

2011 Peer Exchange Equipment and Methods Research Survey

Please provide some information about you and your agency. You may be contacted for further information and input in preparation for the 2011 Peer Exchange.

Answer Options	Response Percent	Response Count
Name:	100.0%	63
State:	98.4%	62
Email Address:	100.0%	63
Phone Number:	98.4%	62
	<i>answered question</i>	63
	<i>skipped question</i>	1

Number	Response Date	Name:	State:	Email Address:	Phone Number:
1	May 20, 2011 3:00 PM	Tim Jackson	MO	timothy.jackson@modot.mo.gov	573-526-1884
2	May 17, 2011 9:13 PM	Cale Durrence	GA	cdurrence@dot.ga.gov	770-532-5524
3	May 17, 2011 2:12 PM	Dawn Gustafson	MI	gustafsond@michigan.gov	9067861800
4	May 17, 2011 11:32 AM	Doug Graham	NH	dgraham@dot.state.nh.us	603-352-2302
5	May 16, 2011 9:34 PM	Mike Mattison	NE	mike.mattison@nebraska.gov	402-479-4878
6	May 16, 2011 8:31 PM	Kyle Stollings	WV	w.kyle.stollings@wv.gov	304-558-2901
7	May 16, 2011 5:14 PM	Mike Sproul	WI	michael.sproul@dot.wi.gov	608-266-8680
8	May 16, 2011 3:27 PM	Dean VanDeWiele	SD	dkvandewiele@state.sd.us	605.773.5586
9	May 16, 2011 2:00 PM	David Cook	SC	cookdb@scdot.org	(803) 737-1290
10	May 13, 2011 8:27 PM	Caleb Dobbins	NH	cdobbins@dot.state.nh.us	603 271 2693
11	May 13, 2011 6:56 PM	Dennis Ortiz	NM	Dennis.Ortiz@state.nm.us	505-827-5498
12	May 13, 2011 6:20 PM	Mitch Turner	MS	mturner@mdot.state.ms.us	662-563-4541
13	May 13, 2011 3:56 PM	David Frame	CA	david.w.frame@dot.ca.gov	(916) 616-8987
14	May 13, 2011 3:33 PM	Marc Lipnick	MD	mlipnick@sha.state.md.us	410-582-5566
15	May 13, 2011 2:54 PM	Robert P Mongillo	CT	robert.mongillo@ct.gov	860-594-2604
16	May 13, 2011 2:01 PM	Greg Parker	IA	gparker@co.johnson.ia.us	319-356-6046
17	May 13, 2011 1:52 PM	R. Mark DeVries	IL	rmdevries@co.mchenry.il.us	815-334-4975
18	May 13, 2011 12:13 PM	Steven B. Cole	WV	steven.b.cole@wv.gov	3045586264
19	May 12, 2011 10:54 PM	Lonnie Hendrix	AZ	Lhendrix@azdot.gov	602-712-7972
20	May 12, 2011 9:59 PM	Carl High	AK	carl.high@alaska.gov	907-262-2199

21	May 12, 2011 9:31 PM	Steve Spoor	ID	steve.spoor@itd.idaho.gov	208-334-8413
22	May 12, 2011 9:13 PM	David.B.Johnson	IL	david.b.johnson@illinois.gov	217-782-7228
23	May 12, 2011 8:58 PM	Mike Adams	WI	michael.adams@dot.wi.gov	6082665004
24	May 12, 2011 8:54 PM	Brian Burne	ME	Brian.Burne@maine.gov	
25	May 12, 2011 8:46 PM	Tim Peters	IL	tim.peters@illinois.gov	217-782-8419
26	May 12, 2011 8:38 PM	Jason Jones	IN	jasjones@indot.in.gov	317-232-5545
27	May 12, 2011 8:36 PM	Allen Williams	VA	Allen.Williams@vdot.virginia.gov	(540) 387-5346
28	May 12, 2011 8:22 PM	AARON HORTON	DC	aaron.horton@dc.gov	2026714679
29	May 12, 2011 8:13 PM	Will Thompson	MI	thompsonw@michigan.gov	517-750-0425
30	May 12, 2011 7:04 PM	David C. Wieder	CO	david.wieder@dot.state.co.us	303 512 5502
31	May 10, 2011 7:02 PM	Eric Meka	NY	emeka@dot.state.ny.us	716-753-2821
32	May 10, 2011 12:29 PM	Curt Pape	MN	curt.pape@state.mn.us	651.366.3571
33	May 9, 2011 7:37 PM	Kevin Bloss	OK	kbloss@odot.org	405-521-2557
34	May 9, 2011 1:44 PM	doug tosten	PA	dtosten@state.pa.us	717 582-2148
35	May 6, 2011 8:44 PM	Paul David Cornett	KY	davidp.cornett@ky.gov	502-564-4556
36	May 5, 2011 8:47 PM	Leigh Jones	UT	leighjones@utah.gov	801-887-3735
37	May 5, 2011 6:34 PM	Joseph Baker	RI	jbaker@dot.ri.gov	4017344807
38	May 5, 2011 2:30 PM	Brad Darr	ND	bdarr@nd.gov	701-328-4443
39	May 4, 2011 6:23 PM	alastair probert	DE	alastair.probert@state.de.us	302-853-1305
40	May 4, 2011 2:27 PM	Leland Smithson	IA	leland.smithson@dot.iowa.gov	515-239-1519
41	May 2, 2011 7:43 PM	Tim Croze	MI	crozet@michigan.gov	
42	May 2, 2011 5:58 PM	kathy ahlenius	WY	kathy.ahlenius@dot.state.wy.us	307.777.4264
43	May 2, 2011 2:29 PM	Wayne Gammell	VT	wayne.gammell@state.vt.us	802-828-2691
44	Apr 30, 2011 1:25 AM	Tony Sullivan	AR	Tony.Sullivan@AHTD.ar.gov	501-569-2231
45	Apr 29, 2011 4:07 PM	Max Perchanok		max.perchanok@ontario.ca	416 235-4680
46	Apr 29, 2011 4:57 AM	Greg Duncan	TN	Greg.Duncan@tn.gov	6157412027
47	Apr 28, 2011 7:49 PM	Chris Mundel	MT	cmundel@mt.gov	406-888-5666
48	Apr 28, 2011 3:43 PM	Paul Brown	MA	Paul.Brown@state.ma.us	617-973-7792
49	Apr 28, 2011 1:16 PM	Troy Whitworth	KS	troy@ksdot.org	785-296-7140
50	Apr 28, 2011 12:59 PM	Gabriel Guevara	MN	gabriel.guevara@dot.gov	2023660754
51	Apr 27, 2011 9:01 PM	Monty Mills	WA	millsm@wsdot.wa.gov	360-705-7803
52	Apr 27, 2011 7:51 PM	Phillip Anderle	CO	phillip.anderle@dot.state.co.us	970-350-2100
53	Apr 27, 2011 6:27 PM	Wilf Nixon	IA	wilfrid-nixon@uiowa.edu	319-335-5166
54	Apr 27, 2011 5:55 PM	Annette Dunn	IA	annette.dunn@dot.iowa.gov	5152391355
55	Apr 27, 2011 5:19 PM	David W. Bowlby	NJ	David.Bowlby@dot.state.nj.us	609-530-2815
56	Apr 27, 2011 4:15 PM	mike taylor	TX	mike.taylor@txdot.gov	806-356-3270
57	Apr 27, 2011 3:45 PM	Michael Lashmet	NY	mlashmet@dot.state.ny.us	518-457-5796

