



No Boundaries Phase II Transportation Pooled Fund #TPF-5(330)

Minutes – Face-to-Face TAC meeting

December 10 and 11, 2015

St. Louis, Missouri

Attendees

Florida DOT: Kristin McCrary (phone)
Illinois: Stephanie Dobbs
Michigan DOT: Todd Rowley
Missouri DOT: Mike Shea
North Dakota DOT: Les Noehre
Ohio DOT: Mitch Blackford, John Stains (phone)

South Carolina DOT: Jim Johannemann
Washington State DOT: Jay Wells (phone)
CTC: Kim Linsenmayer, Patrick Casey, Kirsten Seeber
DW Clonch: Diana Clonch

DAY ONE – DECEMEBER 10, 2015

State Presentations

TAC members from Ohio, North Dakota, Florida, Michigan, South Carolina, Washington State and Illinois presented provided overviews of the maintenance programs at their state DOTs, including new projects, successes and challenges. Below is a short summary of the successes and challenges shared. For complete details, each state's presentation can be viewed on the No Boundaries website.

Ohio DOT – Mitch Blackford

Success/New Efforts

- Using and tracking success factors (driven by ODOT) for the performance of all county work. Tracks people, system conditions, safety, capital program for performance using colored indicators. Look for trends and contract out if it would be cheaper.
- New TRIP Program provides a \$2,500 bonus incentive for a towing company to arrive within 45 minutes and clear within 90 minutes. If it ends up being a fatality or hazmat situation they get \$600 just for showing up. Piloted in Columbus region and then went statewide a few months ago.
- We contract out for gathering condition ratings (driving all the system and noting where work is needed).
- ODOT website for traffic. Soon there will be an app to personalize the data – how long it will take to get to work.
- Doing lots of outreach around state to get people to know us. Paint the Plow program (kids painting on the plow front during the summer. Do at prisons, fairs, festivals. Gets a lot of publicity. Then we plow with them.



Challenges

- Now contracting out almost all interstate mowing out. Only got one bidder in each district. Bidding is excessive so being rejected (no competition). Concerned that we'll have to mow with our crews.
- Striping – also huge bids on this. You have to do it but not much competition. We contract almost all out and don't want to have state start doing this work.

Les Noehre – North Dakota DOT

Successes/New Efforts

- \$5M innovation program recently initiated by executive management. Industry, NDDOT staff, citizens, anyone can submit ideas to a committee that meets three times a year. They select and present to management.
- We use rental equipment because we can't afford to buy it.
- Training Academy has been running for ten years to transfer knowledge. All districts submit names to participate and there are a certain number of slots per class. Teach them how to use equipment, use maintenance support software (MDSS), keep better records, etc. Retaining them after they're trained is a challenge. We offer 1% raise to complete the academy but no requirements to not go work elsewhere. Mix of new and seasoned employees.
- Pavement preservation – One of our contractors put a rock saw on an excavator to remove depressed transverse cracks in asphalt pavement and then filled them with good asphalt.

Challenges

- Funding – often have to rob from summer to fund snow and ice control and one-time expenditures for expansion projects. Non-winter equipment budget is small - \$5M biannually.
- Retention/recruiting – competing salaries with oil industry is impossible. Lose operators and mechanics. Positions open for years. Losing knowledge base.
- Environmental commitments harder to keep.

Kristin McCrary – Florida DOT

Successes/New Efforts

- One-stop Permitting – Created a few years ago, starting with the utility permit. With this new system users can manage personal and organizational profiles, apply for new permits, and attach documents and plans in the system. Approved permit packages issued online with real-time tracking.
- Customer Comment System – Allows customers to submit comments about rest areas. Used to be paper cards. System generated email sent to DOT for any rating less than 3 (on scale of 1 to 5).
- Self Service Motor Pool System – Only used in central office right now. Reservations made online, self-service key pickup and return. Resulted in 19% increase in utilization measure from April 2014 to April 2015.

Future Projects

- Electronic forms to record and upload inspection information.
- Data Warehouse – We have a lot of information that is not all connected. We want a centralized location for organizational data so it can better be used to make decisions.
- Roadway Characteristics Inventory (RCI) Update – A depository of DOT roadway assets, including lane miles, guardrail, etc. Three major offices maintain the data in the system (Planning, Maintenance, Traffic Ops). Maintenance program depends on the accuracy of RCI data and uses it for budgeting. System is being reviewed with the goal of having a central repository of information related to maintenance features that could be accessed from anywhere in state.

