GOVERNOR'S OFFICE OF BUDGET AND PROGRAM PLANNING

Fiscal Note 2017 Biennium

Bill #	SB0369	**Title:**	Requiring reductions in the use of certain chemical de-icers on Montana roads
Primary Sponsor:	Brown, Dee	**Status:**	As Introduced

☐Significant Local Gov Impact ✓Needs to be included in HB 2 ☐Technical Concerns

☐Included in the Executive Budget ☐Significant Long-Term Impacts ☐Dedicated Revenue Form Attached

FISCAL SUMMARY

	FY 2016 Difference	FY 2017 Difference	FY 2018 Difference	FY 2019 Difference
Expenditures:				
General Fund	$0	$0	$0	$0
State Special Revenue	$8,097,611	$9,976,066	$10,338,033	$10,712,738
Revenue:				
General Fund	$0	$0	$0	$0
State Special Revenue	$0	$0	$0	$0
Net Impact-General Fund Balance:	$0	$0	$0	$0

Description of fiscal impact: SB 369 is expected to increase overall costs to maintain the roadways at current levels of service by requiring the use of non-chloride based deicer.

FISCAL ANALYSIS

Assumptions:

1. Liquid potassium acetate is the only non-chloride product available that meets current performance and environmental specifications of the Pacific Northwest Snowfighters required by MDT. Liquid potassium acetate would be used as a replacement for the corrosion inhibited liquid chloride deicer reductions required by SB 369.
    a. Liquid potassium acetate would be the only liquid deicer used for winter maintenance between the months of April - November. This amounts to approximately 13.78% of the total corrosion inhibited liquid chloride deicer currently used. This amount is represented by 1,206,747 gallons of liquid chloride deicer in FY 2014.
    b. Liquid potassium acetate has a higher concentration than corrosion inhibited salt brine. Forty seven gallons of liquid potassium acetate has approximately the same performance as 100 gallons of corrosion inhibited salt brine.
    c. MDOT would use 567,171 gallons of liquid potassium acetate to offset the corrosion inhibited liquid chloride deicer reductions from April – November required by SB 369.

   d. Liquid potassium acetate would offset the 10% annual reduction of the corrosion inhibited liquid chloride deicer required by the bill between the months of December - March.
   e. Liquid potassium acetate is currently $7.51 per gallon and is estimated to increase by 3% annually. Corrosion inhibited liquid magnesium chloride costs on average $0.89 per gallon and is estimated to increase 3% annually. Corrosion inhibited salt brine costs on average $0.29 per gallon and is estimated to increase 3% annually.
2. MDT applied 8,754,586 gallons of corrosion inhibited chloride based liquid deicer in FY 2014 and considers this quantity as current usage.
3. The mean average December to March usage of corrosion inhibited chloride based deicer utilized from 2007 to 2010 is 6,269,617 gallons. The bill requires MDT to reduce liquid chlorides by 10% per year for the next 10 years or until the mean average from Dec to March is reached. This will require a reduction of 2,484,969 gallons per year.
4. It would take approximately two years to reduce corrosion inhibited liquid chloride deicer to the level identified in SB 369. 411,466 gallons of liquid potassium acetate would be used to offset the 10% reduction from December through March in FY 2016 and an additional 370,319 gallons of liquid potassium acetate is estimated for FY 2017.
5. On average MDT assumes maintenance responsibility for approximately 50 additional lane miles annually which would require an additional 8229 gallons of liquid potassium acetate annually to maintain an acceptable level of service.
6. MDT would require approximately 126 additional liquid storage tanks at an estimated one time cost of $1,071,000.
7. The total cost estimate for incorporating potassium acetate in the 2017 biennium is $18,073,677 and $21,050,771 for the 2019 biennium. Future costs would increase in relation to Consumer Price Index by an estimated 3% annually.

	Salt brine CPG	Magnesium Chloride CPG	Potasium Acetate CPG	Net CPG Salt Brine	Net CPG Magnesium Chloride
FY16	$0.33	$0.89	$7.51	$7.18	$6.62
FY17	$0.34	$0.92	$7.74	$7.40	$6.82
FY18	$0.35	$0.94	$7.97	$7.62	$7.02
FY19	$0.36	$0.97	$8.21	$7.85	$7.23
FY20	$0.37	$1.00	$8.45	$8.08	$7.45
FY21	$0.38	$1.03	$8.71	$8.32	$7.67
FY22	$0.39	$1.06	$8.97	$8.57	$7.90
Total					

Additional MG Cl2 required for additional yearly lane miles: 8,229

	10% Reduction (Dec- March)			April - Nov Reduction			Total Annual Chloride Reduction		Liquid Storage Tanks			Total
	Brine reduced	Potassium Acetate Required	Net Cost	Brine reduced	Potassium Acetate Required	Net Cost	Quantity	Net cost	Quantity	Cost + install (each)	Net Cost	Total Cost
FY14	8,754,586											
FY16	875,459	411,466	$2,954,323	1,206,747	567,171	$4,072,288	2,082,206	$7,026,611	126	$8,500	$1,071,000	$8,097,611
FY17	787,913	781,785	$5,781,609	1,206,747	567,171	$4,194,457	1,994,660	$9,976,066				$9,976,066
2017 Bien Total	$1,663,371	$1,193,250	$8,735,932	$2,413,494	$1,134,342	$8,266,746	$4,076,865	$17,002,677			$1,071,000	$18,073,677
FY18		790,014			567,171			$10,338,033				$10,338,033
FY19		798,243			567,171			$10,712,738				$10,712,738
2019 Bien Total		$1,588,257	$8,735,931.90	2,413,494	$1,134,342	$0	4,076,865	$21,050,771				$21,050,771

	FY 2016 Difference	FY 2017 Difference	FY 2018 Difference	FY 2019 Difference
Fiscal Impact:				
Expenditures:				
Operating Expenses	$7,026,611	$9,976,066	$10,338,033	$10,712,738
Equipment	$1,071,000	$0	$0	$0
TOTAL Expenditures	$8,097,611	$9,976,066	$10,338,033	$10,712,738
Funding of Expenditures:				
General Fund (01)	$0	$0	$0	$0
State Special Revenue (02)	$8,097,611	$9,976,066	$10,338,033	$10,712,738
TOTAL Funding of Exp.	$8,097,611	$9,976,066	$10,338,033	$10,712,738
Revenues:				
General Fund (01)	$0	$0	$0	$0
State Special Revenue (02)	$0	$0	$0	$0
TOTAL Revenues	$0	$0	$0	$0
Net Impact to Fund Balance (Revenue minus Funding of Expenditures):				
General Fund (01)	$0	$0	$0	$0
State Special Revenue (02)	($8,097,611)	($9,976,066)	($10,338,033)	($10,712,738)

Sponsor's Initials *Date* *Budget Director's Initials* *Date*