

1 **CONFERENCE CALL MEETING # 1 – AUGUST 1, 2013**

2 Meeting Participants: 13 total / 8 agencies

3 <b>Deschutes</b>	Chris Doty	Tom Shamberger
4 <b>Jackson</b>	none	
5 <b>Marion</b>	Don Newell	Krista Rowland
6 <b>Washington</b>	Keith Lewis	Dave Schultz
7 <b>Pierce</b>	Bryan Chappell	Wanda Davis
8 <b>Snohomish</b>	Mel Reitz	
9 <b>Spokane</b>	Bob Keneally	John Seaver
10 <b>Yakima</b>	none	
11 <b>AOC</b>	Emily Ackland	
12 <b>CRAB</b>	Bob Moorhead	

13 **INITIAL AGENDA**

- 14 1. Individual Introductions
  - 15 a. Yourself, background, Career....
- 16 2. Agency Introductions
  - 17 a. Breath of your agency's Scope of Services
  - 18 b. System Size (i.e miles of roads, others serves - i.e. solid waste)
  - 19 c. Staffing – FTE counts / Overall Budgets
- 20 3. Formulating Group / Individual Goals
  - 21 a. Sharing / Brainstorming...
  - 22 b. Methods (web)
  - 23 c. Measurables ?
- 24 4. Immediate Concerns / Opportunities
- 25 5. Site Visits ?
  - 26 a. View daily operations / facilities / opportunity to ask questions
  - 27 b. Who is interested / Arrange some dates/ locations?
- 28 6. Gravel Road Maintenance Practices - Robert / Spokane
  - 29 a. Spokane has 1,000 miles of gravel roads out of 2,500 total miles
    - 30 i. What ideas do people have for maintaining gravel roads?
    - 31 ii. We are experimenting with asphalt grindings and mag chloride and will share results
  - 32 b. Converting to Pave roads - How
- 33 7. Your Summer Projects
- 34 8. Working with other Agencies
- 35 9. Budget Forecasting – right-sizing?
- 36 10. Fleet
- 37 11. Labor practices
- 38 12. Service Levels Delivering – changes
- 39 13. Good / New Discoveries – what is working well
- 40 14. Pitfalls – what is not working

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

41 15. Other lessons learned

42 16. What else ?

## 43 ANNOUNCEMENT'S / CALENDAR

44 **News!:** for you or your staff calendars – **OACES 2013 Chipseal Workshop** - Wednesday, Dec 11 at Marion County

- 45 - Held every 2-years, this is our 2<sup>nd</sup> one
- 46 - We filled the room with 130 folks in 2011, but as per our phone meeting, I will reserve up to 4 slots for each
- 47 agency
- 48 - If you have staff that need to get on Workshop e-mail list, please send them to me.
- 49 - Most agencies prepare 10 to 20 minute PowerPoint presentations, and accent some unique feature in their
- 50 program (i.e. application tricks, success, discovered failures, etc)
- 51 - No industry vendors are allowed in the room – folks talk frankly about the products & services they are
- 52 using.
- 53 - In the fall, I collect common data from the agencies, and present them side-by-side (i.e. one could who is
- 54 doing coated chips and how many miles)
- 55 - Take photos of your work, and collect rock samples to bring & put on the rock table for all to see/ compare
- 56 - Purpose: I have found that Chipseal folks learn from each other – great to bring front line folks together!
- 57

## 58 **Topic # 1: Introductions, Goals, Project Scope, Agendas, Methods**

### 59 HOT TOPICS

60 I reviewed Krista's notes (pages following), bolded some things, and brought a few forward to this page:

61

62 We agreed to meet on 90-minute phone conferences on the **1<sup>st</sup> Thurs of each month at 9 AM**

- 63 • The phone number / code number access should remain the same: (1-888-330-1716 code: 9311297)
- 64 • I booked my calendar through 2014, and at this point the date I moved was July 3, 2014 to July 10.

65 We agreed to consider doing 2 site visits tours each year – Spring & Fall, maybe visit two counties on each

- 66 • Spokane offered to be host in the Spring '14 ( no date projected at this time)

67 Agreed to continue to populate the agency side-by- side comparison spreadsheet

- 68 • Add new record lines
- 69 • Send updated files back to Don
- 70 • Latest version: "[Over Shoulder – County Data v3.xls](#)"

## 71 **Topic # 2: OTS Topics: Concerns; "What we like to learn"; Priority #1's Issues**

72 Don hopes to launch a secured web page for news & obtain files

### 73 Deschutes

74 [Chris Doty - Issues:](#)

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

- 75 • Sustaining pavement quality and steer into pavement maintenance.
- 76 • Initial computerized maintenance management system; implementing a modernized system. Would like to
- 77 find a system to put everything under one umbrella instead of individual pieces.

78 What he wants from the group:

- 79 • Things we are doing right but always room for improvement
- 80 • Things we are not doing and where to start.

81 Priority #1 : asset management systems

82 Tom Shamberger: What he wants from the group:

- 83 • New ideas;
- 84 • Older ideas that are working; best practices

## 85 Marion

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86 Don Newell: What he wants from the group: What works elsewhere and pitfalls to avoid

87 Priority #1: Fleet specifications as prices are going up – right spec for the work/ job

## 88 Washington

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89 Keith Lewis: Priority #1:

- 90 • decreasing funds, work smarter,
- 91 • contracted work vs doing it ourselves;
- 92 • how to deal with funding issues

93 Dave Schltz: Issues:

- 94 • Integrated road maintenance system; street saver pavement management ArcView
- 95 • Feels there is a greater demand to provide high level of services.

## 96 Pierce

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97 Bryan Chappell: Priority #1 : maintenance and preservations of asphalt on sidewalks and shoulders.

## 98 Snohomish

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99 Mel Reitz: Issues: Dealing with vegetation, noxious weeds

- 100 • bridges, crack seal, drainage and routine maintenance
- 101 • work with cities quite frequently; agreements for pavement markings, surface
- 102 • Working towards a maintenance management system.
- 103 • Adding automotive GPS to road equipment.
- 104 • Have a Web based system for community complaints and have to respond within 30 days; they are rated
- 105 on that.
- 106 • Had 3 year hiring freeze, reduced staff has been challenging.

107 What he wants from the group:

- 108 • Ways to save money

see **"Over The Shoulder Topic Index"** ongoing WORD file for meetings' topics

- Asphalt recycling
- Monitor stripes. Stripe every year.
- Leading edge technology as to maintenance of pavement.

Priority #1: Pavement markings and minimizing costs.

## Spokane

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Bob Keneally

Issues: Re-organizing the department into 2 districts instead of 4; will be more supervision on the roads.

What he wants from the group:

- Maintaining gravel roads
- too dry of gravel
- Maintenance on equipment – Tracking a piece of equipment for completion time and when it can be fixed, and keeping them maintained.

Priority #1

- Chipseal
- gravel roads
- management organizational structure.

John Seaver: Issues:

- Getting new equipment since it hasn't been updated.
- GPS in all vehicles for de-icing and grading so they'll have close contact.
- TV's in offices, RFI system.
- Reports to the media so the citizens know the location they are working.

## AOC

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Emily Ackland: Priority #1: learning from you all but you can use her as a resource too.

## CRAB

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Bob Moorhead: Issues:

- There are 12 standards of good practices that have to be met by the counties to receive gas tax.
- Interact with Association of County Engineers for performance measures.

Priority #1: Review interchangeable beds on Truck chassis & such on equipment and which may control county fleet costs.

**\*\* End of Meeting #1 \*\***

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

141 **CONFERENCE CALL MEETING # 2 – SEPTEMBER 5, 2013**

142 Meeting Participants: 18 total / 9 agencies

143	<b>Deschutes</b>	Chris Doty	Ed Landers	
144	<b>Jackson</b>	John Vial	John Rhoden	
145	<b>Marion</b>	Don Newell	Pete Delapp	Jolene Bray
146	<b>Washington</b>	Keith Lewis	Dave Schultz	Lar Bidstrup
147	<b>Pierce</b>	Bryan Chappell	Paul March	Paul Welsh
148	<b>Snohomish</b>	Mel Reitz		
149	<b>Spokane</b>	Robert Keneally	Howard Hamby	
150	<b>Yakima</b>	none		
151	<b>AOC</b>	Emily Ackland		
152	<b>CRAB</b>	Bob Moorhead		

153 **REVIEW SITE VISITS SCHEDULE**

- 154 • Discussed doing site visits twice/ year. Keith at Washington County will host first site visit. Attendees can stay  
155 overnight and then visit Marion County the following day with a site visit to the ash recovery facility. The site visit  
156 will start at 10:30 a.m. with lunch on site. Washington County has most equipment and facilities at one location  
157 so there will be time to go through the yard and then have a sit down meeting. Don said attending operators  
158 would be able to view equipment.
- 159 • Agenda and time not set – can include optional field trip before 10:30.
- 160 • End day by 3:00 p.m. so attendees can begin travel home.
- 161 • Asked participants to send ideas/suggestions of what they would like to see.
- 162 • Don – Spokane County has agreed to host second site visit but they need to choose dates.