Todd Rowley – Michigan DOT



Successes/New Efforts

- Loss of maintenance dollars/personnel has required us to evaluate our maintenance functions and ask, “Just because we have done it that way forever, is it still the most efficient way to do it with the new technology/products available today?”
- New road funding investment dollars starting in 2017, passed in Michigan.

Challenges

- Loss of DOT ground/direct forces since 2005.
- Trending towards more maintenance contracts. Inherit learning curve when managing new maintenance contracts.
- Just over 100 maintenance activities (PCAs) performed. Each is documented/tracked. Some areas fell to the wayside with budget cuts and contracting trend (like removal of dead trees before they fall, ditch cleanout, culvert edge drain cleaning, retention basin maintenance).
- Summer maintenance budget dollars are determined by severity of previous winter.

Jim Johanneman – South Carolina DOT

Successes/New Efforts

- Improvements in sign shop productivity. We did some production studies, consolidated shops, and reduced the number of people to those with higher productivity. Saved \$500K. Pushing the approaches out to the field.
- Using performance metrics to predict costs.
- QMR/QMT inspections. 55-item checklist to review safety, environmental, etc.
- MAP Program works with QMT. Go to half of the counties each year.
- Customer survey.
- On-call contracts (responsive, predetermined costs, better LOS).
- EORS (Emergency Operations Response System) and procedure. Extreme weather situation with having crews help each other in other regions. Checklist for emergency management. Good plan in place now.

Challenges

- Turnover is huge especially in lower end road maintenance. As soon as they get their CDL they can go make more driving in cities or counties. Losing skills, having behavior problems, lower quality of work, safety issues. Recently tried increasing entry-level wage and hope that will help.
- Safety record has seen some improvement by using performance-based inspection. Would like to learn from others.
- Funding. No increase since 1987.
- Productivity. Doing reactive work in the counties. Started putting in goals.

Jay Wells – Washington State DOT

Successes/New Efforts

- Maintenance Management System – We had all handwritten records for inspections and such. About three years ago we tried to improve our systems. We bought iPads and developed a highway asset tracking system in house. Rolled out 800 iPads with GPS to maintenance staff for inspections, taking pictures, doing repairs. Only issue was not having a signal. Added about 200 hotspots. Working really well. Have a mobile maintenance technology manager. Could share code and how developed.
- We have our own web-based AVL/GPS. We designed it ourselves to see trucks on a map and where they’ve been and the level of service in real time.
- Data collection emphasis – Helps with developing budget requests and predicting impacts, measuring effectiveness of operations and success or failure of changes. Can be used to defend tort claims.



- Pre- and post-winter roadside soil sampling.
- Buffer trucks for spraying operations

Challenges

- Staffing levels appear stable but 52% of lead workers are eligible for retirement in the next few years. 85% of managers can retire now. Retention challenge and not enough people coming up to step into these positions.

Stephanie Dobbs – Illinois DOT

Successes/New /Efforts

- Getting ready to roll out new tracking system that will be web based and use iPads and iPhones. Still scrambling to develop and train people.
- Performing well even with fewer employees.
- Dedication to safety and training.
- Dedicated funding for weed spraying and EAB ash tree removals.
- Dedicated funding for rest area maintenance and pavement preservation (minor repairs).
- Working to include green friendly best management practices.
- Working to reduce mowing.
- Chainsaw and chipper safety training. Grabbed from others and put together with other info.

Challenges

- Invasive plants and diseases.
- Loss of senior staff and experience.
- Aging equipment and facilities.
- Geographic range and size.
- Diverse environmental and weather conditions.
- Training and educating new staff.
- Budget and funding challenges – no budget right now and things are closing or not getting done.
- Windmill industry is booming, which affects transmission lines and trees. Policies have not kept up. Need to work on maintenance policy.

Missouri DOT – Traffic Management Center

The group took a trip to the Gateway Guide of Operations, which houses MoDOT's Transportation Management Center. Several folks gave presentations related to MoDOT's maintenance program, including:

- Jean Olubogun, District Traffic Engineer - Jean provided an overview of MoDOT's Transportation Management Center, including how their Motorist Assist program operates.
- Mark Croarkin, District Maintenance Engineer – Mark provided details on the maintenance operations in the St. Louis district.
- Mike Shea, Maintenance Liaison Engineer - Mike presented on MoDOT's overall maintenance program.
- John Russell, Maintenance Supervisor and Gary Pettit, Intermediate Maintenance Worker - Equipment presentation
 - Trailer-Mounted Attenuator with Panic Lights and Sound – The group received a live demonstration of lights and speakers mounted to the truck that tows a TMA, in order to increase the safety for the truck driver and crews working on the side of a roadway. The TMA operator holds a control switch to turn on either the lights, or the sound, in order to alert drivers to the TMA if they are approaching too quickly. The light package costs \$2,400 per truck. Adding a speaker costs an additional \$2,000 per truck. This demonstration will be posted on the No Boundaries website.



