

**Clear Roads Budget Overview: #TPF-5(218)
April 2016**

Overall Budget

Description	Amount
Total anticipated income through 2016 under MnDOT TPF-5(218)	\$4,590,000.00
Transfer of funds from TPF-5(092)	\$200,748.86
One-time FHWA Contribution and MnDOT 20% Match	\$62,500.00
Expenses under TFP-5(218)	\$4,113,389.80
NEEDS TAC APPROVAL:	
One-year extension of CTC contract for admin. and info. Services (September 2016 to August 2017)	\$125,070.00

Available funds for new research \$614,789.06

Designated Synthesis Funding (Subset of Expenses Above)

Description	Amount
Total funding approved by TAC in 2015	\$50,000.00
Winter data survey project for 2014-2015 season	\$12,546.00
NEEDS TAC APPROVAL:	
Winter data survey project for 2015-2016 season	\$7,216.00

Available funds for new synthesis projects \$30,238.00

Clear Roads Budget Overview: #TPF-5(218)
April 2016

Income

State	Years funds committed	Total amt. committed	Total expected to be paid thru 2016	Total paid as of today
AK	2015, 2016, 2017 (\$10k)	\$60,000	\$60,000	\$60,000
AZ	2016	\$25,000	\$25,000	\$25,000
CA	2013, 2014, 2015	\$75,000	\$100,000	\$75,000
CO	2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017	\$225,000	\$200,000	\$200,000
CT	2014, 2015	\$50,000	\$75,000	\$50,000
DE	2015	\$25,000	\$50,000	\$25,000
IA	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
ID	2012, 2013, 2014, 2015, 2016, 2017	\$150,000	\$125,000	\$125,000
IL	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$125,000
IN	2010, 2016	\$50,000	\$50,000	\$50,000
KS	2011, 2012, 2013, 2014, 2015, 2016	\$150,000	\$150,000	\$125,000
MA	2010, 2011, 2012, 2013, 2014, 2015	\$150,000	\$175,000	\$150,000
ME	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
MI	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017	\$200,000	\$175,000	\$150,000
MN	2010, 2011, 2012, 2013, 2014, 2015	\$155,000	\$180,000	\$155,000
MO	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
MT	2012, 2013, 2014, 2015, 2016, 2017, 2018	\$175,000	\$125,000	\$100,000
ND	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017	\$200,000	\$175,000	\$175,000
NE	2011, 2012, 2013, 2014, 2015, 2016	\$150,000	\$150,000	\$150,000
NH	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
NY	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017,	\$225,000	\$175,000	\$175,000
OH	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017	\$200,000	\$175,000	\$175,000
OR	2013, 2014, 2015, 2016	\$100,000	\$100,000	\$100,000
PA	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
RI	2012, 2013, 2014, 2015	\$100,000	\$100,000	\$100,000
SD	2014, 2015, 2016	\$75,000	\$75,000	\$75,000
UT	2011, 2012, 2013, 2014, 2015, 2016	\$150,000	\$150,000	\$150,000
VA	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$175,000
VT	2012, 2014, 2015	\$75,000	\$100,000	\$50,000
WA	2010, 2011, 2012, 2013, 2014, 2015	\$150,000	\$175,000	\$150,000
WI	2010, 2011, 2012, 2013, 2014, 2015, 2016	\$175,000	\$175,000	\$150,000
WV	2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018	\$200,000	\$150,000	\$125,000
WY	2010, 2011, 2012, 2013, 2014, 2015	\$150,000	\$175,000	\$150,000
Bold years indicate that Clear Roads has received the funds.		\$4,665,000	\$4,590,000	\$4,190,000

Notes

Alaska transferred \$60k to cover 2015, 2016, (and part of 2017).

Colorado transferred both 2009 and 2010 to MnDOT in 2010.

Minnesota transferred an extra \$5,000 to cover an additional \$5,000 transferred to PNS in error.

Utah made their 2010 payment to the WisDOT-led Clear Roads pooled fund.

