

# WHISTLER

## REPORT | ADMINISTRATIVE REPORT TO COUNCIL

**PRESENTED:** June 9, 2020

**REPORT:** 20-052

**FROM:** Infrastructure Services

**FILE:** T001-01-2020

**SUBJECT:** ASPHALT PROCUREMENT UPDATE

### COMMENT/RECOMMENDATION FROM THE CHIEF ADMINISTRATIVE OFFICER

**That** the recommendation of the General Manager of Infrastructure Services be endorsed.

### RECOMMENDATION

**That** Council consider changing the restrictions on asphalt procurement to allow asphalt to be purchased from the asphalt plant located near Cheakamus Crossing.

### REFERENCES

Appendix “A” – Whistler Aggregates Ltd., Crown Tenure Licence of Occupation

Appendix “B” – WSP 2018 Ambient Air Quality Monitoring Report

Appendix “C” – Levelton 2010 -2014 Ambient Air Quality Monitoring Report

Appendix “D” – Resident feedback from February 26th Asphalt Sourcing Public Information Meeting

### PURPOSE OF REPORT

The purpose of this Report is to allow Council an opportunity to provide revised direction on the limitations of where the RMOW will purchase asphalt.

### DISCUSSION

#### Background

Since 2011, Council has directed staff to include a restriction in our asphalt procurement tender that requires asphalt used for municipal projects be sourced from a facility that is located at least three kilometers from a Whistler residential neighborhood. Alpine Paving Ltd. has continued to be the successful bidder every year, and this has resulted in Alpine Paving supplying asphalt for Whistler projects from their Squamish asphalt plant. The Squamish asphalt plant is located approximately 750 meters from the nearest Squamish neighborhood.

Alpine Paving also owns a newer asphalt plant located south of the Cheakamus Crossing neighborhood that is capable of using recycled asphalt and has a modern exhaust scrubbing system that reduces particulate emissions discharged from the facility as it produces asphalt. This asphalt plant is located on crown provincial land and has a License of Occupation (LOO) from the province for quarrying and asphalt purposes. See Appendix “A” for the decision by the province to renew this tenure over Crown land LOO in September 2017 for a period of 10 years.

The RMOW has been monitoring air quality in Cheakamus Crossing since 2010 with the assistance of consultants (WSP Canada Ltd-Levelton) at an average annual cost of \$20,000 - \$30,000. All results and reports (by WSP-Levelton) since 2010 have shown that all days monitored show compliance with the provincial standards for air quality monitoring, BC Ambient Air Quality objectives (BC AAQO), with the exception of the significant forest fire events that have happened in past summers. The Whistler asphalt plant located south of Cheakamus Crossing owned by Alpine Paving, has been the source of asphalt for several other clients such as the Ministry of Transportation and Infrastructure (MOTI), private land owners, and other municipalities surrounding Whistler.

An air quality specialist from WSP consultants has been contracted by the RMOW to operate and maintain the Cheakamus Crossing air monitoring station that detects airborne particulate matter. The station was installed to assist in addressing local citizen's concerns of potential ambient air quality issues associated with the Alpine Paving asphalt plant. The most recent WSP annual report on air quality monitoring for 2018 is attached in Appendix "B" and further mentioned below with respect to air quality and prevailing wind direction. Additional information on air quality monitoring back to 2011, is found in Appendix "C" - 2010 -2014 Ambient Air Quality Monitoring Report by Levelton Consultants (now WSP). This report summarizes monitoring data from 2011-2014 and draws conclusions from those five years of data. All of the reports are consistent in their analysis that the provincial air quality objectives have been met and are also below the Metro Vancouver regional annual average (per WSP 2018 conclusion statement).

