarding air quality resulted in it being one of the strongest themes cited by respondents in the recent Comox Valley Community Foundation's Vital Signs survey. A citizens group known as Breathe Clean Air Comox Valley has been formed, appeared as a delegation at the May 2016 meeting of the CVRD committee of the whole, attended the April 4, 2017 elected officials forum on air quality, and communicated suggestions for implementation of the wood stove exchange program in a June 2017 letter to the CVRD board.

A three year smart burning education and outreach program, aimed at informing the public on the impacts related to poor burning practices, actions they can take to improve local air quality, and the rules and guidelines identified in local and provincial air quality, wood burning appliance and open burning regulations was approved by the CVRD board in May 2017. This program will be targeted at those neighborhoods identified as having elevated levels of wood smoke during the heating season. Door-to-door delivery of air quality & wood stove incentive materials in 'hot-spot' neighborhoods is one such strategy. Engagement with other stakeholders, such as firewood suppliers, home inspectors and WETT inspectors is also planned. CVRD have also been providing moisture meters, supplied by the province, as part of the current smart burning education program and will be looking at further opportunities to distribute these so that residents can ensure they are burning dry wood.

A top-up incentive to the provincial wood stove exchange program was proposed in a May 10, 2017 staff report and has been revisited to consider the discussions at the CVRD board strategic priorities session in June 2017. With a budget of \$9,000 per year available from the Island Health Community Wellness grant, the following rebate program is recommended:

Table 1 - Wood stove exchange top up rebates, for clean heating sources only

Description	Quantity	Top up Amount	Total Rebate
Natural gas or pellet stoves	15	\$250	\$500
Electric heat pumps	7	\$750	\$1,000

Table 1 includes top-up incentives only for cleaner burning sources such as natural gas or pellet stoves, or electric heat pumps. Providing a greater level of incentives for non-cordwood heating sources addresses concerns regarding improper use of EPA certified wood stoves (ie. burning wet wood, excessively damping down the stove to hold a fire, etc). Pellet stoves are included as they produce about a quarter the amount of PM2.5 of an EPA certified wood stove, and pellet fuel is commercially produced to contain low moisture levels.

The top-up incentives would be delivered as part of the existing wood stove exchange program, and administered by the CVRD's wood stove exchange program coordinator, CVRD staff, and program partner retailers. To accommodate the workload anticipated by including these top-up incentives, \$1,000 in additional contract funding for the wood stove exchange program coordinator is suggested, bringing the total annual cost of the incentive program to \$10,000.

The number of top-up incentives and provincial woodstove exchange rebates is limited when compared to the total number of wood burning appliances in the Comox Valley. Through the marketing of the incentive program, staff and the program coordinator will be targeting the known 'hot-spot' neighborhoods in order to maximize the benefit of the limited incentive resources. Should other funding sources be identified to increase the number of incentives, the program could be amended at a later date.

Options

Staff have developed the following incentive program options for the board's consideration:

1. Offer top-up wood stove exchange incentives to homeowners that are replacing a non-EPA wood burning appliance with a pellet stove, natural gas stove, or electric heat pump, with a maximum annual budget of \$10,000.
2. Offer top-up wood stove exchange incentives to homeowners replacing a non-EPA wood burning appliance with an EPA-certified wood stove, pellet stove, natural gas stove, or electric heat pump as previously recommended in a staff report dated May 10, 2017, with a maximum annual budget of \$10,000.

Staff are recommending option 1. This option differs from option 2 in that top-up incentives will only be offered to participants who are exchanging their stove for a cleaner (ie. non-cordwood) heating source (e.g. natural gas stove). As such, this is the option that is likely to create the biggest benefit in terms of a reduction in wintertime fine particulate matter pollution. Information regarding this top-up incentive program will be directly distributed to homes in the wood smoke impacted neighborhoods identified by mobile monitoring.

Financial Factors

The CVRD received in 2016 a Community Wellness Grant from Island Health totalling \$98,933. This grant provided \$14,700 for the CVRD's share of costs for the recently completed emissions inventory. The education program approved by the board in May, and the top-up incentive program as described in this report would be implemented with the funds remaining from this grant. For 2017, the CVRD has also received \$17,100 to implement the provincial wood stove exchange program, which provides \$250 towards the exchange of old non-certified wood stoves for new, cleaner heating options, and \$4,100 for the contracted wood stove exchange program coordinator.

As the CVRD has no service dedicated to air quality, the existing wood stove exchange program, approved education program, and proposed wood stove top-up incentive program are funded with provincial grants. Should expanded air quality initiatives be desired, the board would need to consider establishing a service and potential using taxation for additional funding.

Legal Factors

Local governments are granted the authority to protect local air quality through various sections of the *Local Government Act* and *Community Charter*. A full summary of the provincial legislative framework for air quality was included as Appendix ‘A’ to an air quality report delivered to the June 2016 meeting of the CVRD committee of the whole ([link](#)).

Regional Growth Strategy Implications

The activities proposed in this report would work towards the following objectives of the Regional Growth Strategy:

- Ecosystems, natural areas and parks: poor air quality could adversely impact the ability of residents to recreate in natural areas and parks;
- Local economic development: poor air quality could adversely impact the desirability of the Comox Valley as a tourism and retirement destination;
- Transportation: multi-modal transportation networks that reduce single occupancy vehicle travel will help reduce the impact of vehicle emissions on local air quality;
- Public health and safety: exposure to the pollutants in wood smoke has been linked to negative health outcomes including impaired lung function in children, increased severity and frequency of symptoms of asthma and chronic obstructive pulmonary disease (COPD) and increased risk of heart attack or stroke for those with risk factors for heart disease; and
- Climate change: diverting material that is open burned to energy recovery (ie. as fuel for a biomass boiler) is a form of renewable energy that could reduce the local need for fossil fuels.

Intergovernmental Factors

Many communities in British Columbia address local air quality challenges through air quality working groups, which typically include local governments, first nations, health authorities, Ministry of Environment and local citizens amongst their membership. Due to air quality concerns resulting from PM_{2.5} levels in exceedance of provincial objectives, the Ministry of Environment and Island Health have a strong interest in assisting with the development of a Comox Valley air quality working group. Staff from Comox Valley local governments will be invited to review the elements of the air quality education and outreach program as they are developed.

Interdepartmental Involvement

The following CVRD departments have been involved in the CVRD’s response to citizen concerns regarding local air quality:

- Transit and sustainability;
- Fire services;
- Building services;
- Bylaw enforcement;
- Public affairs; and
- Legislative services.

The majority of the air quality work thus far has been led by staff in the community services branch.

Citizen/Public Relations

In the Comox Valley, air quality has been a recent citizen concern due to temperature inversions and wood smoke in the winters and smoke from open burning activity in the area. A citizens group known as Breathe Clean Air Comox Valley has been formed, and appeared as a delegation at the May 2016 meeting of the CVRD committee of the whole. Air quality was also one of the strongest themes cited by respondents in the recent Comox Valley Community Foundation’s Vital Signs

survey. A communications plan for an air quality education and outreach program was approved by the CVRD board at its May 30, 2017 meeting.

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