58	Apr 27, 2011 3:26 PM	Clifford Spoonemore	WY	cliff.spoonemore@dot.state.wy.us	307-777-6377
59	Apr 27, 2011 3:14 PM	Rich Clarke	UT	richardclarke@utah.gov	801-965-4120
60	Apr 27, 2011 3:11 PM	Lynn Bernhard	UT	lynnbernhard@utah.gov	801-965-4094
61	Apr 27, 2011 2:42 PM	Randy Roth	MT	raroath@mt.gov	406-657-0217
62	Apr 26, 2011 4:25 PM	Tina Greenfield	IA	tina.greenfield@dot.iowa.gov	515-233-7746
63	Apr 25, 2011 11:29 AM	Dean Kernan	IL	paul.kernan@illinois.gov	309-945-5015

2011 Peer Exchange Equipment and Methods Research Survey

Problem Statement:

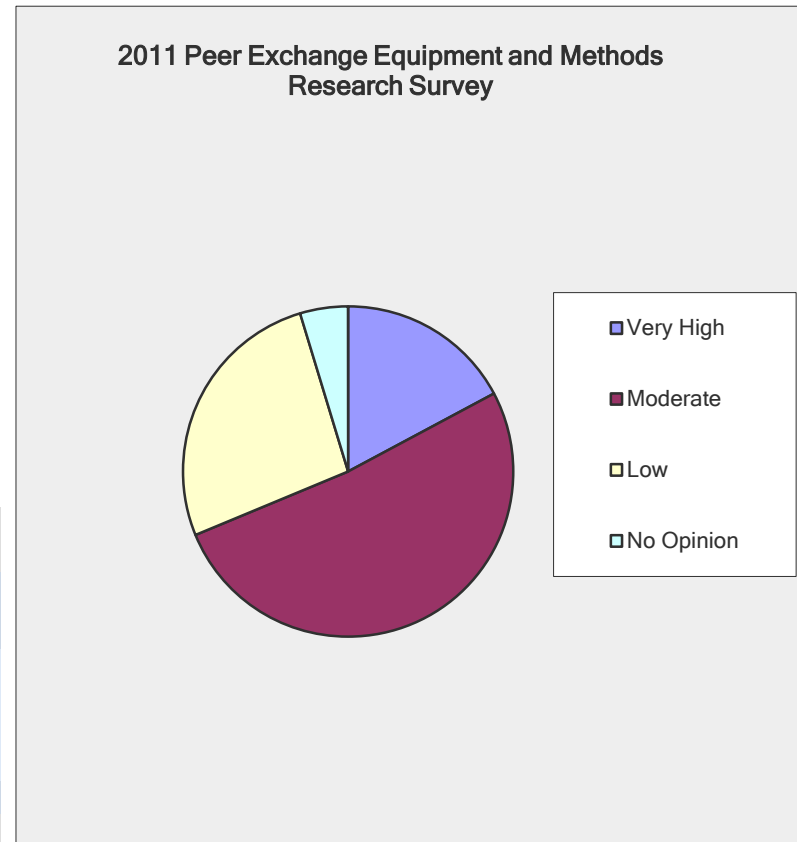
Quantify Salinity Sensor Performance - Accuracy of current sensors are dubious. We need proof of any sensor's (new or existing on market) performance in field applications and also evaluate the current sensors' accuracy as a baseline for future improvement.

Progress to Date:

The salinity sensor research needs were originally identified in the 2007 Peer Exchange as the #9 ranked problem. Aurora originally funded this effort under its FY2009 research program as Aurora Project 2009-06, "Salinity Sensor Improvements and Development". After consideration of the public sector involvement in this issue, its efforts have focused on encouraging the private vendor community to further develop this technology.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	17.2%	11
Moderate	51.6%	33
Low	26.6%	17
No Opinion	4.7%	3
<i>answered question</i>		64
<i>skipped question</i>		0



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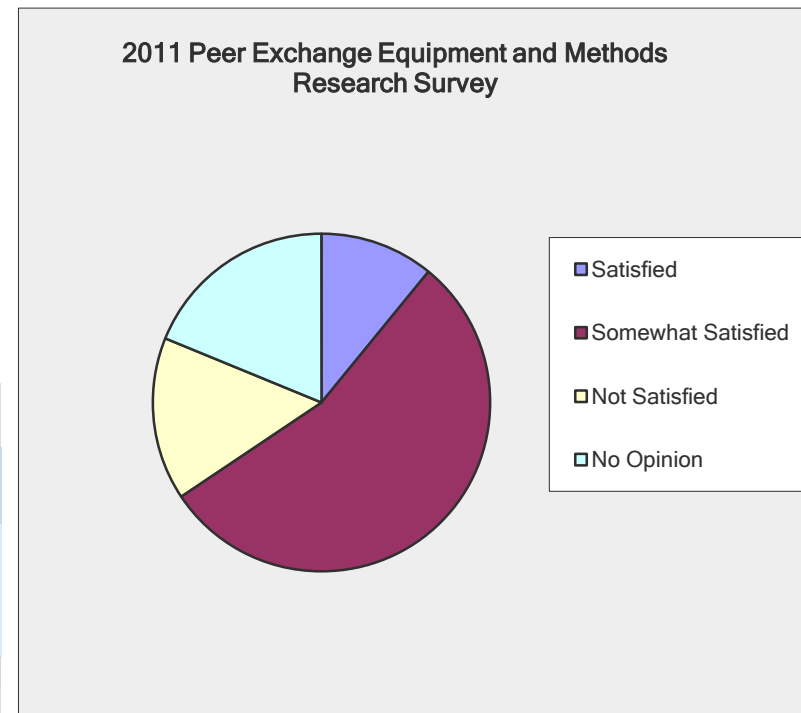
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Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	10.9%	7
Somewhat Satisfied	54.7%	35
Not Satisfied	15.6%	10
No Opinion	18.8%	12
<i>answered question</i>		64
<i>skipped question</i>		0



2011 Peer Exchange Equipment and Methods Research Survey

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Quantify Salinity Sensor Performance - Accuracy of current sensors are dubious. We need proof of any sensor's (new or existing on market) performance in field applications and also evaluate the current sensors' accuracy as a baseline for future improvement.

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You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	10
<i>answered question</i>	10
<i>skipped question</i>	54

Number	Response Date	Response Text
1	May 12, 2011 9:15 PM	For all practical purposes there is only one vendor in this market. We don't need to pay for their research.
2	May 12, 2011 8:59 PM	There really is no research, so it doesn't meet our needs.
3	May 2, 2011 2:30 PM	Vendors are not meeting needs yet, still having many problems.
4	Apr 29, 2011 4:07 PM	Don't know of any research on this topic other than mobile sensor. I think accuracy of fixed sensor is higherpriority than mobile sensor.
5	Apr 27, 2011 9:03 PM	This technology needs further development until a reliable salinity sensor has been produced. That has not happened as yet, so any research on this topic is unsatisfactory until that development takes place.