163 **NEW SECURE WEB PAGE FOR FILES**

- 164 • Administrative News – Don told of new website and asked if anyone had problems with log-in. Some had to log  
165 in multiple times but were able to access the file page. Website address is:  
166 [www.co.marion.or.us/PW/Roads/overshoulder](http://www.co.marion.or.us/PW/Roads/overshoulder)
- 167 • New PowerPoint file is online. Told group that new note files would be posted each month before next meeting  
168 as well as the next meeting agenda.
- 169 • Don – told group if they have individual files to share they can email to MC and we will post.
- 170 • Asked counties to look at directory and email any needed corrected contact information.
- 171 • Keith at Washington County - He and Dave Schultz have gone through the numbers on the county data  
172 spreadsheet and are working to refine numbers and pin down. They will have updates to original info and will  
173 send to Don. Once received, information will be updated and added as it is submitted by participating counties.  
174 Don told participants to download the file from the 'Over The Shoulder' website, then save their version, make  
175 changes, and email to Don.

176 **CALENDAR OF EVENTS – FINE TUNE**

- 177 • Reviewed future meeting dates/times.
- 178 • Chip seal workshop in December at Marion County. Please let Don know if you have staff you'd like to attend.
- 179 • See Site View Schedule above.

**Topic # 3: Gravel Road Maintenance: 1/3- Practices & Related Activities**

**Deschutes**

Has 200 miles of gravel roads and most are out in desert. They don't do dust control because there is no water available. General maintenance is done in early spring or late fall.

They have five (5) graders available and three (3) rollers.

They treat about 50 miles of local gravel roads with magnesium chloride per year. He said a lot of gravel roads have native soil for dust abatement. He said it seems to take magnesium chloride better than rock. Their annual budget for magnesium chloride is approximately \$175,000.

**Jackson**

Has **165 miles gravel road**, which is about 20% of the road system. Demographics is varied. Quite a few in valley road. ATV pushing 100. Many are logging roads in mountains.

Annual budget for gravel road maintenance is \$1.2 million or 11% budget.

Carl Rhoden has joined. Has 5 grading crews. Pickups and water trucks. In place 9 mo. Out of year.

When paving go down to one crew to hit wash boarding and complaints.

Dust abatement program – use lignon. Don't do it unless citizens participate. Co. subsidizes 1/3 – citizen pays 2/3. Subsidize because they save on grading.

**Marion**

Has a little less than **190-miles gravel road** and have been making changes in the last 5-7 years to gravel road services. Have been making enough rock to rock roads but made changes to fleet.

Had lighter graders but buying some with more horsepower. County has 1,200 mile road system, with 300 miles above 3,000 feet. Bigger graders are needed during the winter and will keep one at districts that have high elevation.

County was spending \$50,000 on lignon but had budget cuts and has now ceased buying lignon for roads but will provide grading services after citizens purchase lignon from contractors. They are also looking at other products.

One road was slipping and was turned into gravel with **Earthbind** applied for dust abatement. This has been promising but expensive.

Pete said a lot of roads have heavy truck traffic and in the summer time there are problems with washboards. Marion County doesn't have a roller yet and they are considering getting **roller buddies for graders**. He asked if anyone uses them. Howard at Spokane County said they purchased four of those but the four purchased were badly constructed and were sent back. In meantime tried out other brands and they're sold on them but haven't had funds to purchase. Don asked which ones didn't work out. Howard said the Rock and Roll brand.

**Washington**

**Has 200 miles of gravel roads and they grade 130 miles.** Purposefully don't maintain a few designated dead end roads with no residences. Grading season starts in September and runs through May.

They have three graders in fleet and had four until four years ago. Due to budget cuts they consolidated southern portion of county and shifted things to be covered by three graders. They saw a bit of drop off in service but proportionately they haven't seen a significant outcry from the public. Typically hitting roads three times per year but have some roads at higher elevation that get more attention.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

218 Their budget for rock is a little over half million dollars and they use ¾" minus in aggregate. The dust abatement  
219 program is called "Surface Stabilization Program." Have downsized from recent years, going from \$70,000 to  
220 \$20,000 and did have a few upset citizens.

221 They have a similar program where citizens pay for dust abatement. Citizens take out 'grading permit and the county  
222 grades that area before product placement. Tested lignon and magnesium chloride in same area and would like to  
223 look at that section of roads during site review. Dave said they have a Rural Roads Advisory Committee with  
224 citizens who have an interest in rural road system. Keith said years ago when Washington County was going  
225 through budget cuts and shifting to gravel, with cooperation with RoadMac they got pavement back on some gravel  
226 roads. Have made some headway.

227 Lars said 1,800 feet is highest elevation on roads. Howard (Spokane Co.) asked when turning back to asphalt did you  
228 see increase in cost of maintenance. Keith said they ran costs and saw it is more expense to maintain hard surface  
229 compared to gravel. Don (Marion Co.) asked if they had any documentation to post on our website. Keith said when  
230 talking about rating they went back to when road was graded or rocked, did survey of road and looked how  
231 treatment went. At the time rated, the road received a score (A, B, C, D). It was a random sampling and by no  
232 means a complete inventory. Don asked if they have exhibits or description of rating program that would be good to  
233 put on web.

## 234 Pierce

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235 Has **22 miles of gravel roads left in** their road system. In the mid-1980's to 1990's they converted the previous 80  
236 miles to hard surface. Their budget is \$62,000 per year, which is 1.5% of total budget.

237 They grade in the spring and fall, and have six graders but only use a fraction of the time on graveling.

238 They have **three rubber tire rollers**. This is a very small piece of their road program. They position the graders in  
239 higher elevations for snow removal and have used dust stabilization products.

240 They experimented with **asphalt grindings** and this works marginally well as dust control procedure. Bryan said they  
241 must screen product so it doesn't ball up into a mass. There was discussion about application.

242 Brian said the road needs to be cut into about 2" to get it to bond below. They have not used oil or magnesium chloride  
243 on the grindings; they apply and tamp down to road bed. Bryan said it is not a good choice for steep grades  
244 because it will slide around.

## 245 Snohomish:

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246 Only **10 miles of gravel roads**, which is a very small portion of road system.

247 They have four John Deere motor graders and use in winter.

248 Their annual budget is \$900,000, with Lignon sulfate budgeted at \$10,000 annually

## 249 Spokane:

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250 Has **1,000 miles of gravel roads**.

251 They currently have 38 graders and will get 6 new graders.

252 They typically don't do any grading on gravel roads in July and August which is when they get the most complaints.  
253 They did a test project by putting down magnesium chloride on half a section of road and none on other half. They  
254 then put down grindings and rolled both sections. Held up pretty well and watching for results on how both hold up.

255 Howard said Handywhips were did poor workmanship on rollers, not Rock and Roll. He said their board of  
256 commissioners wanted them to use mag chloride on a road project but staff determined it wouldn't work.

257 They did a test project – ditched, graded, compacted, then put high float 150 at shot rate and used dirty cold mix and  
258 applied. (High float penetrates up not down.) They then swept it off and are waiting to see how it holds up. Intent is  
259 to see if they can do this process as a semi-permanent surface. Staff just visited and it looks to be holding up well  
260 and may be a good viable option.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

261 John (Jackson Co.) asked what type of ATD. Howard said this section of road doesn't get a lot of traffic but will get  
262 more because they just opened a new park at the end of the road. The same process is being used all over with  
263 good success. Instead of chips they are using high float and it improves structure of the road. Some counties are  
264 doing 100% on high traffic / high volume roads

## 265 AOC:

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266 No comments

## 267 CRAB:

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268 No comments

## 269 WHAT ARE SOME PRIMARY CONCERNS TODAY AND WHAT YOU WANT TO LEARN FROM GROUP?

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## 270 Deschutes

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271 Nothing coming to mind.

## 272 Jackson

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273 Some counties are rolling / compacting and some aren't. Interested in knowing why these decisions are being made.  
274 Howard (Spokane Co.) said it is important to compact because when you grade there is still fluff that starts to  
275 washboard and degrade. Once compacted, you have a surface that handles traffic. The same thing applies to  
276 applications. If there is fluff when oil applied, it immediately starts to degrade the road. John (Jackson Co.) said  
277 they are truck compacting but there is a difference from compactors.

## 278 Marion

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279 Just purchased a cold plane drum and looking at other uses for grindings.

