

Report to Council



Date: April 25, 2022
To: Council
From: City Manager
Subject: Vehicle Idling Control Proposal
Department: Integrated Transportation

Recommendation:

THAT Council receives for information, the report from Integrated Transportation dated April 25, 2022, regarding the proposed vehicle idling control policy for the City of Kelowna;

AND THAT Council direct staff to come forward for Council consideration with an Anti-Idling Bylaw and accompanying Education Program during Q3 2022.

Purpose:

To update Council on regional objectives and actions towards vehicle idling control, the merits, and the potential for regulating idling within City of Kelowna corporate limits and municipal authority.

Background:

Transportation is the largest contributor to greenhouse gas (GHG) emissions within Kelowna. Vehicle emissions also directly contribute harmful emissions into the city's air supply. Idling control is an action to reduce GHG emissions and improve air quality from the transportation sector. Reducing unnecessary idling is identified as a recommended action in Kelowna's Community Climate Action Plan and the Central Okanagan Clean Air Strategy. Overall, an idling control bylaw is an effective and low-cost method to build awareness for climate objectives and to reduce local emissions by changing driver practice.

Administration's recommendations seek to deliver on Imagine Kelowna's goals to "protect land, water and air" (Principle 4-Responsible) and to "take action in the face of climate change" (Principle 2-Smarter). Also, this would support one of Council's Environment protection priorities, "Greenhouse gas emissions are decreasing"¹.

As the air has no boundaries, all Clean Air Strategies have been discussed and evaluated with a regional approach. The Central Okanagan Air Quality Technical Committee, a working group of air quality experts from federal, provincial, and local agencies, supports implementing an idling control bylaw to improve local air quality.

¹ Imagine Kelowna: vision into action, Council priorities 2019-2022, Results summary, Pg. 7

Considered a municipal environmental best practice², an idling control regulation would align the City of Kelowna in line with 30 British Columbia municipalities that have implemented similar bylaws. Attached as Appendix 1 is a sample for review and discussion titled "Central Okanagan Idling Control Technical Report".

Previous Council Resolution:

Over the past 12 years, the City has acted to study, consult, and coordinate on an idling control policy. On multiple occasions Council has endorsed recommendations to implement an anti-idling bylaw.

- On January 11, 2010, Council discussed implementing an idling control regulation, but opted to defer to the Regional District of Central Okanagan (RDCO) for discussion by the Regional District's Okanagan Similkameen Airshed Coalition (OSAC), who could comment on idling control with respect to both corporate and community carbon and air quality issues. Following the Council resolution, the former Okanagan Similkameen Airshed Coalition (OSAC) made two motions at their Feb. 24, 2010, meeting: 1. Consider a social marketing program for anti-idling, and 2. Request regional and municipal governments forward any anti-idling policies to the Okanagan Similkameen Airshed Coalition (OSAC) for their review.
- In 2011 Council approved a Climate Action Plan which recommends implementing an anti-idling bylaw.
- In 2011, anti-idling policies were compiled and shared with regional partners, there was an educational program in the Central Okanagan through public awareness campaigns, school-based initiatives, signage, city websites, media releases and social media. Two hundred anti-idling signs provided by the provincial government were installed throughout the region to support public awareness. The RDCO, Lake Country, City of Kelowna, West Kelowna, and Peachland have all adopted municipal fleet anti-idling policies.
- In 2015 Council approved a Clean Air Strategy including Action 3.2 which recommended implementing an anti-idling bylaw.
- The 2018 Community Action Plan includes recommended action T9, implementing an anti-idling bylaw.
- In 2019, a Regional Idling Control regulation proposal was presented to the RDCO, and staff received direction from the RDCO to present the idling control regulation proposal to interested municipalities within the region.
- On February 10, 2020, Council directed staff to report back on the status of a Regional Anti-Idling Bylaw, and options to regulate idling, including number of complaints, pros, and cons of enforcement.
- On October 19, 2020, city staff presented options to resource accelerated climate action which included "develop and adopt an anti-idling bylaw" as was a recommended action in the Kelowna's Community Climate Action Plan³.
- On May 13, 2021, an Air Quality service update report was presented to the RDCO Governance and Services Committee for their information. The report included actions related to idling control. Staff indicated their intention to bring an idling control proposal to City of Kelowna Council as a pilot program for the region.
- On January 24, 2022, City Council approved the Transportation Master Plan (TMP). TMP Policy 7.2, states "Recognize that vehicle idling creates noise, odour, and harmful emissions. Work to reduce vehicle idling in Kelowna in alignment with the Central Okanagan Clean Air Strategy".