Clear Roads Budget Overview: #TPF-5(218)
April 2016

Expenses

Description	Amount
Pre-Contract Projects (estimated cost)	
Developing Test Bed Software to Qualify Plug and Play Technology (RFP)	\$108,161.00
Pacific Northwest Snowfighters (PNS)	\$30,000.00
Synthesis of Material Application Methodologies for Winter Operations	\$125,000.00
Identification and Recommendations for Correction of Equipment Factors Causing Fatigue in Snowplow Operators	\$200,000.00
Projects in Progress (contract amount)	
North American Study on Contracting Snow and Ice Response	\$74,983.00
Snow Plow Route Optimization	\$68,305.00
Snow Removal Performance Metrics	\$74,640.00
Plug and Play Phase II	\$81,690.00
CTC Synthesis Projects/Winter Data Survey	\$50,000.00
Quantifying the Impact that New Capital Projects will have on Roadway Snow and Ice Control (RSIC) Operations	\$145,622.00
Synthesis on GPS/AVL Equipment Used for Winter Maintenance (contract)	\$59,912.05
Developing a Training Video and Manual for Best Practices and Techniques in Snowplow Operator and Supervisor Training, plus Winter Driver Education Program	\$124,857.00
Understanding the Effectiveness of Non-Chloride Liquid Agricultural By-Products and	\$191,238.00
Understanding the Performance of Snow and Ice Control Agents on Porous or	\$185,000.00
Completed Projects (actual project expenditures, unless stated otherwise)	
Roadway Salt Management Best Practices Manual	\$58,171.00
Use Of Equipment Lighting During Snow Plow Operations	\$40,406.00
Cost Benefit Analysis of Various Winter Maintenance Strategies	\$121,730.00
Best Practices for the Prevention of Corrosion to DOT Equipment: A User's Manual	\$49,950.00
Snow and Ice Control Environmental Best Management Practices Manual	\$180,107.00
Winter Severity Mapping Enhancement	\$4,767.50
Establishing Effective Salt and Anti-icing Application Rates (actual expenditures - one more invoice due)	\$82,602.23
Comparison of Material Distribution Systems	\$44,960.00
Environmental Factors Causing Fatigue in Snowplow Operators	\$124,991.00
Development of a Totally Automated Spreading System	\$72,025.00
Cost-Benefit Analysis Toolkit Phase 2	\$109,999.00
Determining the Toxicity of Deicing Materials	\$85,098.26
Understanding the True Costs of Snow and Ice Control Operations	\$150,774.60
Aurora Wiki Site	\$9,000.00
Pacific Northwest Snowfighters (PNS)	\$30,000.00
Snow Removal at Extreme Temperatures	\$32,871.00
Weather Severity Mapping	\$49,307.71
2011 Peer Exchange	\$19,825.73
2013 Peer Exchange	\$34,733.62
2015 Peer Exchange	\$40,996.20
Video for Determining Effectiveness of Deicing Materials and Procedures	\$20,465.00

Clear Roads Budget Overview: #TPF-5(218)
April 2016

Expenses

Meeting Expenses	
AASHTO SCOM and 2012 Fall Meeting Amendment (actual expenditures)	\$12,363.55
FY 2010 Meeting expenses (travel, meeting space, meals, etc. - actual expenditures)	\$7,587.00
2010 PNS Conference (travel for Chairman to attend PNS meeting)	\$496.60
FY 2011 Meeting expenses (travel, meeting space, meals, etc. - actual expenditures)	\$40,686.81
FY 2012 Meeting Expenses (travel, meeting space, meals, etc. - actual expenditures)	\$61,886.57
FY 2013 Meeting expenses (travel, meeting space, meals, etc. - actual expenditures)	\$61,733.35
FY 2014 Meeting expenses (travel, meeting space, meals, etc. - actual expenditures)	\$56,814.72
FY 2015 Meeting expenses (travel, meeting space, meals, etc. - actual expenditures)	\$84,939.36
TRB 2016 International Conference on Winter Maintenance and Surface	\$1,250.00
FY 2016 Meeting Expenses (travel, meeting space, meals, etc. - budgeted)	\$80,000.00
Administrative and Information Services Expenses	
2010 Admin. and Info. Services, web hosting (actual expenditures Jan. to Dec. '10)	\$76,475.30
2011 Admin. and Info. Services, web hosting (actual expenditures Jan. to Sep. '11)	\$61,836.30
2011-12 Admin. and Info. Services, web hosting (actual expenditures Oct. '11 to Sep.	\$97,160.00
2012-13 Admin. and Info. Services, web hosting (actual expenditures Oct. '12 to Jun.	\$89,466.34
2013-2016 Admin. and Info. Services, web hosting contract	\$398,511.00
<i>Original contract for July 2013 to March 2015: \$224,900.00</i>	
<i>Contract renewal for April 2015 to August 2016: \$173,611.00</i>	

Total \$4,113,389.80