

REGIONAL DISTRICT OF CENTRAL OKANAGAN
QUARTERLY PROGRAM MEASURES REPORT
Year to Date March 31, 2021

PROGRAM:

102 Air Quality Monitoring
Corporate Services

MANDATE:

Work with partners to protect and improve air quality, in the best interests of the people of the Central Okanagan, to improve their quality of life.

SUMMARY OF YEAR TO DATE RESULTS:

The Air Quality Program is a joint initiative between the City of Kelowna, Regional District of Central Okanagan (RDCO), District of Peachland, District of West Kelowna, and the District of Lake Country and WestBank First Nation.

PROGRAM MEASUREMENTS:

Budget Inputs:

	YTD ACTUALS	%	2021 BUDGET	Variance
General Revenue Fund \$:				
Revenue	213,619	100%	213,619	-
Expenditures	87,449	41%		126,170.00
Net General (Surplus) / Deficit	126,170			126,170
Residential Tax Rate (per \$1000 Assessment)				

OTHER MEASURES:

	2021 ACTUAL	2020 ACTUAL	2019 ACTUAL	2018 ACTUAL	2017 ACTUAL	2016 ACTUAL	2015 ACTUAL	2014 ACTUAL	2013 ACTUAL	2012 ACTUAL	2011 ACTUAL	2010 ACTUAL	2009 ACTUAL	Notes
Output:														
Average Air Quality Index														
PM ₁₀ (Particulate Matter AQI Avg.)														a
PM _{2.5} ug/m3 (Particulate Matter Mean)	NA	NA	6.4	11.6	10	5.9	8.8	4.3	3.9	4.2	4	4.6	5.8	b
Ozone ppb (Hourly Mean)	NA	NA	28.3	23.3	24.9	21.8	23	22.3	24.3	24.8	25.4	21	25	b
NO ppb (Hourly Mean)	NA	NA	2.0	2.3	2	2.8	2.9	2.9	2.1	2.8	2.6	4.9	3.3	d
NO2 ppb (Hourly Mean)	NA	NA	8.4	7.1	7.6	6.8	7.1	6.7	5.9	7.6	7.4	8.2	8.3	d
Total # of Wood Stoves Exchanged in Okanagan		4	15	13	12	45	19	0	80	117	158	230	215	
# of Wood Stoves Exchanged in Central Okanagan	4	4	15	13	12	18	19	0	34	47	72	72	71	
Agricultural Wood Waste Pilot Project														0
Volume of Wood Chips (m ³)	5424.01	440.63	4,891.15	7,237.71	4,639	4639	3,059	7,453	10,728	4134	9262.34	11,619	7,528	

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	Notes
	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	
Outreach / Education (# of people unless otherwise stated):														
Air Quality Education. STP Program (School District #23)		23,574	1945	1,754	1,409				2,000	2,000	500	1,600	2,655	
Presentations to Public Interest Groups/Outreach Woodstove-Workshop-Burn responsibly	4244	78,504	35,343	90,694	30,442	14,949	49,187	-	-		0	30	35	
Wood Smoke/Air Quality Health Index /Wildfires		297,835	1948	100,578	81,547			NA	NA	NA	120	800	700	
Go Green Challenge/TDM events						7335	7650	7760	6,162	6,500	6,500	9,093	12,415	
Agricultural Wood Waste Chipping Project (Outreach to Orchardists)/ Open burning awarness to general public	788	112,467	31,433	84,528	60,543	6176	18,110	250	500	500	1,000	2,000	700	
Open Burning Brochures distributed		800	It will be redesigned	It will be redesigned	25		175	250	1,000	1,000	3,000			
Indoor Wood Burning Nuisance Letter and Brochures (homes)	4	4	7	6	525	1200	0	1	0	3	1	4	0	
Great Okanagan Wood Stove Exchange Workshop Participants		0		11	8	19	31	0	25	32	18	50	70	
Great Okanagan Wood Stove Exchange Hotline (calls)	#REF!	#REF!	17	11	18		6	4	70	100	125	150	250	
Anti Idling letter/ residents	4	6					25		na			nya	n/a	
Anti Idling Campaign			14	0	4,827				na		6		n/a	
Living Greener Calendar Distribution (homes)	28,000	28,000	28,000	28,000	20,600	20,600	NA	NA	NA	NA	75,000	55,000	55,000	
Central Okanagan Emission Reduction Stats:														
Great Okanagan Wood Stove Exchange														
PM10 Tonnes	0.2	0.20	0.78	0.71	0.6	1.15	0.96		3.93	5.68	9.24	11.05	33.84	
PM2.5 Tonnes	0.2	0.20	0.78	0.71	0.6	1.15	0.96		3.93	5.68	9.24	11.05	33.84	
CO Tonnes	0.6	0.57	2.60	2.65	1.6	3.19	2.89		10.21	13.96	33.72	27.57	155.14	
NOx Tonnes	0.0	0.01	0.03	0.03	0.0	0.03	0.03		0.09	0.11	0.42	0.22	2.38	
SOx Tonnes	0.0	0.00	0.00	0.00	0.0	11.34	0.00		0.03	0.02	0.06	0.03	0.35	
VOC Tonnes	0.3	0.31	1.20	1.08	0.9	1.77	1.48		6.06	8.76	14.19	17.04	41.11	
TDM events										NA	NA			
PM2.5 Tonnes										NA	NA	0.1	0.0015	
NOx Tonnes										NA	NA	0.1	0.2	
GHG Tonnes (CO ₂ Equivalents)	NA	NA	20	18.7	18.719	58	61.8	30.9	75.57	13	nya	nya		
CO Tonnes										nya	55	23		