### **Air Quality Monitoring**

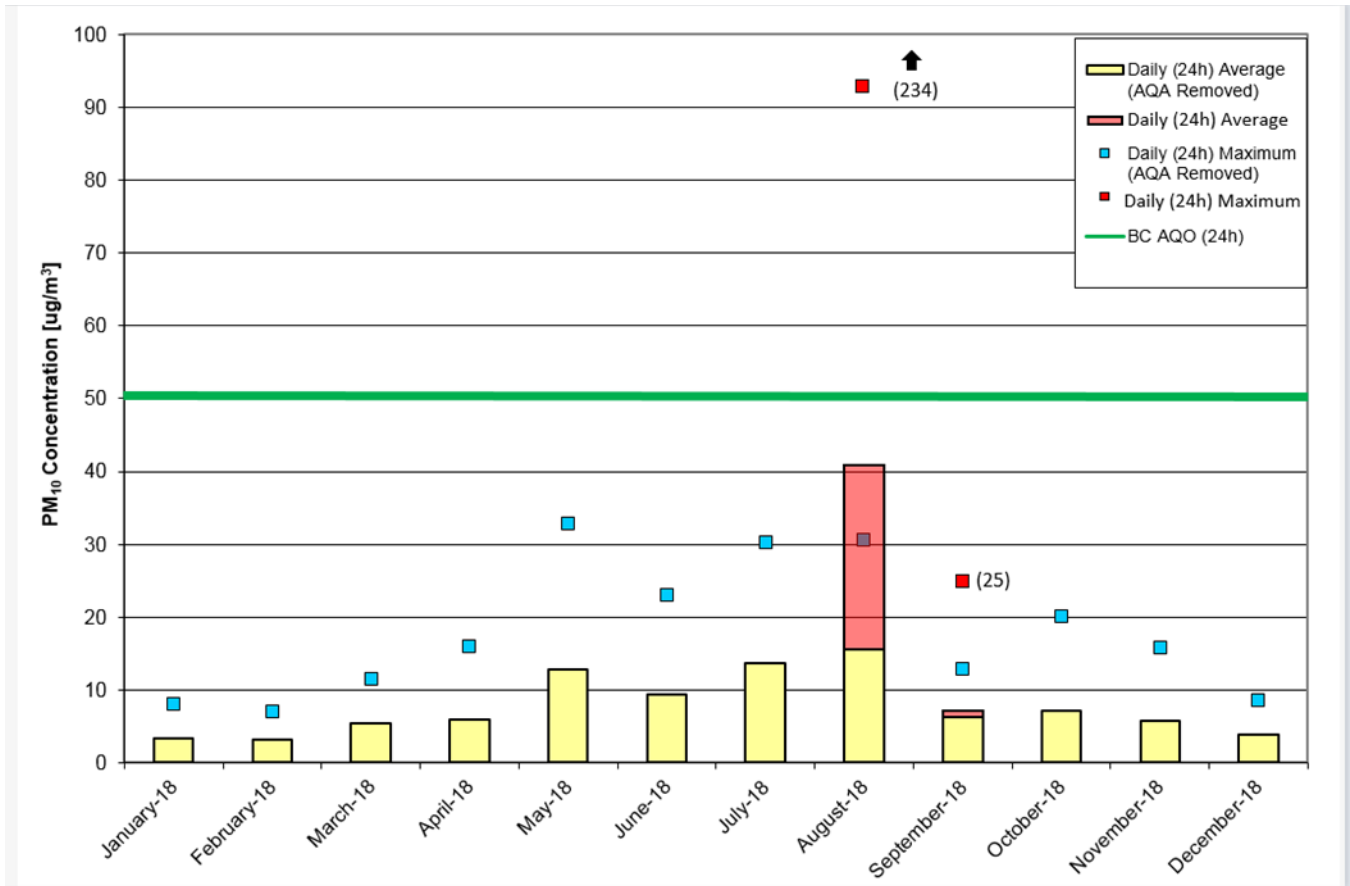
Shown below in Figure 1, the monthly breakdown of the 24-hour air quality monitoring (referred to as block averages). This Figure shows the 24 hours maximums, along with the hourly maximum and the monthly averages (shown as yellow columns). The BC Ambient Air Quality Objective (AAQO) is shown by the green line in Figure 1, as  $<50\mu\text{g}/\text{m}^3$ . This is then compared to the 24-hour maximum recorded amounts of particulate matter during each month (blue squares shown in Figure 1).

As shown in the 2018 report data by WSP, there were no exceedances of the provincial air quality objectives, except for two separate times during forest fires in the province. In August and September of 2018, during which Air Quality Advisories were issued by Metro Vancouver, due to smoke from forest fires, high levels of particulate matter were detected by the air quality monitoring at the Cheakamus monitoring station. Removing the distinguishable data peaks due to forest fire smoke shows that the results are within the BC Air Quality Objective ( $<50\mu\text{g}/\text{m}^3$ ), see Figure 1 below.

Figure 1 shows the red maximum points as the values if the data during these air quality advisories periods are included. The specific dates of the air quality advisories were: August 10th-11th, 13th-27th, and Sept 7th. This data set was cross referenced with the Meadow Park Station run by BC Ministry of Environment. It collected data with similar highs of approximately  $233\mu\text{g}/\text{m}^3$  during the period of the air quality advisories due to forest fires.

All daily air quality results from 2018, and previous years back to 2010, for the Cheakamus Crossing monitoring station show that the concentration of particulate matter is in compliance with provincial standards for air quality objectives.