6 **Apr 27, 2011 7:54 PM** Sometimes waiting on vendors to improve their product with no driving force, ie proof that there needs to be improvement, is like waiting on the glaciers to move. If we can show that their product is in need of improvement or that there is something better available, it would spark a reason for them to move forward in making a better sensor.

7 **Apr 27, 2011 6:28 PM** We do not have a sensor available that does this job yet. We need to know how much salt is on the road in real time, so we know how much more (if any) needs to be added.

8 **Apr 27, 2011 5:56 PM** We need an effective mobile salinity meter for the snow plows.

9 **Apr 27, 2011 3:20 PM** We still do not have a remote method to tell us what the salinity is on the road
I am (was) the champion for that project and I think it was ok to put it back on the private sector to help solve, but I have not heard that anybody has been trying to act on the need. I have not seen any new sensor come out for salinity in some time. It is a challenging

10 **Apr 26, 2011 4:25 PM** problem and nobody seems to have stepped up to meet it.

2011 Peer Exchange Equipment and Methods Research Survey

Problem Statement:

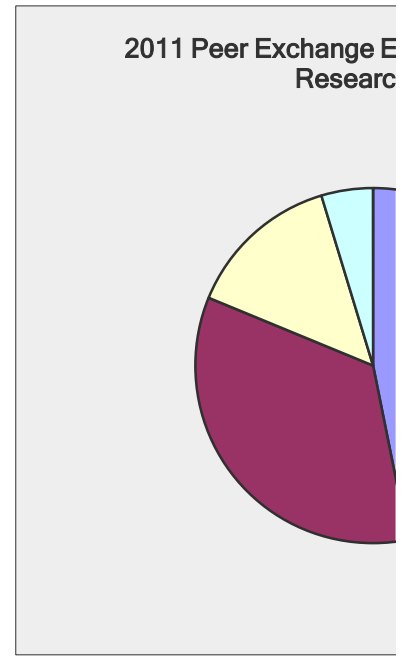
Best Management Practices for Reducing Corrosion on Maintenance Equipment (electrical and mechanical)

Progress to Date:

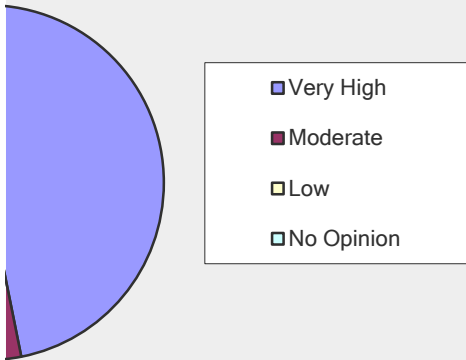
Project was selected for funding in 2010, but Western Transportation Institute already has a similar project underway with the Alaska University Transportation Center, so rather than Clear Roads leading the project, Clear Roads will assist and collaborate in that effort. Additional information can be found at www.westerntransportationinstitute.org/research/default.aspx

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	46.9%	30
Moderate	34.4%	22
Low	14.1%	9
No Opinion	4.7%	3
<i>answered question</i>		64
<i>skipped question</i>		0



Equipment and Methods
Survey



2011 Peer Exchange Equipment and Methods Research Survey

Problem Statement:

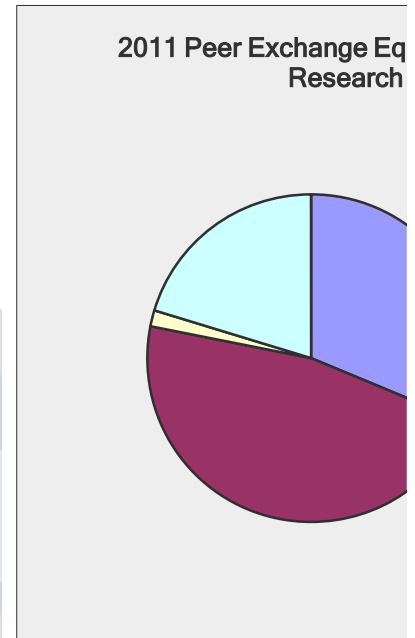
Best Management Practices for Reducing Corrosion on Maintenance Equipment (electrical and mechanical)

Progress to Date:

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Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	31.3%	20
Somewhat Satisfied	46.9%	30
Not Satisfied	1.6%	1
No Opinion	20.3%	13
<i>answered question</i>		64
<i>skipped question</i>		0



**Equipment and Methods
Survey**



- Satisfied
- Somewhat Satisfied
- Not Satisfied
- No Opinion

2011 Peer Exchange Equipment and Methods Research Survey

Problem Statement:

Best Management Practices for Reducing Corrosion on Maintenance Equipment (electrical and mechanical)

Progress to Date:

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You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	1
<i>answered question</i>	1
<i>skipped question</i>	63

Number	Response Date	Response Text
1	Apr 27, 2011 7:57 PM	I feel that with the differences in regions, this needs to be a broader approach. Weather differences, length of weather geographically, de-icing materials differences, humidity differences, and the list goes on. It is differences that make it impossible to take a cooking cutter approach to a subject like this. What may be a great fix in Alaska could fail miserably in Iowa.

2011 Peer Exchange Equipment and Methods Research Survey

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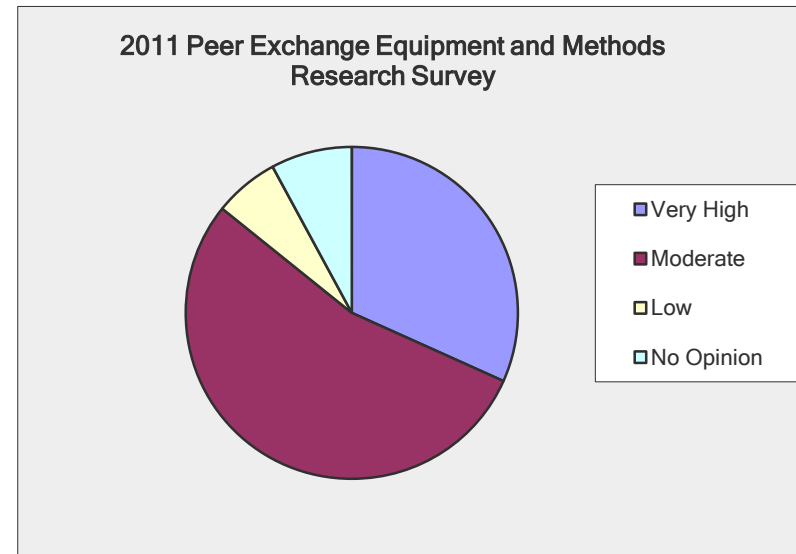
Comprehensive Comparative Study to Report on Blade Types, Inserts and Fasteners - and recommendations based on pavement types.