- Emergency Response vehicle – MoDOT also showed the group one of their Emergency Response vehicles, which is available to assist motorists when they have problems on the roadway. Their main job is to clear the lanes of vehicles to prevent further accidents. The Emergency Response vehicles also have fuel, water and oil available for cars that are stalled on the side of the road.
- Tom Blair, Assistant District Engineer – [Road To Tomorrow](#) program – Tom presented an overview on the program, which asks private industry, entrepreneurs and innovators to collaborate with MoDOT by bringing them their ideas and products. The goal is to build a highway of the future, featuring smarter roads and new revenue streams for MoDOT.

DAY TWO – DECEMBER 11, 2015

Proposed Program Management Approach to No Boundaries

- Kim Linsenmayer presented ideas and options for a management approach to the pooled fund to help the members choose a direction for the study. Two approaches are:
 - Solution driven – Identify practices or technologies that work and share with others.
 - Problem driven – Identify common problems and seek out leaders with effective practices to share.
- How do we start?
 - Focus our efforts – Not to narrow or eliminate topics but to focus so we can make progress and have outcomes
 - ≈ Select priority topics/problems/themes to address in the coming year and focus activities on those topics.
 - ≈ Still allow for ongoing sharing on any topic.
 - ≈ Look for the maintenance angle of an issue as a way of staying focused.
 - ≈ Fund tech transfer activities, not research – Maybe identifying research needs (and get to the groups who do fund research) or bringing together research results.
- Potential program models
 - Clear Roads Pooled Fund – www.clearroads.org
 - ≈ Annual cycle of activities driven by member needs and priorities.
 - ≈ Strong focus on member sharing of day-to-day practices, challenges and innovations.
 - ≈ Strong ties to FHWA and AASHTO.
 - NCHRP US Domestic Scan Program – www.domesticscan.org
 - ≈ Identifies innovative practices that others could benefit from.
 - ≈ Individually funded scans promote technology transfer between leader and learner agencies.
 - ≈ Follow-up activities (presentations, peer exchanges, videos, etc.) aim to accelerate implementation in even more states.
 - ACRP Insight Events
 - ≈ New program in 2015 to convene airport industry leaders and subject matter experts for presentations and discussion on selected topics.
 - ≈ Involves an in-depth literature review before each event, identification of events/ leaders, and outreach to state and federal agencies.
 - ≈ Aimed at illuminating issues through meaningful exchange.
- How should No Boundaries be structured?
 - Select a theme/set of topics to drive upcoming activities?
 - Annual cycle to prioritize and select topics?
 - Look to both members and others for solutions/effective practices?

Priority Topic Selection

The group reviewed the topics identified at the recent Maintenance Peer Network Regional Peer Exchanges as appropriate for future research and technology transfer. Each member picked the three topics they feel No Boundaries should focus on in the coming year. The group then selected the top two focus areas and discussed activities that they want to do related to them.

The MPN topics selected, in order of highest to lowest votes, were:

- Topic #2 Electronic capture of assessments, work crews, etc. through electronic devices – 6 votes
 - MI - Allows us to collect data more efficiently (take pictures and capture conditions) and create a need for work order.
 - ND – Starting to look at doing this.
 - IL - The data capture is what every state needs.
 - MI - Technology is a moving target. The new technology doesn't always work or it's outdated right away.
 - OH - We have an EIMS (equipment inventory management system). This is one system that collects all of the information, instead of using multiple systems. We are a year into using this system and hope that all of the issues will be worked out in the next year. It's been a huge change and it's our number one issue.
 - FL

- Topic #4 Asset management systems, implementation and long-term staffing – 3 votes
 - WA - Tied to funding. Asset management tells your story and lets you know what you have.
 - MO - Need to know what we have and how it's all going to need to be maintained.
 - ≈ Integrated maintenance management – When we send a crew out, we tell them what they are doing where, when and with what materials. We want something that can capture all of this information out in the field, so the maintenance staff doesn't have to re-enter it when they get back to their offices, which adds hours to their work. We would like to see an integrated management system that allows us to capture the info and get it to where it needs to be in their systems.
 - ND