² [Cracking Down on Idling \(nrcan.gc.ca\)](https://www.nrcan.gc.ca/cracking-down-on-idling)

³ [Community climate action plan june 2018 final.pdf \(kelowna.ca\)](#)

Discussion:

Idling

Vehicle idling occurs when a vehicle's engine is in operation but not propelling the vehicle. The engine is creating unnecessary emissions. Natural Resources Canada^{4 5} states that idling for more than 10 seconds uses more fuel and produces more CO₂ than restarting the engine. However, to balance factors such as fuel savings, emissions and component wear, 60 seconds is the recommended interval.

Idling occurs in many places including on and off roadways. On-roadway idling occurs when vehicles are stopped at traffic signals or stopped in traffic congestion. Off-roadway idling is associated with truck stops and rest areas, bus terminals, restaurant drive-throughs, tourist attractions, landfill, car washes, school zones or simply in front of people's homes.

Results from a 2016 survey of 276 respondents in the Central Okanagan showed that respondents' top five reasons for idling were waiting in traffic, waiting for passengers, waiting to park, warming up or cooling down a vehicle, as well as waiting in drive-throughs⁶. Most respondents agreed steps should be taken to change idling behaviours (78%) and agreed that their municipality should implement an idling control bylaw (60%). The Air Quality program received on average 147 complaints/inquiries per year (2018-2020), and 20% were related to vehicle idling. Some examples of idling concerns are included in Appendix 2.

Other Jurisdictions

Vehicle idling bylaws in B.C. cover 35% of the B.C. population. Vehicle idling bylaws are in place in 30 municipalities within 15 regional districts. Idling bylaws tend to be in place in urban areas and densely populated municipalities where vehicle idling can become a significant source of local air pollution⁷. The most common time limit prohibits idling for more than 3 minutes. Recently updated and adopted bylaws are moving towards a one-minute bylaw to align with Natural Resources Canada's recommended interval (British Columbia Ministry of Environment, 2015). Any reduction in permitted idling time will increase ease and efficacy of enforcement.

Canadian National initiatives

Vehicle manufactures around the world are adopting automatic stop-start components in new vehicles at all price points to meet increasingly strict emissions and fuel conservation targets. A vehicle start-stop system automatically shuts down and restarts the internal combustion engine to reduce the amount of time the engine spends idling, thereby reducing fuel consumption and emissions. These systems are engineered into all system components and the engine control software. The Ford F-150 pick-up, Canada's #1 selling vehicle, has had stop-start technology as standard equipment since 2017. The benefits of this new technology will take years to accumulate as the new vehicles replace older vehicles currently on Kelowna's roads. The benefits of auto stop-start will be most significant towards traffic congestion related idling.

⁴ [Natural Resource Canada-Idle-Free Zone](#)

⁵ [Which Is Greener: Idle, or Stop and Restart?](#)

⁶ [Central Okanagan Idling and Air Quality Attitudinal Study](#)

⁷ [Status of Air Quality Bylaws in BC-2017](#)

Potential for Reducing Greenhouse Gas Emissions in Kelowna

According to the latest Sixth Assessment Report (AR6) by the Intergovernmental Panel on Climate Change (IPCC); *“Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since AR5. From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO₂ emissions, reaching at least net zero CO₂ emissions, along with strong reductions in other greenhouse gas emissions. Strong, rapid and sustained reductions in CH₄ emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality”*.⁸