Progress to Date:

Clear Roads just completed a project on carbide inserts. More information available at <http://www.clearroads.org/research-projects/07-01carbideinsert.html>. More research is likely needed to be comprehensive.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	31.7%	20
Moderate	54.0%	34
Low	6.3%	4
No Opinion	7.9%	5
<i>answered question</i>		63
<i>skipped question</i>		1



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2011 Peer Exchange Equipment and Methods Research Survey

Problem Statement:

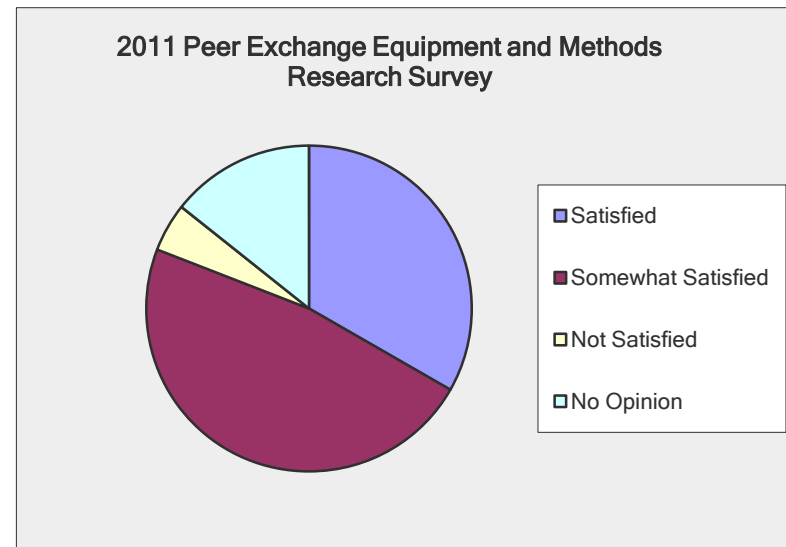
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Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	33.3%	21
Somewhat Satisfied	47.6%	30
Not Satisfied	4.8%	3
No Opinion	14.3%	9
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

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Answer Options	Response Count
	3
<i>answered question</i>	3
<i>skipped question</i>	61

Number	Response Date	Response Text
1	May 12, 2011 9:16 PM	The report does not identify brands. We cannot write a sole source spec or exclude a vendor based on this report.
2	May 12, 2011 8:49 PM	The report needs to identify the brands of the blades tested. Not generically identify the blades by letters. We cannot use this research to write a brand specific specification or exclude a vendor.
3	Apr 27, 2011 6:31 PM	I think we have to broaden scope here. I get the sense that we have not yet even defined what constitutes a good blade. Is it long lasting, shock resistant, low vibration, cheap? The answer should vary depending on an agency's needs, and so the sort of cutting edge should vary too. We now have a much broader set of options when it comes to cutting edges. We need ways to allow agencies to identify their needs, and match those needs either with existing products, or with specific needs for product development.

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

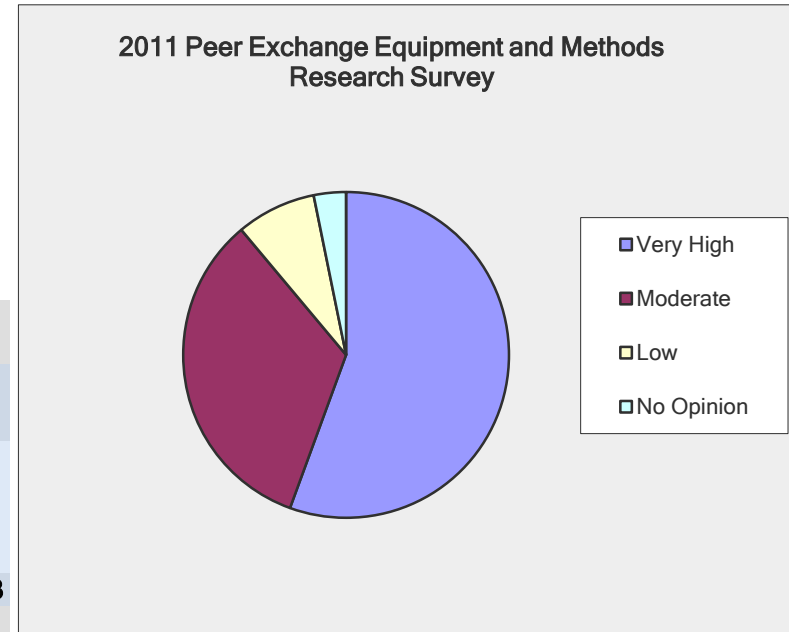
True Costs of Snow and Ice Control Operations - There is a need to determine the true costs of snow and ice control operations.

Progress to Date:

Clear Roads has a request for proposal posted. Deadline for RFPs is April 15, 2011. More information available at <http://www.clearroads.org/requests-for-proposal.html>

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	55.6%	35
Moderate	33.3%	21
Low	7.9%	5
No Opinion	3.2%	2
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

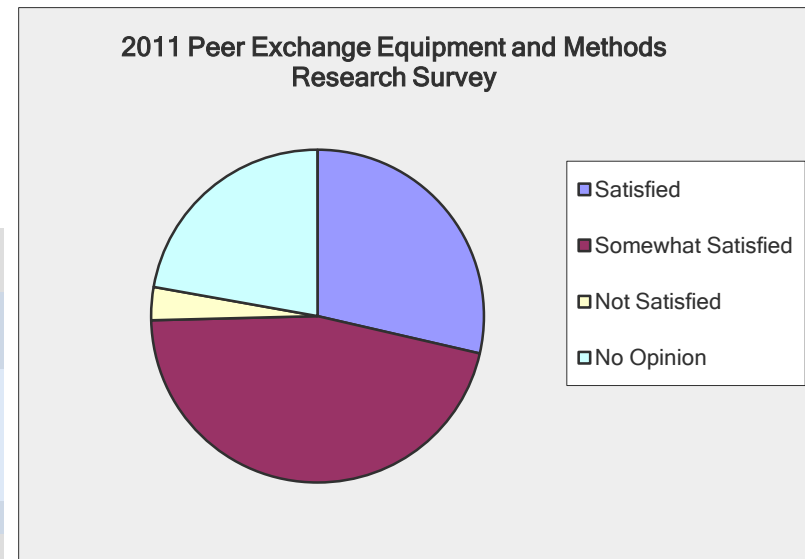
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Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	28.6%	18
Somewhat Satisfied	46.0%	29
Not Satisfied	3.2%	2
No Opinion	22.2%	14
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

True Costs of Snow and Ice Control Operations - There is a need to determine the true costs of snow and ice control operations.

Progress to Date:

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Answer Options	Response Count
	2
<i>answered question</i>	2
<i>skipped question</i>	62

Number	Response Date	Response Text
1	May 12, 2011 9:18 PM	The costs for labor, materials and environmental factors differ significantly from state to state. A single cost or even a regional cost is not of value. The rfp from clear roads was a bit narrow and used some normalizing factors (e.g. inches of snowfall) that are not really reflective of the difficulty of fighting the storm. Also, the rfp spoke in terms of not considering anti-icing and not considering different levels of service. These are critical parts of current practice and we need to get these things incorporated. Hopefully, the project will be done by a team that addresses the
2	Apr 27, 2011 6:33 PM	broader issues.