280 Also, how are safety practices done for graders. Marion County worked with agriculture folks and built an applicator  
281 that dispenses colored **foam to the rear of the graders**. Our grader operators dispense on blind corners to alert  
282 motorists coming up behind graders. The foam lasts for about 40 minutes and then turns white and disappears.  
283 There is a small tank strapped on side of grader and the operator turns switch on and off as needed. The costs was  
284 less than \$2,000 and the contact number for local manufacturer is on spread sheet.

## 285 Washington

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286 Would like to hear about Highflow 150 penetrating up instead of down. Sounds like other counties are having success.  
287 Concerned if penetrating up it doesn't tie into base. Interested in hearing more.

288 The Northwest Pavement Management conference is in Spokane and this will be discussed. Don (Marion Co.) highly  
289 recommended conference and said it is good for road supervisors, engineers, and pavement management.

## 290 Pierce

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291 Roads are pretty easy to maintain and most complaints center around dust. They will do dust abatement in the spring  
292 with magnesium chloride.



see **"Over The Shoulder Topic Index"** ongoing *WORD* file for meetings' topics

293 Don said he sees two concerns around dust: safety and quality of life, although environmental is a concern also. Bryan  
294 said most of their complaints are about quality of life and working with Puget Sound environmental rules are  
295 unforgiving.

296 They would like to see a decrease in maintenance costs.

297 **Snohomish:**

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298 Would like to hear about dust abatement. Most of their roads are in back country / high elevation and whatever they  
299 put down doesn't last too long.

300 Also, the foam applicator sounds interesting.

301 **Spokane:**

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302 They made a change to their complaint system this year. They previously sent complaints from citizens to districts but  
303 that system wasn't very efficient.

304 They have moved to an electronic process in which calls put into the application can be viewed by all and tracked by  
305 district. Staff can put in callers contact info, district, location of complaint, and attach a received voice mail. Then  
306 district manager can open application, read what's written and listen to the message and most can be called back  
307 that day. This has been very successful.

308 They are also doing other test projects with Highflow and there is one in particular where they used grindings with  
309 same process and chipped over the top. They went up 200 feet up and put high float and it now looks like a paved  
310 road. It's called a semi-permanent surface but is turning into a paved surface and they will need to do permanent  
311 maintenance.

312 **AOC:**

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313 No comments

314 **CRAB:**

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315 No comments

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317 **\*\* End of Meeting #2 \*\***

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see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

### CONFERENCE CALL MEETING # 3 – OCTOBER 3, 2013

Meeting Participants: 13 total / 7 agencies

<b>Deschutes</b>	Chris Doty	Tom Shamberger	
<b>Jackson</b>	none		
<b>Marion</b>	Don Newell	Jolene Bray	Pete DeLapp
<b>Washington</b>	Dave Schultz		
<b>Pierce</b>	Bryan Chappell	Paul Marsh	Todd Zurfluh
<b>Snohomish</b>	Mel Reitz		
<b>Spokane</b>	Howard Hamby	Steve Becker	
<b>Yakima</b>	Ryan Calhoun		
<b>AOC</b>	none		
<b>CRAB</b>	none		

### REVIEW SITE VISITS INFORMATION

The first site review is on November 6<sup>th</sup> at Washington County with a field trip to Marion County's North Marion Recycling and Transfer Center in Woodburn and teleconference meeting the following day. Don asked for a head count by October 29<sup>th</sup>. He said he wouldn't suggest an agency group larger than five.

The first day may involve a morning field trip for early arrivals but this will be firmed up closer to the date. The second day will begin at 7:30 a.m. at Marion County's recycling center. The group will meet there and then move to the Public Works campus for the meeting at 10:00 a.m.

Don said the Washington County equipment yard is quite large with a lot to see. Lunch will be onsite and the site visit will try to be over by 3:00 p.m. so attendees have travel time.

Don asked what folks want to see at the sites:

- Deschutes County – Look at some roads that were converted from gravel to hard surfaces. See how crew rotations and equipment are used for ice and snow events.
- Washington County – Hosting so no opinion given.
- Pierce County – Nothing specific but if there are decamping facilities they'd like to look at, as well as snow and ice brine making.
- Spokane County – Agrees with previous suggestions.
- Yakima County – Not sure if attending but would like to see snow and ice, brine making. See what other fleets are doing to prevent damage from salt and mag chloride to vehicles.

Don will send out a more formal agenda closer to the date.

### REVIEW WEB PAGE INSTRUCTIONS

Don shared that there is or will be web sub directories to place share organization files: Fleet & Equipment, Gravel Roads & Shoulders, Other & Assorted items, Pavements, Program Descriptions, Budgets, Adm Aids, Public Communication, Safety, Staffing & Work Rules, Traffic Markings & Signs, Vegetation, and Winter & Storms.

### CALENDAR OF EVENTS

**OACES 2nd Chip Seal Workshop** – Wed, Dec 11 @ 9:30 AM to 3 PM. This is held every two years at Marion County Public Works for chip seal supervisors, managers, and crew leaders. Agencies compare practices with each other and no vendors are allowed. Agencies must RSVP to Don Newell and are limited to three (3) seats per agency. Don said he needs agency's staff e-mail addresses for further announcements. He will be polling agencies on their chip seal programs (what type of oil, rock, etc.) to share with the larger group. Don said they like to see 10-15 minute PowerPoint presentations about what is unique to your organization and something that works well.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

362 Everyone there is chip sealers and the audience is there to learn what does and doesn't work well for others. The  
363 last time this workshop was done all agencies were asked to bring rock to display.

364 Don will send out a formal invitation to agencies next week. He said there will be a working lunch in the room with  
365 attendees asked to contribute money. Those who should attend are staff who make decisions about chip seals and  
366 supervisors that are in front lines. Tom (Deschutes Co.) said this is a good training and he agreed it was mainly for  
367 decision makers and operators would not get as much out of the workshop. This will be mostly Oregon counties  
368 with only a few cities. All attendees of this meeting will be receiving an invitation.

## 369 SURVEY - NEAR FUTURE AGENDA IDEAS

370 Don sent the group a list of possible agenda items for the future and asked participants choose their top ten items for  
371 discussion and send to him **by October 29**. He said the group will work on all the items on this list and sees it as a  
372 two year project but wants to cover it in the order this groups thinks is necessary.

## 373 Topic # 4: Gravel Road Maintenance: 2/3 – Graders

374 Don said the group had agreed to continue discussion about grader specs, what type of graders folks are buying, what  
375 type of life cycle agencies are scheduling. He said most graders are custom built for agencies. He asked each  
376 organization to share how many graders they had, what was their most recent purchase, if there has been recent  
377 purchase, why they purchased what they did, and if they had maintenance issues.

## 378 Deschutes

379 Has five graders total. Run 14' long board on all of them. There are two AWD units – one large and one small.  
380 They also have one with a small plow and use when opening roads in high country. This maintains balance of small  
381 and large machines because different purposes.

382 Also has B plow and has straight dozer plow. The B is used in the lower country when it can be used quickly. The 14's  
383 the operators really like. Tom said they cut ice.

384 The smaller machines go out to desert. The bigger machines lean toward snow and ice. When they are doing  
385 nighttime plowing, they may run grader through intersections and follow with truck plow. This has been pretty  
386 affective. They also have a truck mounted wing plow that works well. It can push snow out to guard rails. There  
387 have been training issues for operators, but this is a good tool that allows them to move a lot of snow.

## 388 Marion

389 For ten years Marion County had eleven graders but has reduced that number to seven. More grader routes have  
390 been reestablished.

391 There are three principal operators that cover the roads but can throw in additional operators if available. Two districts  
392 have high elevation roads so one grader is left up high in the winter and one down low. Don (Marion Co.) said he  
393 thinks fleet will be resized to 5 maybe 6.

394 They now have a 4WD and will pick up an AWD. Marion County's graders are John Deere with one Volvo from the  
395 state contract. He said we made a deal to trade out two old graders for the purchase of a new big grader (772GP).  
396 Staff did a side by side comparison with CAT and liked the John Deere better, thinking it would work better for  
397 roading and winter work.

398 The price tag was \$320,000 and a second twin has been ordered. Don said they have varying size low boys on  
399 graders.

400 They have historically done private work orders for driveways for agriculture customers, but this activity has been cut.  
401 Four wheel drive graders with more borings are bought now. Don said one thing grader operators liked about the

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402 John Deere is a steering wheel rather than joy sticks on CAT. He asked for other input on steering wheel versus joy  
403 sticks.

404 Ryan (Yakima) said they have eight graders and all have joysticks. He said they have a lot of problems with joy sticks  
405 and are looking hard at whether they stay with their current graders. Randy (Deschutes) said they've had good luck  
406 with M series have worked for CAT. Tom (Deschutes) said they haul everything so they don't road miles on  
407 graders.