Every ton of CO₂ adds to global warming and City of Kelowna residents could help reduce local emissions. We will see a shift to zero-emission vehicles in the coming decades, however most recent ICBC data shows that only 7% of registered vehicles are either fully electric or hybrid (2012-2020). Auto industry data estimates that only 42% of new vehicles (Model 2020) are equipped with start-stop technology⁹. Considering data from the 2018 Okanagan Household Travel Survey, it is estimated that on a typical weekday there are 62,993 gas and diesel engine vehicles on the road in Kelowna that potentially idle. If every drive in Kelowna were to avoid idling for one minute a day, the positive impact to improving air quality would be the same as if 345 vehicles were removed from the road for a year. Residents could reduce emissions between 1,586 (1 min/day) to 9,518 (6 min/day) tonnes of carbon dioxide (CO₂) per year.

Health Benefits

Idling creates smog that can seriously affect residents' health. For every litre of gasoline used, a vehicle produces about 2.3 kilograms of CO₂. Vehicles produce additional emissions, such as volatile organic compounds (VOCs), carbon monoxide (CO) and oxides of nitrogen (NO_x), these are criteria air contaminants (CACs). Benefits of reducing air pollution can be measured by the prevention of premature deaths. Improving the conditions for pedestrians and bicyclists in areas where idling frequently occurs is vital (e.g., school areas, street parking).

Options for idling restrictions

Experience from municipalities across Canada has shown that rather than being mutually exclusive, bylaws and voluntary approaches can be seen as complementary and as a continuum of education and implementation¹⁰. The intent is compliance and behavior change not issuing fines. For example:

- Education and outreach campaigns conducted before a bylaw is enacted can:
 - Build awareness about idling, and in turn build support for actions taken on idling.
- A bylaw can support and reinforce an education and outreach campaign by:
 - Highlighting idling as a serious health and climate issue.
 - Sustaining public awareness and behavioural change.
 - Empowering employers, property owners, and agencies in requesting reduced idling.
- A bylaw without an education campaign will likely be ineffective because:
 - If residents do not know about the bylaw, then they will be unlikely to comply with it.
 - People are likely to resist a bylaw that they do not understand and may feel it is unwarranted, and

⁸ [Climate Change 2021. The Physical Science Basis- Summary for policymakers](#)

⁹ [Highlights of the Automotive Trends Report-Figure ES-5](#)

¹⁰ [Natural Resource Canada](#)-Reflect on “Carrot” versus “Stick” Approaches

- A bylaw on its own does not address the barriers that prevent motorists from idling their vehicles less, whereas an education campaign can seek to break these barriers down.

Lessons learned by other municipalities across Canada indicate that an idling control regulation supported by a comprehensive public awareness campaign is the most effective way to reduce unnecessary vehicle idling.¹¹

Proposed regulation

Implementing an idling bylaw demonstrates the commitment of municipal government to change damaging environmental behaviors while significantly raising public awareness and compliance. An idling bylaw aligns well with Council's priorities respecting climate change, which is also inclusive of green fleet policies, employee trip reductions, improved public transit, energy conservation, among other.

The Central Okanagan Air Quality Technical Committee recommends a one-minute idling maximum regulation with the least number of exemptions. It is important to note that this proposed regulation would not apply to zero emissions vehicles and partial-emissions vehicles or those with start-stop technology while the electric motor/generator assists the gas engine. It also not applies to vehicles when they are in traffic. Instead, the regulation would apply to vehicles idling while parked in a:

- parking lot
- drop-off zone
- street
- driveway
- laneway
- pick-up zone or drive-thru

The proposed regulation would apply to all drivers of motor vehicles on highway, municipal, private, and commercial property within city limits of Kelowna. Table 1 summarizes typical provisions of an idling bylaw.