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

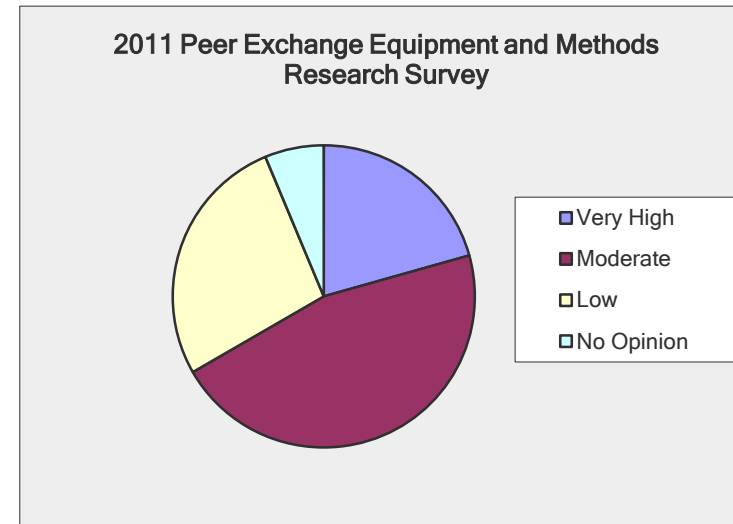
Develop BMP Synthesis for Low Temperature Pavement Surface Management - There is a need for a BMP synthesis for management of low-temperature

Progress to Date:

For 2011, Clear Roads has approved funding for a project on "Snow Removal at Extreme Temperatures".

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	20.6%	13
Moderate	46.0%	29
Low	27.0%	17
No Opinion	6.3%	4
<i>answered question</i>		63
<i>skipped question</i>		1



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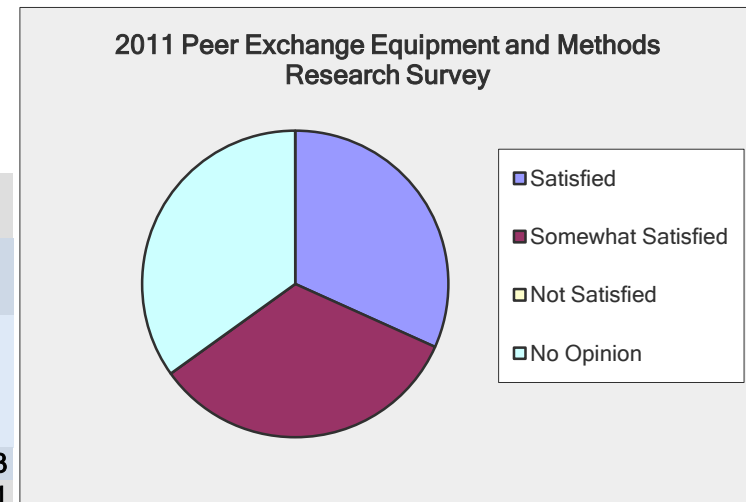
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Satisfied	31.7%	20
Somewhat Satisfied	33.3%	21
Not Satisfied	0.0%	0
No Opinion	34.9%	22
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Develop BMP Synthesis for Low Temperature Pavement Surface Management - There is a need for a BMP synthesis for management of low-temperature

Progress to Date:

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You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	0
<i>answered question</i>	0
<i>skipped question</i>	64

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Quantify Consumer Costs - Quantify the consumer cost associated with delays caused by winter weather.

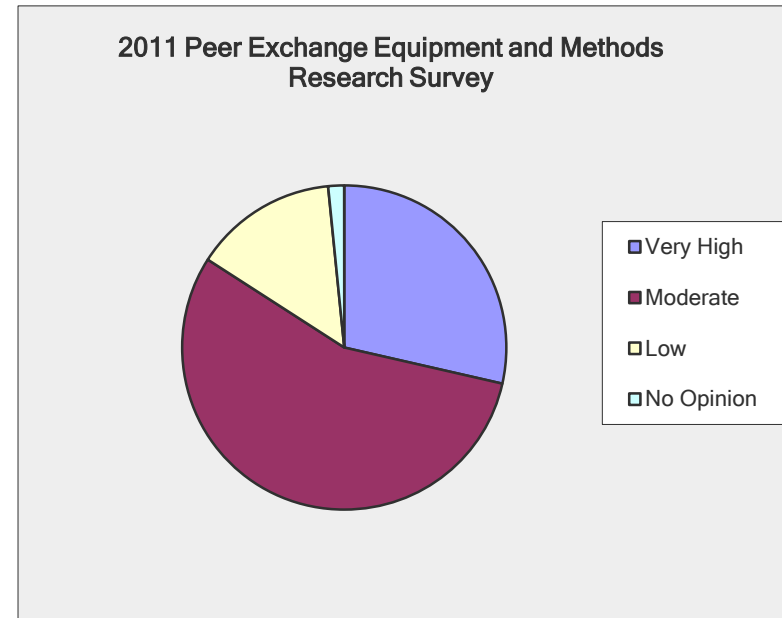
Progress to Date:

Project was approved for funding in 2010 as a Phase II to the True Costs of Snow and Ice Control project.

For more information see <http://www.clearroads.org/research-projects.html> click on "All Proposed Projects in 2010", pages 15 and 22.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	28.6%	18
Moderate	55.6%	35
Low	14.3%	9
No Opinion	1.6%	1
<i>answered question</i>		63
<i>skipped question</i>		1



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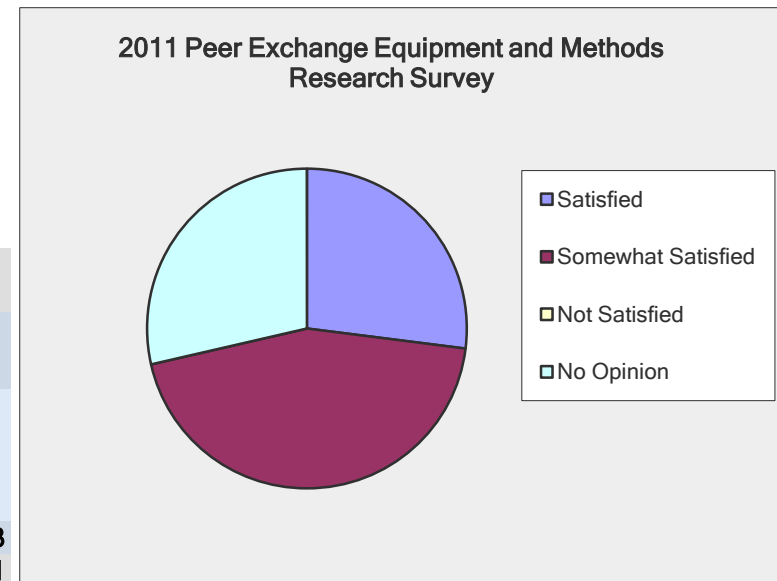
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Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count	
Satisfied	27.0%	17	
Somewhat Satisfied	44.4%	28	
Not Satisfied	0.0%	0	
No Opinion	28.6%	18	
		<i>answered question</i>	63
		<i>skipped question</i>	1



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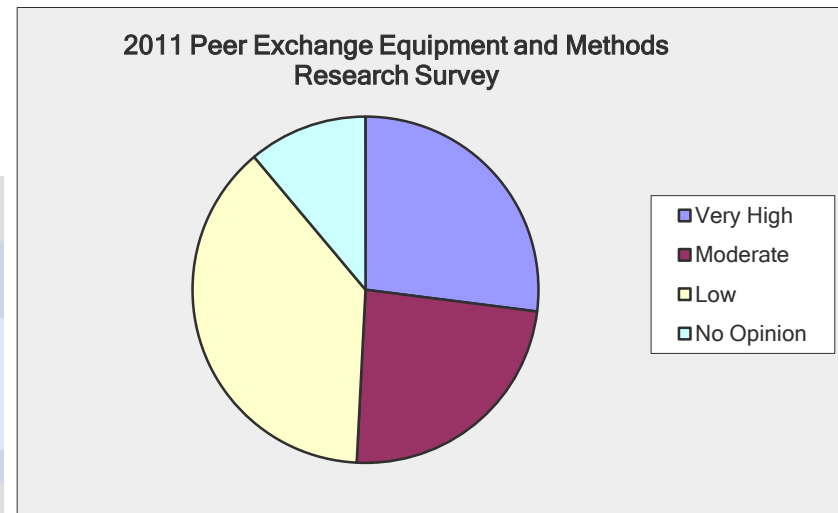
MDSS Minimum Data Elements - Develop standard minimum data elements required to support MDSS applications.