408 Pete (Marion) said he's had no issues with joy sticks and that operators liked it when grading but not when road-ing.  
409 Marion County has 300 miles of road above 1,000 feet, with heavy vegetation so there are problems with canopy  
410 and down trees. The new grader has front bi-directional plow but haven't had a chance to use in a snow storm. Also  
411 have 6WD graders for the hills. Using HD brand tire chains after fleet tried using cheaper chains that didn't hold up.  
412 Chaining up all front axels too and it will go almost anywhere.

413 Don asked if there were any more thoughts about using **asphalt chips**? Tom Shamberger said Wasco County did that  
414 and put together a PowerPoint presentation. He said it was successful for a low travel road. Don said Columbia  
415 County did the same this past summer. Don said he would try to get the PowerPoint from Wasco County and share  
416 on the 'Over The Shoulder' website.

## 417 Washington

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418 Have three CAT graders that are assigned by area in rural part of county for gravel road maintenance and snow and  
419 ice removal.

420 Don encouraged attendees to look on the website under "Gravel Roads" directory at Washington County's manual.  
421 Dave said it was a requirement to develop a level of service and is one of several manuals, with others available  
422 about road maintenance. He said they used this manual and put together their own inspection program.

## 423 Pierce

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424 Have five CAT 540Hs and have one stationed in Green Water area (5,500 elev). There are a few pockets of high  
425 elevation roads assigned as needed. If there are big events, they will work in tandem with trucks. Used as needed  
426 in lower elevation.

## 427 Spokane:

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428 Have thirty-six 14-foot graders that are 1987 – 2001 in age. They have 6 CATs and 30 John Deere's and all are AWD.  
429 They have purchased six new John Deere Graders are both joy stick and steering wheel steering, with wings, lift  
430 group to run plow, and air conditioning.

431 Tom (Deschutes) said grading in desert and asked if anyone runs compaction behind. A lot of agencies who have full  
432 fleet.

433 Steve (Spokane) said tried before economy hit and really liked. They purchased a compaction unit a Canadian  
434 company, which turned out to be shoddy and was sent back. They said compacting is getting huge successes and  
435 benefits from not having to go back out on problem roads. Tom asked how it is used and what is cost?

436 Steve said they're hydraulically lifted in back and come off the ground. They do not cause any warranty issues for  
437 grader. As making final pass on gravel road, you drop this down and roll it in. You now have compacted road  
438 instead of traffic making compaction and causing washboards. Those they looked at have hydraulics that cause  
439 down pressure. Others allow shifting to side to do shoulder compaction. He said if go out and get, demonstrate all  
440 you can because there are definite differences.

441 Don said counties in Oregon have tried a lot and have polled them. The Grader Buddy and Final Pass are those liked  
442 by counties. Yamhill County did a demo and liked the engineering solution on the Final Pass model. One thing  
443 learned is to have dozer blade to give machines balance. Don said they are under \$30,000 and that Marion County  
444 would equip one grader.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

445 Ryan (Yakima) said he has the Rock and Roll model and really likes. Steve (Spokane) said when they did analysis the  
446 one that performs the best is the Rock and Roll. He said some are very rigid just roller behind grader. He said you  
447 need to look for those with some bells and whistles but all don't articulate around corners.

448 Don asked if anyone is using for lignin /dust abatement control. No one is currently using for this purpose.

449 Don said the reasons Marion County is interested in roller are, 1) reduce number of passes on road and reduce rock  
450 breakage, and 2) when roads compact you can make less visits to road.

## 451 Yakima:

452 Graders are paired up with truck driver and used for clearing out intersections. Grader will clear intersection and truck  
453 will follow. Ryan said they preach no down pressure; flow only. It is used very heavily throughout the county.

454 Pete (Marion) said they had problems with graders that had fenders when putting on chains. He said they plan on  
455 making quick disconnects for fenders particularly rear ones so they can be removed quickly and chains attached.  
456 He said when ordering graders he'd recommend not ordering with fenders if they aren't needed.

457 Yakima does buy back program but not leasing. Asked if it makes years newer in fleet. Yakima said it seems to be.  
458 Ryan said Dave Viele is equipment manager.

## 459 Topic # 5: Gravel Road Maintenance: 3/3 - Grader Training

### 460 Deschutes

461 Part of training program is training school to learn to be journeyman grader. Some more proficient than others but are  
462 receiving training on job too. Some operators hired from outside come in with previous experience.

### 463 Marion

464 Previously had Heavy Equipment Operator (HEO) who ran for graders with no additional pay to grader operators.  
465 Looked at ODOT and made changes. There are no HEO's anymore but give pay adjustment of 5% to run heavy  
466 equipment. Any one can receive training and earn additional wages in all the districts but with reduced staff trying  
467 to get fleet out. Staff receive instruction from senior operators. Currently have a small crew so working on training  
468 more people than originally running just graders. Now trying to get equipment operators so they can step in and  
469 operate. Don said they are trying to train new graders every season.

470 Don told the group there is a new PowerPoint presentation on the web about the foam applicator Marion County uses  
471 on for its graders and has contact information for fabricator.

### 472 Washington

473 Not familiar with training program.

### 474 Pierce

475 Don't have formalized training program but new operators get time with experienced grader. Discussing with unions  
476 how to get training. All training is now on the job, but is looking at a regional based training..

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

477 **Spokane:**

478 Implemented two or three years ago. Asked for training people to sign up grader operators in the field. County staff is  
479 training new operators. Adding on to make sure grader operators are experienced and looking at experience in  
480 driving trucks or grader operator during hiring process.

481 **Yakima:**

482 New hires are asked for experience. If they say they are a grader operator they are put through a 'rodeo'. They do seat  
483 time as well as training with joy stick. Initially have a DVD and own curriculum and mostly done in-house with older  
484 operators.

485 They use the South Dakota Gravel Road book. Ryan said the company that they purchase magnesium chloride from  
486 puts on a class "Gravel Roads Academy." It's geared for gravel road maintenance with dust control in mind and  
487 brings in experienced operators who can answer questions

488 **OTHER TOPICS – UPCOMING EVENTS**

489 There was discussion about funding and potential road/gas tax. Counties can now raise local monies that must be  
490 used for the maintenance, not new construction, of road system per state law.

491 Pavement Management Conference – There are currently 170 people registered and growing. Don said those not  
492 signed up should consider going, adding that the things learned at and away from conference are valuable.

493 Don said Marion County brought in hot in place recycling resurfacing and we're putting together a PowerPoint  
494 presentation on that project. Ryan said they are looking at doing small projects with a small unit on a flat and using  
495 for potholes.

496 Don said one agency is looking for a hand tamper for pot holing and looking at pneumatic fence post pounder.

497 The next meeting is in Washington County on November 6th, then Marion County on November 7th. The meeting on  
498 the 7th will begin at 10:30. Topics may shift due to road tour. Don again asked everyone to please complete the  
499 survey of the top 10 items for future agenda discussion.

500 Tom (Deschutes) said he went to an ODOT training for procurement and was told a lot of equipment was coming back  
501 from Iraq and Afghanistan. He asked if Don or fleet staff had heard of or gotten any of this equipment. Don said  
502 Yamhill had one piece of equipment.

503 Steve (Spokane) said an outsider commented on this group meeting and said it was a good thing that all these  
504 counties are getting together to discuss mutual issues.

505 **\*\* End of Meeting #3\*\***

506 **Topic # 6: Site Visit: Washington - 11/7/13**

508 **Topic # 7: Site Visit: Marion - 11/8/13**

509 **#Agencies Attending:** Deschutes (3), Marion (4), Washington (2), Pierce (2), Spokane (3)

510 See OTS Web site for handouts, etc

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

512 **CONFERENCE CALL MEETING # 4 – NOVEMBER 7, 2013 @ MARION CO SITE VISIT**

513 Meeting Participants: 18 total / 7 agencies

514	<b>Deschutes</b>	Chris Doty	Ed Landers	Randy McCulley		
515	<b>Jackson</b>	none				
516	<b>Marion</b>	Don Newell	Jolene Bray	Pete DeLapp	Mike Harmel	Pat Murray
517	<b>Washington</b>	Keith Lewis	Dave Schultz			
518	<b>Pierce</b>	Bryan Chappell	Bruce Wagner			
519	<b>Snohomish</b>	Cindy Higman	Alan Smith			
520	<b>Spokane</b>	Bob Keneally	Bud Simmons	Bryan Hopp		
521	<b>Yakima</b>	none				
522	<b>AOC</b>	none				
523	<b>CRAB</b>	Bob Moorhead				

524 **LUNCH PRESENTATION**

525 Marion County **hot-in-place recycled asphalt concrete paving** project – Raid A, Engineer

526 **ANNOUNCEMENT'S / CALENDAR**

527 The **OACES Chip Seal Workshop** will be held on Wednesday, December 11th from 9:30 a.m. to 3:00 p.m. at Marion  
528 County Public Works. This workshop is held every two years for chip seal supervisors, managers, and lead  
529 workers. Don said agencies have an opportunity to compare practices with each other and no vendors are allowed.  
530 He reminded everything that RSVPs must be sent to him and each agency is limited to 3 participants. Tom  
531 (Deschutes) said agencies are also asked to bring samples of the rock they use and it's displayed on a table for  
532 everyone to view.