Table 1. Typical general idling bylaw provisions

Section	Contents
Part 4. General regulation	6. A person must not cause or permit a motor vehicle to idle for more than one-minute (60 seconds)
Part 5. Exemptions	7. The one-minute limit does not apply to the following situations, except where idling is substantially for the convenience of the operator or passengers of the motor vehicle: <ul style="list-style-type: none"> a) police, fire, ambulance, while engaged in operational activities. b) armoured motor vehicle, used to transport money or valuables, in which a person remains to guard the contents, in the course of the loading or unloading of such money or valuables. c) motor vehicles with power take-off and mobile work vehicles while they are in the course of being used for their basic function. d) Motor vehicle while engaged in a mechanical test or maintenance procedure. e) Motor vehicle in the course of a parade approved by an authorized person. f) Motor vehicle forced to remain motionless because of highway traffic, an emergency, or mechanical difficulties over which the driver has no control. g) Motor vehicles that must remain idling so as to power a heating or refrigeration system or any ancillary equipment for the preservation of perishable cargo, but not when idling disturbs the quiet, peace, rest, enjoyment or convenience of a neighborhood or of persons in the vicinity. h) Transit vehicles while its passengers are in the course of embarking or disembarking.

¹¹ [Cracking Down on Idling \(nrcan.gc.ca\)](http://Cracking Down on Idling (nrcan.gc.ca))

Complaint-based impact

As with the majority of the City's bylaws, an idling regulation would be complaint-based. Other complaint-based bylaws receive a considerable number of complaints per year, but only a few are directed to a bylaw officer for investigation and possible enforcement. As with these other bylaws, to effectively reduce vehicle idling, a two-pronged approach that includes both regulation and education is recommended

Complaints could be handled using an educational approach, like the way water restriction complaints are handled. In this case, when a complaint reaches the service request system, notices are sent to make residents cognizant of their water usage and to reduce their daily demand. A similar example is Regional Bylaw 773, which handles smoke complaints regarding indoor wood burning appliances. It receives around 30 complaints annually (2018-2020); however, only 2 complaints per year were sent to a bylaw officer during the same period.

The City's Service Request system is well suited for managing complaints and responsibilities for actions. For example, when an idling complaint is made, it would automatically be directed to Air Quality staff who could provide the first point of contact via educational materials with a warning. Repeat offenders would eventually escalate to bylaw enforcement. Data could be collected for internal use to track idling hotspots and direct educational resources or enforcement to specific areas or locations receiving complaints. All complaints would be handled first by the regional Air Quality Coordinator, as is done with all regional indoor and outdoor smoke complaints, reducing the time and resources required from City bylaw officers.

The existence of a bylaw can itself be a useful behavior change tool. Other individuals including general staff, and members of the public, are able to point to the bylaw. For example, the Traffic Safety Officer would be able to inform those idling their vehicles around schools that it is not only an undesirable action but indeed is an unlawful one. This is similar to other City bylaws like non-smoking in Parks and Public Spaces which is used regularly by the City's Security Contractor without the need for Bylaw staff assistance.

Educational Campaign

The Regional Air Quality Program is proposed to account for educational campaigns, marketing material, sign production costs and advertising to increase awareness of any new regulation. It is recommended the regulation come into force 180 days after the date of adoption to allow time for an extensive public educational campaign before any enforcement might begin.

A "phased-in" approach is recommended; starting with a public education period followed by a period of "warnings" prior to considering enforcement actions. A six-month public education campaign will increase awareness of any regulation and promote behaviour change over time, where turning off one's vehicle when parked for more than one minute is considered a social norm by the time the regulation is enforced:

- The cost of similar campaigns in other municipalities is \$8000-10,000. The Regional Air Quality program has resources available and there are no additional financial commitments needed by the City.
- A communication plan and an innovative digital campaign will be designed to increase idling awareness; through website, social media, downloadable/printable materials, signs, videos, etc.

Enforcement Perspective

Many municipalities regard the bylaw, together with signage and public information on the problems of idling, as necessary and sufficient deterrent to idling behaviors, and do not regard active enforcement as necessary or desirable. Summaries of experiences of other B.C. communities with an idling bylaw in place are included in Appendix 1. Based on data from other municipalities with one-minute idling bylaws in place, it is estimated that approximately 9 complaints per year could be attended by an enforcement officer. A set fine of \$150 is proposed as a reasonable yet significant enough penalty to encourage compliance.