*Figure 1 – WSP Summary of 2018 Air Monitoring Data*

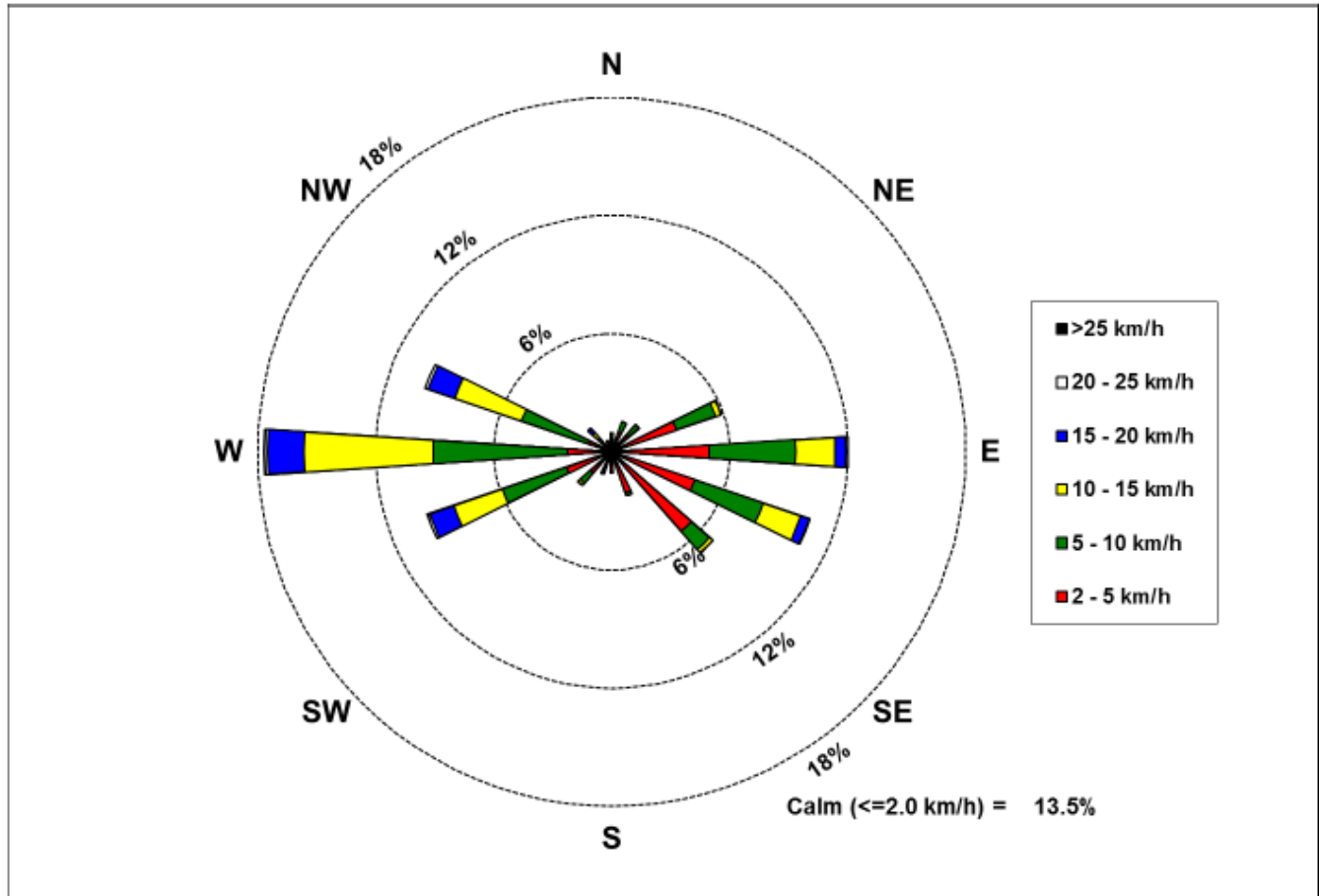


Prevailing winds are measured and recorded by the monitoring station in Cheakamus Crossing. The dominant wind direction has a large impact on how particulate matter can travel in a geographical area.

For the Cheakamus Crossing neighborhood, winds from the southwest and south-southwest would have the greatest potential to transport emissions directly from the asphalt plant towards the monitoring station. However, the wind monitoring data shows that the prevailing wind direction continues to be from the West. Southwest and south-southwest winds are present less than five per cent of the time.