533 **TOPIC SURVEY RESULTS - SEE WEB SITE FOR:**

534 The group reviewed the results from the survey polling each agency. Preservation and bridge maintenance were big  
535 issues. The group agreed this was a good discussion topic. Another suggested discussion topic is pervious  
536 pavements. Don said he would table the chip seal discussion until later and would be glad to take comments on the  
537 survey.

538 **FUTURE FIELD TRIPS:**

539 Don said this trip has proven to be successful and the next is tentatively scheduled for **April in Spokane and Yakama**  
540 **Counties**. He asked for feedback and availability from the group. Don said he will check to review Washington &  
541 Oregon's training / conference training schedules as he begins to float dates for the trip. Cindy (Snohomish) said  
542 she and Alan are both interim operations managers and isn't sure they will be in the same position to attend in  
543 April.

544 **Hot Topic # 8: Vegetation Controls: Contracting Out Services**

545 **QUESTION FOR THE GROUP:**

546 Bob (Spokane) said they have aggressive vegetation program over four districts, with one operator/ vehicle per  
547 district. He said they looked at what other counties are doing and discovered most counties do not  
548 **contract out vegetation control** because of questions and problems with the end product – who  
549 manages, how are you sure they're using right amount of chemicals, etc. He said they researched and  
550 decided they were not ready to contract it out but will contract out in one district contract as a test and

*see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics*

551 do the other three will do in-house. He asked what other counties were doing about contracting out this  
552 service.

## 553 **Deschutes**

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554 Tom was involved in vegetation management in Marion County and observed in farm country the bigger equipment the  
555 faster you go. He said there specialized crops in Marion County and the contractor will try to do as quickly as  
556 possible and will push the envelope, whereas a county crew they came in early and if blown out they had other  
557 duties to do. He said he is really cautious about contracting out spraying because you're unsure how much  
558 chemicals they're actually using.

559 Deschutes County has one brush cutter used infrequently. Mostly rely on herbicides and use 8 foot clear zone. They  
560 have a shoulder residual program and do a lot of spraying for other agencies, including ODOT and State Forestry,  
561 where there is heavily involved re-vegetation.

562 Tom said there is some technology that can assist brush cutting. Wet system on brush cutter, do cutting and in last  
563 pass you flip on switch and it treats cut stumps. He said this might be a way to not go back so often. Tom said he  
564 has also done brush cutting timed with fall leaf drops so the brown out isn't noticeable by public

565 Keith (Washington) said shying away from spraying because of liability but knows it would reap benefits.

## 566 **Marion**

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567 Don told the group about a new helicopter service out of Medford. The helicopter has large blades that hang from it  
568 and lop off tree limbs, which is good for power line and utility work.

569 Don said herbicide program in Marion County is critical and he couldn't do without it. He said the budget number has  
570 remained the same and program is more conservative. He said a big driver in Marion County is from the agriculture  
571 community who don't want a seed bed for noxious weeds to their grass fields. Marion County has three brush  
572 cutters and CDLs aren't required so seasonal workers are used.

573 Mike said Tillamook, Marion, and Polk counties have worked with sections and keep sweepers ahead of stripers. He  
574 said Tillamook County doesn't have employees to do the work so sometimes they aren't able to get employees out  
575 in front of sweeper.

576 Pat said private maintenance agreements are a good tool. He said people who are against the county working the  
577 right-of-way may sign an agreement to do maintenance in front of their house.

## 578 **Washington**

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579 Dave (Wash County) said they've struggled with this issue. The first contractor did good job but then they changed to  
580 another contractor who did a poor job. They have chemicals applied to brush cutting and to the roadside. One year  
581 the county would brush cut and the next year a contractor would spray. When the contractor did a poor job, this  
582 concept was put into question.

583 They worked with environmental staff and drafted a vegetation management plan, which received input from  
584 maintenance crew, the project manager, and asset management staff. Their approach to vegetation management  
585 is one of asset management with right-of-way being the asset.

## 586 **Pierce**

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587 Pierce County contracts out their spray program. Quality control is done by checking work and if found lacking they  
588 come back out and re-spray. In addition, they have roughly five or six brush cutters and mower and run mowers  
589 seasonally mostly this time of year through Spring. They have a bucket truck and have cut back on boom truck  
590 work.



591 **Snohomish**

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592 Alan (Snohomish) said they do everything with county forces and don't have a spray program. They use brush cutters  
593 and mowers. Bob (Spokane) said he knows of one other county who only uses mechanical means only but doesn't  
594 know of any who contract out spraying.

595 Cindy said between their two districts they have eight brush cutters and nine mowers. The brush cutters depend on  
596 personnel and are run year round and mowers are seasonal. They have a bucket truck that's used as needed. Alan  
597 said in the urban area they went away from spray and county council wants it ended due to complaints.

598 **Spokane**

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599 See "Question for the Group" comments above.

600 **CRAB**

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601 had no comments

602 **Topic # 9: Winter Maintenance: - 1/5: General** (Fleet, Sand, Anti-icing, Other Techniques/ Tools,  
603 Crews, Public Information)

604 **Deschutes**

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605 Deschutes County has seven line trucks and mount plows and one reversible plow.

606 They have six full time sanders and three have belly plows.

607 They also have five graders, one with V plow, and four loaders.

608 They also have a snow blower that is used to open Cascade Highway in the spring.

609 They have one snow blower mounted on a Bobcat, three pickups mounted with one ton plows, and can use non-CDL  
610 employees in operating these.

611 **Marion**

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612 Marion County has one small 450 2½ yard sander, one AWD 6 yard truck with reversible plow, two new 6 yarders  
613 with plows, ten sanders only, four plows only, three deicers, and one loader mounted with a plow.

614 PW Environmental Services also has one truck with a reversible plow and drop sander.

615 Tom (Deschutes) asked how folks handled contingency if there is a large event. He said we're due a good winter and  
616 is curious to know how folks plan to handle. Also, how do you handle crews, scheduling. He said they don't do any  
617 plowing between 10:00 p.m. and 4:00 a.m. but knows that's different in Marion County.

618 Don said the salt brine option is not an option in Oregon but knows there is some plusses. He suggested that Pierce  
619 County do a presentation on how they make their own brine.

620 **Washington**

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621 Washington County has 6 full size dump trucks with plows and sanders, one 3 yard dump truck, and one ton dump  
622 truck. They also have 3 graders as well that stay up in the hills.

see **"Over The Shoulder Topic Index"** ongoing WORD file for meetings' topics

623 They use magnesium chloride with one small 750 gal magnesium chloride applicator. They divide into areas and send  
624 out drivers. Magnesium chloride is their primary deicer.

625 **Pierce**

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626 Pierce County has twenty-eight snow zones and 28 trucks with sanders and plows.  
627 They have approximately four one tons with a small box to respond to intersections.  
628 They run anti-icer with salt brine.  
629 When sanding and plowing they use strictly salt but will add magnesium chloride to brine if below 15 degrees.  
630 Bryan (Pierce) splits crews from midnight to noon, and if it's a large, prolonged event, they'll split it up to three eight  
631 hour shifts. This will be discussed more in the next meeting.

632 **Snohomish**

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633 Alan (Snohomish) said if they have a big snow event they go to two twelve hour shifts until it's over.

634 **Spokane**

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635 Pierce County has twenty-eight snow zones and 28 trucks with sanders and plows.  
636 They have approximately four one tons with a small box to respond to intersections.  
637 They run anti-icer with salt brine.  
638 When sanding and plowing they use strictly salt but will add magnesium chloride to brine if below 15 degrees.

639 **CRAB**

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640 had no comments  
641

**\*\* End of Meeting #4\*\***

642  
643  
644

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

645 **CONFERENCE CALL MEETING # 5 – DECEMBER 5, 2013**

646 Meeting Participants: 12 total / 6 agencies

647 **Deschutes** Chris Doty Ed Landers  
648 **Jackson** John Vial  
649 **Marion** Don Newell Jolene Bray Pete DeLapp  
650 **Washington** Keith Lewis Dave Schultz  
651 **Pierce** Bryan Chappell Kenall Willisr  
652 **Snohomish** Cindy Higman Alan Smith  
653 **Spokane** none  
654 **Yakima** none  
655 **AOC** none  
656 **CRAB** none

657 **INTRODUCTIONS**

658 The group checked in by introducing themselves and then went over files available on the website. Don (Marion)  
659 asked participants to share their program info and that will be added to the website folders.

