

Robert Hawkins

From: David Ramsay
Sent: Tuesday, February 14, 2012 10:28 AM
To: Robert Hawkins
Cc: Lynda Comerford
Subject: FW: DOT use of road salt
Attachments: Hwy Salt (Data) updated February 20122.xlsx

Robert here is the information on road salt you had requested. If you need anything further please let me know.

Dave

i) Does the Department of Transportation use road salt on the Ingraham trail?
The Department uses road salt on paved sections of the Ingraham Trail.

ii) How much road salt is typically use in a season?
See attached 5-year summary of salt usage.

iii) What does it cost the department each year?
See attached 5-year summary of salt usage.

iv) How long has the department been using road salt (an estimate will be fine)?
The Department of Transportation began using road salt in 1986 as a de-icing agent for the removal of spot or continuous ice/snow cover on hard surfaces.

v) When is it most likely used during the winter season?
Road salt is used primarily in the fall/spring when temperature fluctuations are the greatest, freeze thaw cycles are predominant and the risk of freezing rain events is higher. Road salt is used at other times during the winter if conditions are favourable. Road salt should only be used when the temperatures are -10 degrees Celsius and rising. Other factors to be considered when applying road salt include, pavement temperature, wind velocity, traffic volumes, time of day/ number of daylight hours, and ice/snow thickness. Road salt must be applied with discretion as a road freezing condition could end up worse than the original condition, i.e., the right amount in the right place at the right time. In circumstance where temperatures are lower than -10 C, winter sand is applied at critical areas such as, stop sign locations, road curves and steep hills to provide traction to vehicles.

vi) Where in the North Slave region is road salt typically used (specific/general locations)?
On Hwy3 and on paved sections of Rae Access, Hwy4 and Dettah Access.

Actual Road Salt Costs Highways #1 - #7

	2006/07			2007/08			2008/09		
	Salt Unit Cost	Usage	Annual Cost	Salt Unit Cost	Usage	Annual Cost	Salt Unit Cost	Usage	Annual Cost
	\$/t	t	\$	\$/t	t	\$	\$/t	t	\$
Highway Camp/Salt Sheds									
Yellowknife	217.77	339.28	73,885.01	239.55	435.85	104,407.87	263.51	482.46	127,133.03
Edzo	199.02	193.90	38,589.98	218.93	348.36	76,266.45	240.82	356.32	85,808.98
Chan Lake	180.27	152.48	27,487.57	198.30	247.80	49,138.74	218.13	272.40	59,418.61
Ft. Providence	167.77	410.64	68,893.07	184.55	603.74	111,420.22	203.01	407.14	82,653.49
Enterprise	149.02	552.66	82,357.39	163.93	811.32	132,999.69	180.32	556.50	100,348.08
Swede creek	152.15	0.00	-	167.37	161.70	27,063.73	184.1	113.68	20,928.49
Pine Point Bridge	142.77	131.07	18,712.86	157.05	146.80	23,054.94	172.76	178.19	30,784.10
Kakisa	155.27	192.19	29,841.34	170.80	191.00	32,622.80	187.88	188.16	35,351.50
Buffalo R.	149.02	606.65	90,402.98	163.93	363.11	59,524.62	180.32	307.03	55,363.65
Ft. Smith	180.27	330.51	59,581.04	198.30	93.20	18,481.56	218.13	285.34	62,241.21
Ft Simpson	205.27	52.50	10,776.68	225.80	90.72	20,484.58	248.38	24.92	6,189.63
Ft Liard	236.52	-	-	260.18	-	-	286.19	-	-
Total cost			500,527.92			655,465.19			666,220.79

2009/10		2010/11		2011/12			
Usage	Annual Cost	Salt Unit Cost	Usage	Annual Cost	Salt Unit Cost	Est Usage	Est Annual Cost
t	\$	\$/t	t	\$	\$/t	t	\$
746.26	157,184.74	210.63	916.11	192,960.25	234.11	706.84	165,478.40
501.97	100,499.41	200.21	489.74	98,050.85	221.61	482.44	106,913.53
328.40	62,327.04	189.79	215.89	40,973.76	190.36	279.89	53,279.85
525.74	86,089.93	163.75	504.59	82,626.61	177.86	368.99	65,628.59
649.18	99,545.26	162.24	540.27	87,653.40	165.36	710.00	117,405.60
162.59	25,777.02	167.44	71.59	11,987.03	171.61	130.00	22,309.30
312.23	47,062.43	159.63	180.32	28,784.48	163.8	180.00	29,484.00
162.59	25,777.02	158.54	120.06	19,034.31	174.74	180.00	31,453.20
460.93	71,877.42	155.94	520.92	81,232.26	171.61	460.00	78,940.60
93.50	16,772.03	179.38	225.17	40,390.99	196.61	240.00	47,186.40
-	-	200.21	24.89	4,983.23	234.11	23.30	5,454.76
-	-	221.04	-	-	221.04	-	-
	692,912.30			688,677.19			723,534.23