See Figure 2 below showing the wind data collected, referred to as a Windrose diagram (see Appendix "B" - WSP 2018 Summary of Ambient Air Quality Monitoring Report).

Figure 2 – Wind data collected - Wind rose data



### Environmental Impact from transporting asphalt from Squamish

The transport of asphalt from the Squamish plant (instead of the Whistler plant) has resulted in an additional environmental impact. Trucking asphalt the additional distance (difference from Squamish to Whistler return) has resulted in additional CO<sub>2</sub> emissions in our air-shed.

Over the past three years (2017-2019), extra emissions from hauling asphalt from Squamish ranged from 32 tons of CO<sub>2</sub> per year to 79 tons of CO<sub>2</sub> per year depending on the amount of asphalt purchased. In comparison, total RMOW Corporate emissions in 2018 were 1,692 tons of CO<sub>2</sub>. The additional emissions from hauling asphalt from Squamish is equal to between two per cent and five per cent of the total RMOW Corporate emissions. See Table 1 below for a summary of the additional CO<sub>2</sub> emissions produced by hauling asphalt (in a diesel dump truck) from 2011 – 2019. This has resulted in an average annual increase of 30 tons of CO<sub>2</sub> per year, or 269 tons of CO<sub>2</sub> total since 2011.

In addition to carbon emissions, diesel is also a material source of local air pollutants including nitrous oxides (NO<sub>x</sub>), Sulphur dioxide (SO<sub>2</sub>), and particulate matter (PM), which exacerbate impacts to the health of the public and environment.

Table 1. Additional CO2 emissions created from hauling asphalt from Squamish since 2011.

Year	RMOW Asphalt Quantity from Squamish Plant (metric tonnes)	Additional CO2 Emissions Due to Longer Haul Distance (tonnes)
2019	5,410	32
2018	6,339	38
2017	13,339	79
2016	1,927	11
2015	1,186	7
2014	6,403	38
2013	1,653	10
2012	3,700	22
2011	5,429	32
<b>Averages</b>	<b>4,697</b>	<b>30</b>
<b>Totals</b>	<b>42,273</b>	<b>269</b>

**Financial Impact to transporting asphalt from Squamish**

On several occasions over the past ten years, an alternative bid to supply asphalt from the Whistler asphalt plant has been received during the project tender process. These alternative bids have been considered, but never accepted. While the exact amount of the discount to supply asphalt from the Whistler plant has varied, the average discount that has been offered has been equal to five per cent of the total paving costs. Staff have used that information to estimate the additional costs of bringing asphalt from Squamish.

The financial impact to the RMOW for transporting asphalt from the Squamish plant to Whistler since 2011 has resulted in an average additional cost of \$50,000 per year to procure asphalt. In total, the cost is roughly \$455,000 or five per cent of the total cost of asphalt from 2011 to 2019.

Table 2. Additional costs for transporting asphalt from Squamish plant to Whistler since 2011.

Year	RMOW Asphalt Quantity from Squamish Plant (metric tonnes)	Additional Dollars due to Squamish Source*/**
2019	5,410	\$54,100.00
2018	6,339	\$63,390.00
2017	13,339	\$133,390.00
2016	1,927	\$19,266.10
2015	1,186	\$11,864.56
2014	6,403	\$64,030.00
2013	1,653	\$16,532.00
2012	3,700	\$55,000.00
2011	5,429	\$38,062.00
<b>Averages</b>	<b>5,043</b>	<b>\$50,625.92</b>
<b>Totals</b>	<b>45,386</b>	<b>\$455,633.26</b>

\*Note this does not include the costs to manage the air quality monitoring stations in Cheakamus Crossing neighbourhood.

\*\*Does not include indirect costs of receiving a cooler asphalt product that staff anticipate to be less durable than locally produced asphalt.

**WHISTLER 2020 ANALYSIS**

<b>W2020 Strategy</b>	<b>TOWARD Descriptions of success that resolution moves us toward</b>	<b>Comments</b>
Visitor Experience	The resort is comfortable, functional, safe, clean and well maintained.	Timely maintenance of roads and valley trail infrastructure is important to enhance the Visitor Experience.
Finance	The resort community effectively and efficiently balances its costs and expenditures.	Purchasing asphalt locally will save money and allow RMOW projects to use a more durable asphalt product.
Materials and Solid Waste	The resort community is closing the loop by providing appropriate and convenient opportunities for reducing, reusing and recycling materials.	The newer asphalt plant located in Cheakamus Crossing can use recycled asphalt, while the older plant in Squamish cannot.
Transportation	Whistler policy, planning and development prioritizes preferred methods of transportation in the following order: <ol style="list-style-type: none"> <li>1. Pedestrians and bicycles</li> <li>2. Transit and movement of goods</li> <li>3. Private automobiles, high occupancy vehicles and other low impact technologies.</li> </ol>	Maintaining the roads and valley trail corridor is a large part of the assets the RMOW is responsible to maintain annually. The RMOW owns and maintains ~80 kilometres of road and 48 kilometres of valley trail.