Progress to Date:

Concept and agencies involved need to be worked out in next years program.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	27.0%	17
Moderate	23.8%	15
Low	38.1%	24
No Opinion	11.1%	7
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

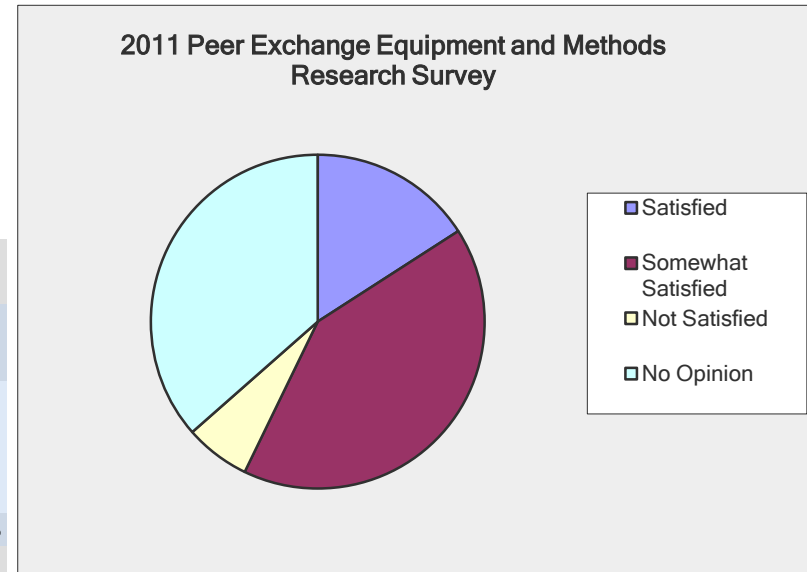
MDSS Minimum Data Elements - Develop standard minimum data elements required to support MDSS applications.

Progress to Date:

Concept and agencies involved need to be worked out in next years program.

Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	15.9%	10
Somewhat Satisfied	41.3%	26
Not Satisfied	6.3%	4
No Opinion	36.5%	23
<i>answered question</i>		63
<i>skipped question</i>		1



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2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

MDSS Minimum Data Elements - Develop standard minimum data elements required to support MDSS applications.

Progress to Date:

Concept and agencies involved need to be worked out in next years program.

You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	4
<i>answered question</i>	4
<i>skipped question</i>	60

Number	Response Date	Response Text
1	May 13, 2011 8:29 PM	No research to date
2	May 12, 2011 9:01 PM	Doesn't seem to be making any progress.
3	May 9, 2011 1:47 PM	Training was not the best.
4	Apr 27, 2011 8:18 PM	We need to get this done and out. MDSS is market ready and if we don't get this done now, the vendors will sell MDSS as an as is product, take it or leave it.

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

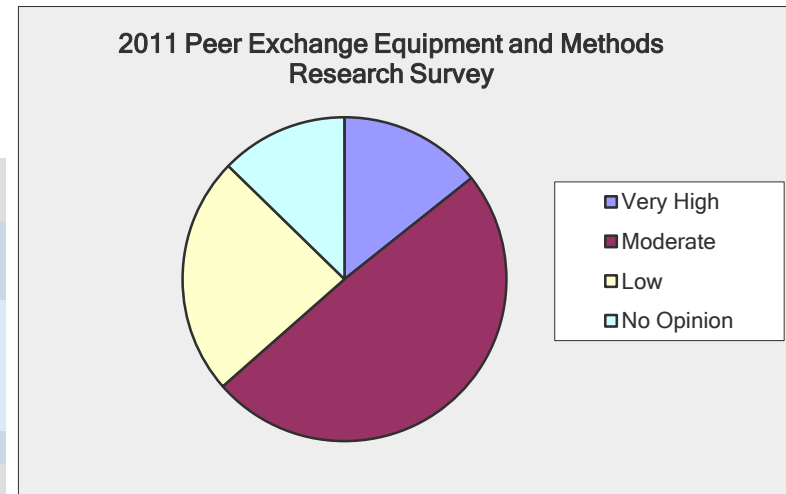
Development of a Granular Product Flow Monitor - There is a need to develop a monitor fo granular products.

Progress to Date:

Project will be considered in next FY program

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	14.3%	9
Moderate	49.2%	31
Low	23.8%	15
No Opinion	12.7%	8
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

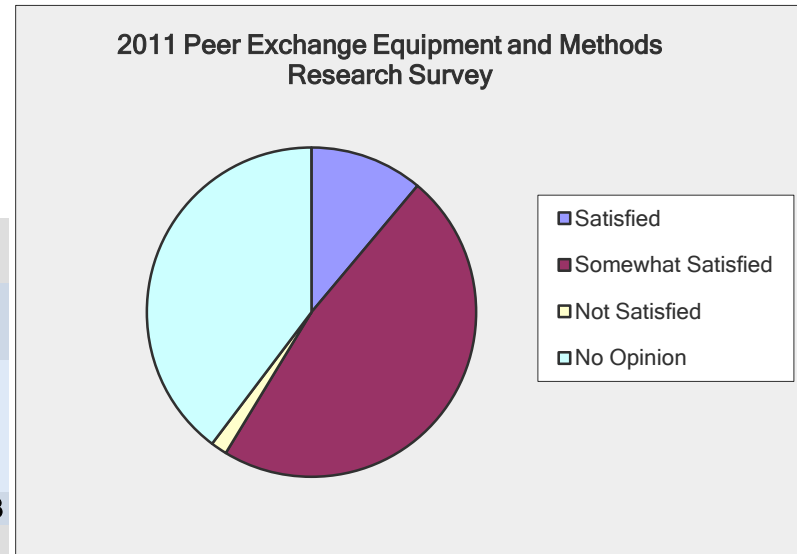
Development of a Granular Product Flow Monitor - There is a need to develop a monitor fo granular products.

Progress to Date:

Project will be considered in next FY program

Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	11.1%	7
Somewhat Satisfied	47.6%	30
Not Satisfied	1.6%	1
No Opinion	39.7%	25
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Development of a Granular Product Flow Monitor - There is a need to develop a monitor fo granular products.

Progress to Date:

Project will be considered in next FY program

You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	1
<i>answered question</i>	1
<i>skipped question</i>	63

Number	Response Date	Response Text
1	May 16, 2011 9:35 PM	Clear Roads has not undertaken the project as yet and I am not aware of other efforts.