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	Notes
	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	<u>ACTUAL</u>	
Agricultural Wood Waste Pilot Project/Open Burning														g
PM10 Tonnes	33.3	5.63	76.4	99.40	55.89	55.89	36.85	89.79	129.25	52.65	111.60	140	59.53	
PM2.5 Tonnes	33.3	5.63	76.4	99.40	55.89	55.89	36.85	89.79	129.25	52.65	111.60	140	59.53	
CO Tonnes	#	22.86	#	403.81	227.06	227.06	149.71	364.77	525.08	213.88	453.30	568.7	272	
NOx Tonnes	1.0	0.18	2.4	3.11	1.75	1.75	1.15	2.81	4.04	1.65	3.50	4.4	2.1	
SOx Tonnes	0.10	0.02	0.2	0.31	0.17	0.17	0.12	0.28	0.40	0.16	0.30	0.4	0.21	
VOC Tonnes	#	1.93	26.3	34.17	19.21	19.21	12.67	30.87	44.43	18.10	38.40	48.1	23.09	
														a & b
Total Reductions for all Programs														
PM10 Tonnes	33.54	5.83	77.16	100.11	56.48	57.04	37.82	89.79	133.18	58.32	120.84	227.05	169.37	
PM2.5 Tonnes	33.54	5.83	77.16	100.11	56.48	57.44	37.82	89.79	134.28	59.42	120.85	227.09	169.64	
CO Tonnes	136.01	23.44	312.88	406.46	228.64	251.84	174.37	369.91	569.30	284.14	542.02	1,031.01	1,215.14	
NOx Tonnes	1.05	0.18	2.42	3.14	1.76	2.64	2.05		5.50	1.75	3.92	11.86	38.08	
SOx Tonnes	0.10	0.02	0.24	0.32	0.18	11.51	0.12	0.28	0.43	0.18	0.36	0.70	0.83	
VOC Tonnes	11.77	2.24	27.46	35.25	20.13	24.23	17.41	31.63	55.64	27.63	52.59	99.68	129.20	

Efficiency:													
Cost per Capita	\$ 1.10	\$ 0.96	\$ 0.90	\$ 1.10	\$ 0.89	\$ 1.08	\$ 0.93	\$ 1.10	\$ 1.14	\$ 0.90	\$ 0.91	\$ 0.90	\$ 0.89

Year	2020	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Pop'n counts for "per capita" calculations:	194,882	194,882	194,882	194,882	194,882	194,882	179,839	179,839	179,839	179,839	179,839	179,839	179,839
Gross Operating Costs (incl. admin overhead and excl. debt & transfers to reserves.)	213,619	187,640	176,105	213,619	172,652	210,250	168,100	198,150	204,323	161,820	163,138	161,975	\$ 160,165

- Explanatory Information (Notes):**
- a. PM₁₀ no longer recorded.

b. New measuring equipment utilized.

c. Previously recorded as "Ozone Level A Exceedance Hours".

d. New reporting measure.

e. Go Green Challenge replaced by Transportation Demand Mgmt Events in 2009.

f. Province wide Scrap It program replaced Cash for Clunkers program.

g. Open burning added to measure as the chipping program is intended to reduce open burning.