<b>W2020 Strategy</b>	<b>AWAY Descriptions of success that resolution moves us away from</b>	<b>Comments</b>
Partnerships	Residents, taxpayers, business and local government hold a shared vision for the resort community and work in partnership to achieve that vision.	Different stakeholders in the resort have different perspectives on the asphalt plant operation near Cheakamus Crossing. The RMOW and the provincial government have control over different parts of this issue which causes some confusion for residents.

**OTHER POLICY CONSIDERATIONS**

N/A

**BUDGET CONSIDERATIONS**

The current asphalt purchasing requirements have created a financial impact due to the cost of trucking asphalt from Squamish. There is also a financial impact due to using asphalt that has cooled more before being placed on the roads. When asphalt cools before it is placed, the durability of the asphalt is reduced. While this reduced durability will be hard to quantify, the RMOW has been using these procurement requirements for the last ten years and can expect to see the effects of using the lower quality product in the following years. Table 2 (above) shows the accumulated cost impact due to a higher price per ton of asphalt from the Squamish plant. The financial impact of bringing asphalt from Squamish to Whistler can be equated to approximately five per cent of the total cost or an additional \$10 per metric ton, for a total of approximately \$455,000 over the past ten years.

## COMMUNITY CONSIDERATIONS AND ENGAGEMENT

An information open house was held on Wednesday, February 17, 2020 from 4:30 to 6:30 p.m. at the Delta Village Inn and Suites. Approximately 20 members of the public attended the open house as well as three Councillors and the Mayor.

A presentation was given during the open house, which created a forum for discussion of many of the issues. Many different points of view were expressed, and residents of Cheakamus Crossing were generally not in favour of any additional operation of the asphalt plant, with many people suggesting that it is not the right place for this kind of industrial activity.

Resident concerns were gathered via email to the Infrastructure Services department following the February information session and are attached in Appendix "D". Below is a summary of the main resident concerns from a total of 20 emails received:

- Dust/Poor Air quality/ Health Concerns – 18 concerns
- Truck traffic – 8 concerns
- Noise – 7 concerns
- Future buildout of residential area in Cheakamus Crossing – 5 concerns.

Many of the local resident's concerns were related to the health effects of asphalt plant emissions, and the effects of dust produced at the industrial site. The majority of dust created at the site comes from truck traffic and the aggregate quarry. The asphalt plant has a bag-house filter that is designed to remove most particulates (dust) from the asphalt plant exhaust.

Several local residents expressed their concerns with respect to the truck traffic that travels to and from the Crown land tenure area which is shared by an aggregate quarry, the asphalt plant, and two local excavation and industrial services companies. The heavy equipment traffic and the associated dust it creates is due to all the companies that use this site, not just from the asphalt plant. It is worth noting that this road is a forestry road, not a municipal road, so the RMOW has less influence over the operation and maintenance of the road.

Some safety measures are being planned in 2020 for the Train Wreck trail head parking area on Jane Lakes road, to protect pedestrian traffic crossing from the parking area to the trail head.

Some residents made comments about the RMOW moving the plant, or purchasing it. However, moving the plant is not a decision that the RMOW has the authority for, and it does not make financial sense for the RMOW to own its own asphalt plant for the relatively small amount of paving we do each year.

There were several concerns/comments expressed by residents about the future buildout of Cheakamus Crossing being beside an established industrial crown tenure. These concerns need to be addressed over the long-term through community planning.



**SUMMARY**

Staff recommend that Council consider revising the current asphalt procurement requirements to allow RMOW projects to use asphalt from the asphalt plant located to the south of Cheakamus Crossing. The long-term licence of occupation, and operation of the asphalt plant at the Cheakamus Crossing location is governed by the Provincial government, while municipal Council, as per the RMOW procurement policy and through their purchasing requirements, currently has the ability to decide whether to purchase asphalt that is produced in Squamish or in Whistler. If other options for purchasing asphalt become available in the future, the RMOW purchasing requirements should be reviewed again at that time.

Respectfully submitted,

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CAPITAL PROJECTS MANAGER

for

James Hallisey, P.Eng.  
GENERAL MANAGER OF INFRASTRUCTURE SERVICES