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

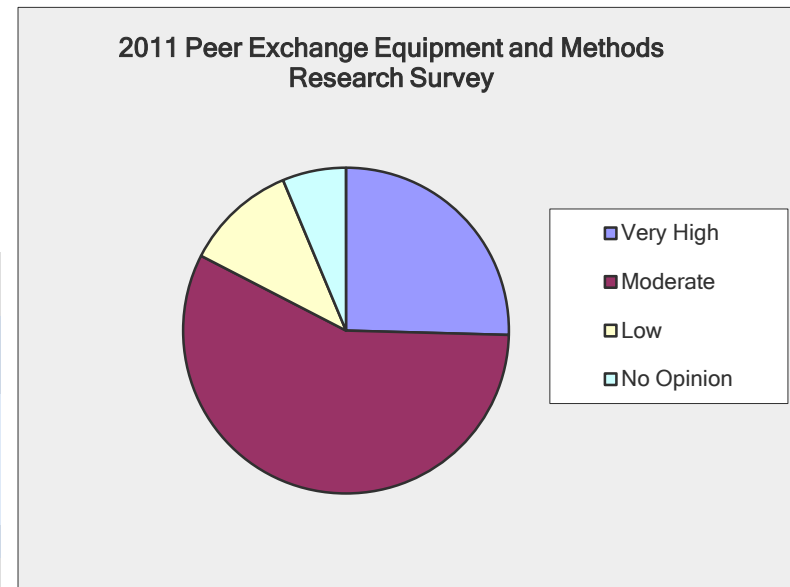
Optimize Ergonomics for Snow Plow Operators - There is a need to improve / optimize plow operator ergonomics

Progress to Date:

For 2011, Clear Roads has approved funding for a project on "Environmental Factors Causing Fatigue in Snowplow Operators" which should address ergonomics in addition to other factors.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	25.4%	16
Moderate	57.1%	36
Low	11.1%	7
No Opinion	6.3%	4
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

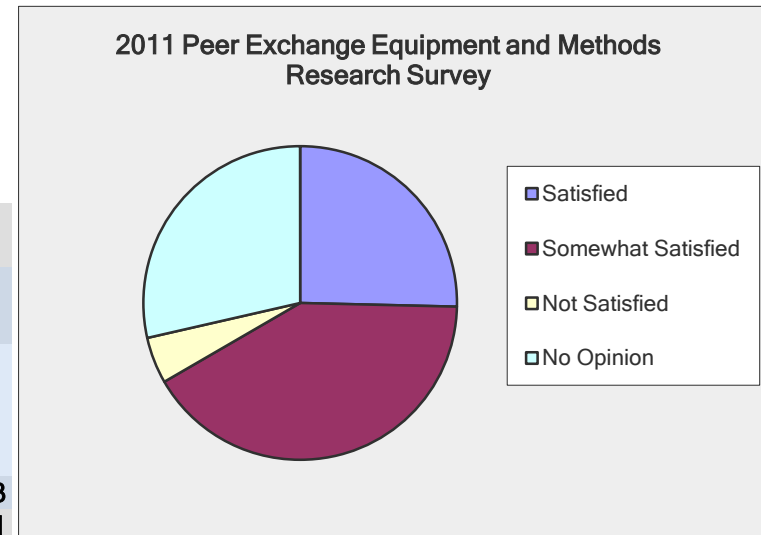
Optimize Ergonomics for Snow Plow Operators - There is a need to improve / optimize plow operator ergonomics

Progress to Date:

For 2011, Clear Roads has approved funding for a project on "Environmental Factors Causing Fatigue in Snowplow Operators" which should address ergonomics in addition to other factors.

Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	25.4%	16
Somewhat Satisfied	41.3%	26
Not Satisfied	4.8%	3
No Opinion	28.6%	18
<i>answered question</i>		63
<i>skipped question</i>		1



2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Optimize Ergonomics for Snow Plow Operators - There is a need to improve / optimize plow operator ergonomics

Progress to Date:

For 2011, Clear Roads has approved funding for a project on "Environmental Factors Causing Fatigue in Snowplow Operators" which should address ergonomics in addition to other factors.

You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	3
<i>answered question</i>	3
<i>skipped question</i>	61

Number	Response Date	Response Text
1	May 16, 2011 9:37 PM	Clear Roads has not undertaken the project yet and I am unaware of other research.
2	Apr 27, 2011 6:35 PM	It seems like all of the developments with controllers over recent years have simply served to increase the cognitive burden on the snowplow operator. We desperately need to provide suitable in-cab assistance for them to ease this loading.
3	Apr 27, 2011 3:35 PM	We think that we could learn much more from farm and other industry equipment

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

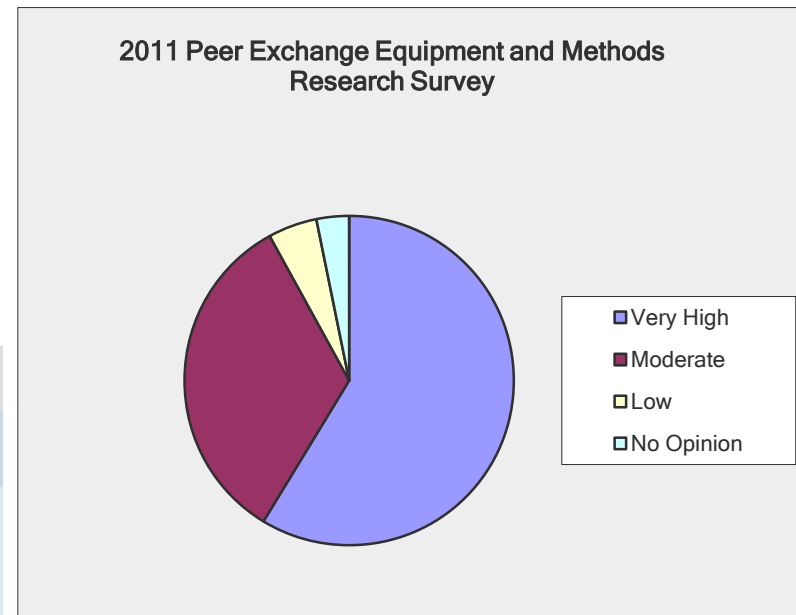
Develop Synthesis to Guide Outreach Program for Benefits of a Proactive Snow and Ice Control Program Using Anti-icing and Prewetting - The outreach program will address benefits of increased operational efficiency and effectiveness, improved mobility and safety, and reducing environmental impacts to the receiving environment and global sustainability. It will also address equipment and training costs of gearing up for liquids. The outreach program will be focused on three audiences. 1) Upper management and the institutional issues they must address 2) field operations personnel who address work environment and cultural issues and 3) traveling public who need to understand how proactive snow and ice control are conducted. Provide recommendations for technology transfer, i.e., webinar program outline, power point for speaker's bureau, etc.

Progress to Date:

Two Clear Roads projects will be providing foundational materials for the development of this outreach program. Project "Cost-benefit Analysis Toolkit" www.clearroads.org/research-projects.html has been completed and now needs to be tested by several DOTs to determine its usefulness and practicality. The other project, "True Costs of Snow and Ice Control Operations" has been mentioned previously in this survey. Two other benefit/cost evaluations have been completed for proactive programs and can be found at www.in.gov/indot/files/MDSSReportWinter08-09.pdf and www.meridian-enviro.com/mdss/pfs/files/WTI-4W1408_Final_Report.pdf.