While the number of complaints requiring reactive enforcement is easily managed within existing bylaw resources, it is noted that proactive enforcement will not be feasible with existing Bylaw Services, and RCMP, resourcing. A detailed overview of enforcement considerations follows:

- Idling requires “*catching in the act*” and “*staking out*” specific areas where complaints are received. Investigations with a view of considering potential charges include more than simply obtaining a license number, but a statement from a witness willing to testify in a court / adjudication proceeding. Out of province vehicles create considerable impediments for enforcement.
- Bylaw Services is not empowered with regulatory authorities to enforce “moving violations” with respect to the operation of motor vehicles on streets / highways. Operationally, this means that once an idling vehicle is in motion, Bylaw Services can not intervene to enforce.
- While the police are duly empowered, idling complaints would not meet a “priority” threshold for response and officer attendance would not occur in a timely enough manner to affect enforcement.
- Seasonal considerations would become prominent for safety reasons with the operation of air conditioning / heat for clearing windshield frost. Although, even in winter, the overall stationary recommended warm-up period for light duty vehicles is just 30 seconds and drivers are also expected to scrape their windows and not rely solely on the defrost/defog function in vehicles.
- While any new legislation brings about desired behaviour changes through general compliance, legislation with inherent enforcement challenges, proactive or reactive, typically includes a measure of consequences. Specifically, legislation that is not proactively enforced and/or is perceived to be inadequately prioritized/ actioned by police or bylaw officers can be expected to invite public complaints and criticism.

It is envisioned the Air Quality Coordinator would be the recipient of all idling complaints, with only the most egregious of complaints (repeat offenders) being forwarded to Bylaw Services for follow-up. Such complaints are anticipated to be <10 annually. A common approach in reacting to complaints will involve speaking with offenders, providing information on the bylaw, and asking for voluntary compliance.

Conclusion:

This report has explored options for reducing and regulating vehicle idling in Kelowna. An idling control regulation could be a cost-effective way to achieve Council objectives including reducing GHG emissions, improve air quality, and consequently improve human health, and align with the goals of Imagine Kelowna.

Staff recommend that a one-minute idling control bylaw regulation with the proposed least number of exemptions. The overall intent is to legitimize a correct action by the public through regulation and

therefore foster a cultural change towards eliminating unnecessary vehicle idling. To supplement the proposed bylaw, a comprehensive education program is proposed with an enforcement strategy that is largely educational in nature.

Next Steps:

Following Council direction, staff could prepare a draft City Idling Control Bylaw and accompanying education public education campaign, returning to Council on June 27, 2022.

Internal Circulation:

Bylaw Services
City Clerk
Communications
Corporate Strategy & Performance
Development Planning
Fleet Services
Parking Services
Policy & Planning

Considerations applicable to this report:

Existing Policy:

- City Idling fleet policy has been in place since 2004
- Kelowna's Community Climate Action Plan Action T9 (Implement an anti-idling bylaw as outlined in the Clean Air Strategy), Action 03 (continue to implement the action of the Clean Air Strategy)
- Central Okanagan Clean Air Strategy
- Official Community Plan Policy 6.2.1 GHG Reduction Target and Actions

Financial/Budgetary Considerations

In addition to allocation of existing staff resources, other potential costs for implementing an anti-idling bylaw include educational campaigns, marketing material and advertising to make people aware of new bylaw. These estimated costs could be covered by the current Regional Air Quality Program budget.

Considerations not applicable to this report:

Legal/Statutory Authority:
External Agency/Public Comments:
Legal/Statutory Procedural Requirements:
External Agency/Public Comments:

Submitted by: N. Mora Castro, Regional Air Quality Program Coordinator

Approved for inclusion: M. Logan, Infrastructure General Manager

Attachment 1 - Appendix 1- Central Okanagan Idling Control Bylaw Technical Report
Attachment 2 - Appendix 2- Examples of Idling concerns from City of Kelowna residents
Attachment 3 - Idling Control Regulation Proposal Presentation

cc: City Clerk

Divisional Director, Corporate and Protective Services
Divisional Director, Corporate Strategic Services
Divisional Director, Financial Services
Divisional Director, Partnership & Investments
Divisional Director, Planning & Development Services