660 Don reviewed the previous meeting minutes and said future meeting minutes will provide a running summary to  
661 discussion items. He reminded participants that future discussion topic suggestions are on the county data spread  
662 sheet which is on the web.

663 **ANNOUNCEMENTS / CALENDAR**

664 Phone Conference meetings will be the 1st Thursday of every month from usually 9 AM to 10:30 AM, unless otherwise  
665 noted.

666 OACES 2nd Chip Seal Workshop – Wed, Dec 11 @ 9:30 AM to 3 PM. Held every two years at Marion County Public  
667 Works for chipseal supervisors, managers, and leads, with agencies comparing practices with each other. Albina  
668 will do a presentation and then leave because no vendors are allowed. Agencies must RSVP to Don Newell and  
669 include staff email addresses for future announcements. Participants need to bring \$10 cash for the working lunch  
670 and seating is limited to three per agency. There is still availability for those who have not yet sent in RSVPs.

671 Future Conference Calls:

- 672 • Conference Call Meeting #6 – Thursday, Jan 9 @ 9 AM (new date / same time)
- 673 • Conference Call Meeting #7 – Thursday, Feb 6 @ 9 AM
- 674 • Conference Call Meeting #8 – Thursday, Mar 6 or 13 @ 9 AM (date may shift)

675 Future Site Visits:

- 676 • Site Visit #2: Spokane & Yakima Counties: April 2014. The plan is to take about a week visiting both  
677 counties, with ½ week spent at Spokane County and ½ week at Yakima County. Keith (Wash Co.) will be  
678 involved in training at EMI during one week, which may be a conflict. Don asked participants to email him  
679 any conflicts they may see on their calendars so when he works with Spokane and Yakima dates can be  
680 chosen that aren't too disruptive.
- 681 • Site Visit #3: Location(s) TBD: Fall 2014
- 682 • Site Visit #4: Location(s) TBD: Late winter / early spring 2015

683 **Hot Topic #10: Organization Culture #1: Employees: Hiring**

684 Don said Marion County's operations division has done some internal promotions and will be **hiring seven equipment**  
685 **operators** in the spring. He said all positions now require a CDL.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

Keith (Washington) just went through recruitment for HEO for two positions and is doing one internal promotion for a MEO. He said Washington County hires at base level and no CDL is required.

Cindy (Snohomish) said they hire at an entry level. The county then helps pay and train them to get their CDL, which they have one year to attain. She asked if other agencies of their process. Keith (Washington Co.) said they first want to see the employee show initiative. Keith said they ask entry level employees to come in on Saturdays for additional training and then they receive on the job training. He said this has worked out well for them.

John (Jackson) said they provide the same opportunity as Snohomish County. Employees receive on the job training and help to getting their CDL. Cindy said their employees have one year to get their CDL and if they don't they are no longer employed.

Don (Marion) said he would like to have more position discussion in 2014 before the next field trip about job classification and labor rules. He said job classifications continue to evolve and he plans to solicit more information about job classes. Don said if participating county human resource departments already have positions defined we'd like to share on our website. He said Marion County's are already there and asked participants to collect theirs and email to him. These files will be posted on the OTS webpage.

**Hot Topic 11: Agencies' OTS Topic Survey PRIORITY LIST - Top 12 Items:**

Don (Marion) shared the results from the Topic Survey and the top twelve items are:

- 1) Pavement Preservation: AC paving / patching;
- 2) Emergency / Urgency Work: Snow & Ice;
- 3) Pavement Preservation: Chip Seals;
- 4) Vegetation Controls: Herbicides;
- 5) Pavement Preservation: Minor treatments (i.e. crack sealing);
- 6) Bridges: Maintenance / Repairs;
- 7) Drainage Systems: Culverts (install, maintain);
- 8) Drainage Systems: Other than Culverts;
- 9) Funding: alternative options (i.e. grants, new sources, partnerships);
- 10) Organization Structures: Scope of program services;
- 11) Traffic Markings; and,
- 12) Vegetation Controls: Other than Herbicides.

Don asked agencies who haven't taken the survey yet to submit their choices and this list will be updated.

**REVIEW RESULTS OF DEBRIEF QUESTIONS**

Don shared the field trip debrief questions as well as participant's responses:

Q1: **What was of value of what you saw or heard?**

A: Fleet, Equipment, Shops, Programs

Q2: **What areas/ topics did you wish we spent less time at?**

A: Solid Waste Site (mixed). Some participants felt it was informative but others felt too much time was spent here.

Q3: **What did you wish you saw/ heard that you didn't get to see?**

A: Asset Management Tools, More Program Discussions. Don said some of these topics will shift to the Spokane meeting.

Q4: **Other ideas / topics/ things to see that our future hosts should include?**

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

A: Pavement Treatments, Management Issues/ Labor Practices. Don said two of these topics will be shifted to Spokane meeting.

## Topic 12: Winter Maintenance: 2/5 - Snow & Ice Equipment / Programs

Don (Marion) said equipment has been added to spreadsheet but clarification may be needed from individual agencies since the numbers help identify who has what equipment. Don said agencies can call each other if they have questions about specific pieces of equipment.

Don asked participants to share their agency's overall program and mission and to define organizational priorities.

### Deschutes County

**Program:** Their program is defined by a snow and ice plan formally adopted by the Board of Commissioners to facilitate motor vehicle travel imposed by negative driving conditions. Don (Marion) asked if they can share this plan. Chris (Deschutes) said they are updating and will share when complete.

**Budget:** He said in a typical year they will spend \$75,000 on mag chloride and \$45,000-\$50,000 on cinders. They also engage in contracts with road districts.

**Staffing:** Chris said they have 22 full time operators and generally don't use temp manpower. They have one employee on call Monday – Friday and a couple of employees are available for call out on the weekends.

**Anti-/ deicing:** They purchase APEX from Prineville and deliver for themselves and other agencies. They have three trucks that will apply mag chloride but they don't use in every event because climates vary. He said the APEX product has broad temperature range and they are still learning when to use. They are conservative in its use and don't apply on straight-aways.

**Pre-storm event:** Adjust their schedules during event to start at 4am to 2pm and then evening shift with no night shift. They haven't had to go to 24-hour shifts in many years because storms have been isolated with no big county wide event. Chris said they are using a variety of weather apps – mostly NOAA to get a daily report. He said they used paid services in the past but now with technology they haven't seen the value.

### Jackson County

**Program:** John said the county has no formally adopted policy and no standard for removal. The county is varied with elevation and population and snow is rare. He said he is interested in other agency's policies because they are struggling with this issue.

He said they normally plow a small number of miles in the high country but when there is a valley event then its all hands on deck, which can be challenging because drivers don't deal with it well.

**Staffing:** They only have temporary staff during the summer.

**Anti-/ deicing:** Pete (Marion) asked if they use mag chloride or just plowing/sanding. John said although they are interested in mag chloride, Jackson County doesn't use it at this time. They have a few critical routes they contract with ODOT to apply mag chloride and the county sands the rest of the roads.

**Concerns:** One concern is if they increase the level of service they won't be able to decrease in future.

**Pre-storm event:** Shifts similar to Deschutes with a 4am start and then the next shift later. John said they want roads cleared when people go to work and than again when they go home and don't provide night services. He said they don't contract weather service but frequently call National Weather Service and get a computer model run.

## Marion County

**Program:** Don said GIS staff have mapped Marion County's 1,200 mile road system by elevation and there are 300 miles of roads above 800 feet and 200 miles above 1,000 feet. He said these higher elevation roads are less traveled and graders are doing a lot of work.

Don said Legal Counsel has asked him to identify route priorities and service levels because they want some defendable system about why some roads are treated with anti-icing and some are not.

**Staffing:** There are 50 full-time employees and approximately 15 winter seasonal workers are hired.

**Anti-/ deicing:** The county was spending \$60,000 on lignon and wanted to spend more on anti-icing so they traded that program for mag chloride in the winter. He said the county now works with citizens by grading roads that they then purchase lignon application. This has allowed the county to enhance the mag chloride program. Pete said the county has three mag trucks and they try to hit all main arterials on the curves, hills, and intersections when they know they're getting a long freeze.

There are two people do deicing at night. He said the level of service needs to be taken into consideration because if it's done once or twice it becomes expected and sometimes there isn't enough deicer or manpower.