Please rate the Need of this project

Answer Options	Response Percent	Response Count
Very High	58.7%	37
Moderate	33.3%	21
Low	4.8%	3
No Opinion	3.2%	2



answered question 63

skipped question 1

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Develop Synthesis to Guide Outreach Program for Benefits of a Proactive Snow and Ice Control Program Using Anti-icing and Prewetting - The outreach program will address benefits of increased operational efficiency and effectiveness, improved mobility and safety, and reducing environmental impacts to the receiving environment and global sustainability. It will also address equipment and training costs of gearing up for liquids. The outreach program will be focused on three audiences. 1) Upper management and the institutional issues they must address 2) field operations personnel who address work environment and cultural issues and 3) traveling public who need to understand how proactive snow and ice control are conducted. Provide recommendations for technology transfer, i.e., webinar program outline, power point for speaker's bureau, etc.

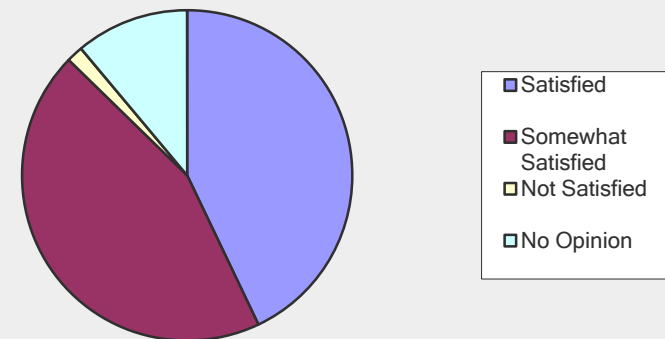
Progress to Date:

Two Clear Roads projects will be providing foundational materials for the development of this outreach program. Project "Cost-benefit Analysis Toolkit" www.clearroads.org/research-projects.html has been completed and now needs to be tested by several DOTs to determine its usefulness and practicality. The other project, "True Costs of Snow and Ice Control Operations" has been mentioned previously in this survey. Two other benefit/cost evaluations have been completed for proactive programs and can be found at www.in.gov/indot/files/MDSSReportWinter08-09.pdf and www.meridian-enviro.com/mdss/pfs/files/WTI-4W1408_Final_Report.pdf.

Please rank how well the current research satisfies your agency's needs.

Answer Options	Response Percent	Response Count
Satisfied	42.9%	27
Somewhat Satisfied	44.4%	28
Not Satisfied	1.6%	1
No Opinion	11.1%	7
<i>answered question</i>		63

2011 Peer Exchange Equipment and Methods Research Survey



skipped question

1

2011 Peer Exchange Equipment and Methods Research Survey

Problem Description:

Develop Synthesis to Guide Outreach Program for Benefits of a Proactive Snow and Ice Control Program Using Anti-icing and Prewetting - The outreach program will address benefits of increased operational efficiency and effectiveness, improved mobility and safety, and reducing environmental impacts to the receiving environment and global sustainability. It will also address equipment and training costs of gearing up for liquids. The outreach program will be focused on three audiences. 1) Upper management and the institutional issues they must address 2) field operations personnel who address work environment and cultural issues and 3) traveling public who need to understand how proactive snow and ice control are conducted. Provide recommendations for technology transfer, i.e., webinar program outline, power point for speaker's bureau, etc.

Progress to Date:

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You responded that the research did not meet your agency's needs. Can you explain what the research was missing and how we can better serve the need in future research efforts?

Answer Options	Response Count
	3
<i>answered question</i>	3
<i>skipped question</i>	61

Number	Response Date	Response Text
1	Apr 27, 2011 3:37 PM	Not there yet

2011 Peer Exchange Equipment and Methods Research Survey

Do you have any unmet winter equipment or methods research needs that do not relate to any of the research needs statements mentioned here?

Answer Options	Response Count
	31
<i>answered question</i>	31
<i>skipped question</i>	33

Number	Response Date	Response Text
1	May 17, 2011 11:36 AM	None.
2	May 16, 2011 3:30 PM	N.A. South Carolina has a lot of Open Graded Friction Course (OGFC) asphalt surfacing on our interstate system. We typically increase our rate of application of salt on this type of surfacing because we believe that it freezes faster than other types of more dense surfaces. Is there any research or data that indicates recommended rates by pavement surface?
3	May 16, 2011 2:43 PM	surface?
4	May 13, 2011 8:30 PM	no
5	May 13, 2011 7:00 PM	No
6	May 13, 2011 4:05 PM	Not at this time Develop Level of Service based Application Anti-icing and Deicing Guidelines and
7	May 13, 2011 3:39 PM	Develop a Searchable Knowledge Site such as a Wiki
8	May 13, 2011 2:59 PM	No
9	May 13, 2011 12:19 PM	no
10	May 12, 2011 10:09 PM	No
11	May 12, 2011 9:26 PM	1. Using average travel speeds to determine real time performance and service levels.[] 2. Per storm or short term winter severity measurements to use to measure performance. Cost effectiveness of advanced spreaders with variable spread patterns and zero velocity capacity.
12	May 12, 2011 9:04 PM	velocity capacity.
13	May 12, 2011 8:54 PM	Integration of GPS and information technology into winter operations
14	May 10, 2011 12:36 PM	no
15	May 9, 2011 7:48 PM	no
16	May 9, 2011 1:49 PM	no

17	May 6, 2011 8:48 PM	No
18	May 5, 2011 3:16 PM	The Peer exchanges have done a great job of identifying needed research. Nothing comes to mind.
19	May 4, 2011 2:31 PM	None
20	May 2, 2011 2:36 PM	Not at this time
21	Apr 30, 2011 1:31 AM	No
22	Apr 29, 2011 4:27 PM	Revisit/update the guide to practice for anti-icing and pre-wetting.
23	Apr 28, 2011 3:49 PM	More work needs to be done on "How to do more with less" We talk about efficiencies but how do we do it?
24	Apr 28, 2011 1:28 PM	Now that Maintenance agencies are embracing AVL/GPS technologies on their trucks, it may be a good idea to identify minimum equipment requirements/standards, communication standards/inter-operability, and other relevant issues.
25	Apr 28, 2011 1:18 PM	We are still looking for a snow and ice performance measures that allows us to measure real performance.
26	Apr 27, 2011 9:21 PM	Yes. Will be developing proposals in good time.
27	Apr 27, 2011 6:37 PM	we need equipment (primarily sensors) that allow us to turn our operations paperless. It is ludicrous to expect operators to complete material usage forms in any meaningfully accurate way after a 12 hour shift, and even if they do, the information does not tell us where materials were placed and at what rate. This should be doable now, but it will need some significant systems integration work.
28	Apr 27, 2011 4:12 PM	Fundamental reconsideration of snowplow design - perhaps going back to the original task - clearing the carriageway - with an eye towards modern materials, fluid dynamics, and basic laws of physics - could we reduce the net energy required to move a certain volume of snow off the road?
29	Apr 27, 2011 4:02 PM	Is there a significant difference in performance between treated salts with agricultural additives as compared to treated salts without? What is the cost/benefit in using more expensive agricultural based treated salt vs treated salt without agricultural additives. If there is a difference in performance, is it significant enough to warrant potentially higher costs?
30	Apr 27, 2011 3:40 PM	Snow Plow Design, We think there can be a lot of work in this area. Not much has changed in the last 50 years.
31	Apr 27, 2011 2:49 PM	No