**Pre-storm event:** Have a contract with ERF Company, Inc. and meteorologist Phil Volker will call and do a consultation with staff including descriptions of how event will hit certain geographical areas in Marion County. There is a large email list of employees who receive the weather updates. Don finds this weather service to pay off for us. Marion County is dry right now and the expected storm event will hit down south. Pete said we will work a normal shift ending at 3:30 p.m. and have night crew coming in at 11:00 p.m. If there is an event they can contact call out staff. All but two employees are trained to use sander, plow, or deicer truck. If there is a big event, crews will go to two 12 hour shifts from 8:00 – 8:00.

## Washington County

**Program:** Keith said they have their winter road maintenance procedure on their website and it has winter road operations and practices. He said they are like Jackson County and don't often get events that affect the valley but are major when they do.

**Staffing:** Keith said they have a 24-hour schedule they can go to and if there is an extended event crews will work around the clock in 3/8 hour or 2/12 hour shifts depending on event and available personnel. Washington County has 57 maintenance personnel and starting next week they will have a night crew with 4-5 people, which gives them the opportunity to hit trouble spots with mag chloride or sanding. They always have two people on standby Friday – Monday, and may put on extra staff during events. During the week they use a call out list and will call in as needed but if they're gearing up for event they will put crews on standby.

He said they have no seasonal workers until there is an emergency and may contract services but that would only be for a declared event. Contracted services might include emergency snow clearing, flagging for slide repairs / events.

**Equipment:** They have six sander plows and each can be put on front of dump truck that can also have sanders. They have one sander unit with under tailgate sander or drop sander. Keith said they have rural roads in high elevations and try to keep plowed by graders.

Pete (Marion) asked if when they are plowing snow on rural routes and leave a berm in front of driveways, do they clear the driveway or do they leave for homeowners? Keith said they have three graders for the rural area so they plow and do nothing with driveways.

**Anti-/ deicing:** They try to be proactive, not reactive, and try to pre-treat roads with mag chloride. He said they are quite conservative and only apply on curves, bridges, intersections and known trouble spots.

They currently have capacity of 18,000 gallons and try to coordinate with other area agencies. Keith said he has found that their application is pretty light at only 12 gallons per lane. He said they have three units that apply mag chloride and can hit all primary and secondary routes in 24 hours running three trucks in 8 hour shifts. They are trying to increase their mag chloride application and decrease their sanding application because they are trending toward trying to be more environmentally friendly and not put more rock in water drainage system.

see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

811 **Pre-storm event:** Use local free apps for NOAA and AccuWeather. If their forecasts are divergent, staff will take  
812 worst case and they start converging where confidence goes up. They bring people in early (before 7:30 standard)  
813 to begin plowing and will shift change a supervisor as well and may extend shifts. Their call-out procedures are to  
814 have 15 people to call but usually they have time to plan and are proactive. They try to give as early a notice as  
815 possible but this can happen as short as 4 hours.

## 816 **Pierce County**

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817 **Program:** Bryan said they have a manual that was adopted by the **county council and their objectives are 'bare**  
818 **and wet at all times.'** They have twenty-eight zones in the county, which goes from sea level to 2,000 feet  
819 elevation.

820 They have 3,000 lane miles and plow 1,500 of them. Brian said clean up costs have gone down because salt goes  
821 away with minimal corrosion.

822 He said snow routes are by standing operating procedure and they have form they use. He said different stages of  
823 snow routes and phases they put into population. Brian said they go 24/7 during a full event with two 12-hour shifts.  
824 Don asked if they can PDF their forms and email to him. Brian said he would and that the snow and ice plan is  
825 available on their website.

826 **Staffing:** He said help with manpower shortages they train utility and sign techs with CDLs.

827 **Equipment:** They have 33 plow trucks plus graders and loaders.

828 **Anti-/ deicing:** He said they have been active in trying to keep their streams clear so have moved away from sand  
829 are now using **salt brine**, not mag chloride, which they make in-house **for \$.35 per gallon**. Their annual budget is  
830 \$1 million for snow and ice response.

831 Pete (Marion) asked if he noticed any retarding of **vegetation** on the edge of the road when using salt and brine. Brian  
832 said he has not and said although this has been an issue with mag chloride, they haven't seen issues with salt.  
833 Pete asked if issues with slickness have gone away. Brian said it has because they're putting down water with 23%  
834 salt so it's not drawing in moisture that products do. He said a lot of cities around Pierce County use salt brine.

835 **Pre-storm event:** Look at 24 hours ahead and will shift half of group to midnight and the next group at 12:00 noon for  
836 a big event. They have used GPS AVL for 3-4 years. They don't have riders with drivers and they monitor weather  
837 and watch where trucks go. He said this is a good resource to decide where to send.

## 838 **Snohomish County**

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839 **Program:** Alan and Cindy operate similarly but Cindy's area is more rural.

840 Alan said their snow and ice response has been **approved by the county council**. During major events they do  
841 primary routes and then secondary routes. Don asked agencies with plans if they will share with the group to see if  
842 there is language that others can learn from. There will be more discussion about snow and ice further in next  
843 meeting.

844 They try to get out ahead using Weathernet. If an events hit, they go to two 12-hour shifts.

845 **Equipment:** They have 17 plows, double axel trucks and single axel trucks, and two graders. They do not contract and  
846 only use their own sources, and train all personnel to be snow plow drivers.

847 Cindy said their snow routes are on their website, by priority and secondary routes. She said all trucks have GPS and  
848 are assigned zones and can coordinate to make sure routes are covered. Don (Marion) asked what info is gained  
849 from GPS, particularly as clock is ticking during event. She said their hope is to have a more accurate reporting  
850 system showing how many lane miles are being plowed and how much sand is being applied, as well as the ability  
851 to look up what zones have been covered. Cindy said drivers still have to do paperwork because the system is new  
852 and they are getting database up. Don (Marion) asked if they can get screen shots of maps and send those to  
853 share.

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854 Alan said his district is more urban and has 19 double axels, 9 single axels, and 9 550s. He said they are using the  
855 AVL system and projection system and can see where trucks are any given time and can dispatch. They are hoping  
856 as soon as info is available, they can control costs and manage storm response more efficiently.

857 **Anti-/ deicing:** She has two CMA trucks in her area and tries to be proactive and mix their own CMA.

858 **Pre-storm event:** They use Weathernet weather service and send crews out ahead of time in the morning. If they go  
859 to 24 hours shift it's 4:30-4:30. They do plan and have daily meetings about what /where to place resources. If it's a  
860 big event, it's all hands on deck.

861 **NEXT MEETING:**

862 Discuss where agencies run into trouble and other items on agenda not covered today.

863 Don asked agencies to send in photos of deicing stations, salt brine manufacturing, etc. so they can be shared with  
864 others.

865

866

***\*\* End of Meeting #5\*\****

867



see "Over The Shoulder Topic Index" ongoing WORD file for meetings' topics

**CONFERENCE CALL MEETING # 6 – JANUARY 9, 2014**

Meeting Participants: 15 total / 8 agencies

<b>Deschutes</b>	Chris Doty	Tom Shamberger	Ed Landers
<b>Jackson</b>	none		
<b>Marion</b>	Don Newell	Jolene Bray	Pete DeLapp Matt Knudsen
<b>Washington</b>	Keith Lewis	Dave Schultz	
<b>Pierce</b>	Bryan Chappell	Kendall Willitz	
<b>Snohomish</b>	none		
<b>Spokane</b>	Jim Cotter		
<b>Yakima</b>	none		
<b>AOC</b>	none		
<b>CRAB</b>	Bob Moorhead		
<b>ODOT</b>	Jeff Moore	Rick Poecker	

**Topic 13: Winter Maintenance: 3/5 - Anti/ De-Icers**

**ODOT**

Don (Marion) welcomed Jeff Moore and Rick Poecker from the **Oregon Department of Transportation (ODOT)** and told participants that he invited them to speak today about chemical use on roadways.

Jeff said ODOT is conducting a **five-year pilot project** of **using salt** on Hwy 95 (from the Idaho to Nevada borders) and I-5 (at the California border). He said ODOT began this project after receiving complaints about the level of service change on these roads from motorists driving across the borders. This project is limited use and ODOT is not looking to shift to using salt as primary product, which is mag chloride.

Jeff said ODOT maintenance crews are managing the project in the two pilot test areas and exploring the use of salt, which is used sparingly and in conjunction with mag chloride.

Jeff said from the outset, research showed that rock salt stayed on the road surface and blended better with mag chloride. He said ODOT is in year two of a five-year project and staff are assessing if it's working and making a difference in terms of safety. Jeff said there is a lot of concern over environmental impacts so they have a monitoring component that includes continuous in stream monitoring in Ashland. He said there are no strong regulations prohibiting the use of salt but there are after it's been applied and added five years is probably not sufficient time to understand impacts because they build up over time.

Jeff said maintenance crews are already reporting they are happy with the salt applications and although he suspects it will be used longer than five years he is hesitant to use elsewhere unless there is a significant event that warrants its use. The primary concern of the Department of Environmental Quality (DEQ) is that they don't end up making Total Maximum Daily Loads (TMDLs) of chloride in streams as well as ground water contamination, which will occur over a longer period of time.

Rick (ODOT) said they are also taking safeguards in some areas including "no salt zones" in towns as there are concerns over corrosion to citizen's vehicles, as well as bridge decks.

Don (Marion) asked how they **sealed the bridge decks**. Rick said a sealant is painted onto the bridges. Jeff said they have also changed the way the bridges drain so runoff doesn't go directly into waterways and is directed away from structures.

Bryan (Pierce) asked about **application rate**. Rick said 150-250 pounds per lane mile after pretreating with mag chloride. Bryan asked if ODOT had considered using salt brine. Jeff said it was considered but they decided to use mag chloride because it sticks to pavement better and because this is a product used for this specific purpose so it carries weight with risk management.

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Pete (Marion) asked at 150-250 pounds per lane mile, how are ODOT crews able to apply rock salt so thinly to the roadways. Rick said they work to calibrate trucks and also have spreaders. Keith (WA) asked about the test section of the ODOT pilot project. Rick said on I-5 it ran from MP 0 – 11 and on Hwy 95 it runs from the Idaho border to the Nevada border, which is 121 miles.

Jeff said DEQ's primary concern is chloride in water. They have volunteered equipment and staff to operate in Ashland test area and are putting in some in stream continuous monitors where they can get a continuous read and look specifically at conductivity. From the conductivity they are hoping to use those numbers to project chloride concentrations and will use parallel numbers to measure and build correlation. Jeff said they don't have a formal sample plan drawn up yet but thinks monitors will be in place next year.

ODOT are also looking at metals and pollutants that are associated with these chemicals with the thought at some time they will probably expand some of the testing done on mag chloride so they can compare the two from an environmental standpoint to see which is more detrimental to the environment. The chlorides and metals tend to be more mobile than the mag chloride, which tends to get bound up in the soils, and are a bit more contained. Jeff said they don't expect to see any changes for three to five years.

Don asked about ODOT's media plan. Rick said it's been in the media in the last year so the public is informed. They also have a website with Frequently Asked Questions (FAQs) and an "Ask ODOT" where people can call or email with specific questions Jeff said they have more concern in the Ashland area and received a lot of calls from citizens and environmental groups. He said before the project started they had a number of meetings and discussed what they would be doing with the project. Don said his experience is that when you roll out a new service or different service you hear concern the first year but by the third they fall off and people accept. Jeff said this has been their experience. Rick said these are also two areas near state lines already using salt products so most have been traveling these roadways already.

## Pierce

Bryan (Pierce) said they make own salt brine to manufacturer's recommendations and don't have a problem. He said they test every time they make a batch and that it's more proactive because they can apply before an event. He said they are not using any additives. They have a 10,000 gallon storage tank but have other tanks they can store up to 30,000 gallons if they have an event and other agencies buy from them. Bryan said they can make 6,000 gallons in an hour with NorthStar machine and use water from a holding pond for the brine.

Don said Pierce County has a "Bare and Wet" road policy so their goal is to apply product before an event because it's easier for crews to keep it there. He said they have been successful in taking their sanding down to zero. Kendall (Pierce) said the only other product used with the salt brine is rock salt. He said although they used mag chloride in the past, their residents want bare, wet roads and mag chloride reacts to temperatures and gets slimy. He said they spoke with Marion County, Ohio and turned to salt brine. Kendall said their cost went way down and they can make the brine for 35¢ a gallon. Don said these products were corrosive and asked if they saw a difference in their equipment between using mag chloride and salt.

Kendall (Pierce) said with the salt brine they saw more corrosion with wiring and their mechanics have changed and sealed the wiring on trucks. He said when the product sticks to the road it sticks to everything else including the trucks. After applications everything is washed off with a salt-away (boating) product and every spring mechanics do a big breakdown on trucks. Pete (Marion) asked about liability for the public's vehicles (rusting, corrosion to wiring, etc.) and Kendall said they've had a couple of complaints about pitting on aluminum wheels but that could be from other factors. He said they put metal coupons in different areas for a season, which are weighed before and after, and haven't seen any significant corrosion. He said the residents in their area is just pleased to have roads open and running.

Don asked at what elevations the salt brine is used. Kendall said up to 1,700 feet and down to sea level.

Don asked Jeff to talk about the testing. Jeff said they have done a little bit of monitoring in the past on deicers (mag chloride, calcium mag acetate) and had pollutants they looked at with mag chloride. He said what you would expect with mag chloride and salt is change in soil structure near the road. Jeff said the metals migrate and it can impact the ability of plants to take up nutrients in soil. He said both will cause leaf burn but it looks like mag chloride doesn't impact the deeper roots of trees and plants. ODOT has done samples and will continue to go back and sample in the same location to see if there are buildups in chlorides.

**Topic 14: Winter Maintenance: 4/5 - Plows**

**Marion**

Don said in Marion County had a plow mounted on Ford 450 (small plow truck) and the truck was overheating. He said they put ribbons on and plow was deflecting air to the radiator.

**Pierce**

Don asked Kendall if he was familiar with equipment on their yard, specifically plows with steel frames with composite plastic lining and **Kueper blade** with porcelain between. He asked about the lifespan of these **composite plows**. Kendall said they have used for 18 years and they're holding up well, are light and don't bounce, and are easy to replace.

<http://www.KueperBlades.com/>

Kendall said they use a rubber blade on all plows and half the fleet have a kueper blade. He said they went through the whole season without having to change rubber plow blades. He said **they're expensive** but are used in the high country a lot and it takes a lot to get them down to their shop to repair. Kendall said they are not using on graders but there are applications for that. Pete (Marion) asked Kendall if they use skis or run right on the rubber pits. Kendall said they are run right on rubber pits. Pete asked if using on new chip seals. Kendall said they were and had no issues.

Don and Keith (Washington) asked if he could track down manufacture information on both the kueper and rubber blades, and also take some photos that can be posted on the website. Kendall said they have photos and videos and will send to Don to share.

**Topic 15: Winter Maintenance: 5/5 - Deployment**

Don asked how participants to tell how they migrate in the middle of the week daytime staff to a night shift in the middle of the work day.

**Deschutes**

Tom said they have a crew come in at 4:00am that works 12 hours. Unless it's a severe storm they don't run 24 hours and shut down at 10:00pm and start back up at 4:00am.

**Marion**

Don said they run 24 hours including dispatch. They start a 12-hour shift at 7:00am then bring second shift back at 7:00pm. He said they try to keep in touch with supervisors on duty. Don said we have supervisors who do "pager pay" who take home a brief case with a cell phone and are the automatic night supervisor. He said there are seven supervisors share this duty for 52 weeks a year, so they rotate the duty every seven weeks.

**Washington**

Keith said they have someone on call and have a pager for seven days a week. When they are in an event they try to do as much preplanning as possible and may go to extended shifts. He said they pull people in early and shift

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994 change people per weather event. If that's not enough, they plan for 12 hour and 8 hour shifts. Keith said they don't  
995 have enough equipment to keep everyone occupied for 12 hour shift so they usually go to 8 hour shifts.

996 **Pierce**

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997 Bryan said they have eight supervisors on call with a week of call out. He said they have a call out service that takes  
998 calls and then calls supervisors at home who then call out people as needed. He said they try to look 24 - 48 hours  
999 ahead and will shoot salt brine before event and have zones they set up for trucks. Bryan said when there are big  
000 events they go for 12 hour shifts, on/off midnight to noon and noon to midnight. He said they will go down to three  
001 eight hour shifts if there is an extended storm but prefer 12 on/off and stagger crews with supervisors.

002 **Spokane**

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003 Jim said their call out procedure is four supervisors for four districts, so the operator calls the supervisor for that  
004 specific district. He said they will go to 12 hour shifts working 5:00 to 5:00. He said they staff the graveyard and  
005 early morning shifts with 2-4 people on those shifts. Don asked how many operators. Jim said they had 132 people.  
006

007 Don said there were a couple of snow related issues not discussed and if any participants want to discuss at the next  
008 meeting to send to him and he'll include in the Hot Topics of the next agenda. He encouraged everyone to visit the  
009 website and look at the files shared on this site. He said if anyone had files to share to send and they will be  
010 posted. He said job descriptions have been shared by three agencies and said he'd like to have job classifications  
011 from all agencies before the site visit in Spokane, adding that this is a good resource.

012 Don reminded everyone that the group will next be discussing **pavement treatments**.

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**\*\* End of Meeting #6 \*\***

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