- Topic #6 Process for identifying and implementing good ideas throughout your agency – 3 votes
 - IL - There are great ideas within agencies but there is no way to discover what those are.
 - OH - This is what this pooled fund is doing.
 - SC

- Topic #11 Human resources: Equitable compensation and Training/Succession Planning – 3 votes
 - MO – This is tied to Topic #10 (listed below).
 - WA – Pay is an issue. In the old days everyone wanted to work at the DOT for their entire careers. Now we can't get folks in the door or keep them. The DOTs train employees and then lose them to the private sector who pays them more.
 - SC - All of subtopics would be useful.

- Topic #8 Fleet management – 2 votes

- OH - This the first budget to get cut. We need millions of dollars each budget cycle to replace equipment. One of our solutions is to ask ourselves if we really need a \$200k excavator that is only used for 7 months. Washington has created a lease contract for some equipment to help mitigate this. OH has some equipment on rental/lease contracts but staff feel they need their own equipment.
- FL
- Topic #10 Delivering maintenance program thru outsourcing, innovative contracting – 2 votes
 - MI – This would provide valuable information.
 - MO – This is tied to Topic #11 (listed above).
- Topic #1 Tying maintenance program funding to level of service, justifying increases in funding – 1 vote
 - MI – The subtopic, “How DOTs are deciding what work they do or not do when funding is flat or shrinking and needs are growing” is of particular interest.
- Topic #3 Using customer input to set LOS targets – 1 vote
 - ND - Get customer buy-in by setting the level of service targets.
- Topic #5 Determining performance measures for highway and bridge assets – 1 vote
 - OH – This is a big one for us.
- Topic #9 Environmental stewardship, commitments, and compliance – 1 vote
 - IL - Environmental changes, such as pollinator rules, are going to impact maintenance activities. There is much to be gained by sharing what each state does with their land.
- Other topics of interest from the state presentations.
 - Staffing – Many members mentioned recruiting, retention and retirement issues in their presentations.
 - Budgets – Most members discussed dealing with flat or declining budgets in their presentations.
 - Training academy – SC is interested in this and ND is doing it currently.
 - Online rest area reporting – FL has this. OH likes this idea.
 - Funding – Innovative ways to increase funding, such as those mentioned during MoDOT’s Road to Tomorrow presentation.

2016 Focus Areas: Asset Management and Maintenance Management

- Asset management and maintenance management, which are closely tied together, were the top two topics chosen by the group.
 - Asset management – Accounting of what you have and its condition.
 - Maintenance management – How your organization addresses, or takes care of, those assets.
 - Diana suggested an umbrella category of resource management.

- The group discussed elements of these topics and how No Boundaries can move forward in focusing on technology transfer in 2016 and beyond.
 - Jay – Before Washington started down our asset management road we went to our IT folks to partner with them on the project. Maintenance funded six IT positions in each region that are dedicated solely to maintenance. It was a huge effort because before it was an us vs. them mentality.
 - Stephanie – Training and support while implementing an asset management system is important. Ensuring field staff and county supervisors get their system-related questions answered is crucial.
 - Mitch – There are often problems when you purchase a company’s system and then need to make changes to it. This can create a lot of implementation issues.
 - ≈ Mike – One possible solution may be to lease or rent an asset management system instead of buying it outright.
 - Stephanie – Use a survey to determine where each member is at with asset management. The survey could also be sent to non-members and used as a recruiting tool as well, since all DOTs deal with this issue.
 - ≈ Jim – Most DOTs are using AgileAssets for their asset management. Maybe other states would share where they are at with their systems.
 - Pat – We should find out if AASHTO has a maintenance management program. SCOM could also have something related to this topic.

Sharing Maintenance Innovations

Beyond focusing on asset and maintenance management, the group would like to ramp up efforts for sharing innovations in any maintenance area. The group discussed potential approaches for soliciting and documenting the practices shared.

- Todd – Maybe there is a protocol to follow to share innovations from other states. Send an innovation to the members first, get feedback on whether or not to share it, and then if it is approved, post it on the website. CTC could gather information on the innovation and write a summary.
 - Mike – Refer back to policy from phase one of the study regarding accepting innovations from folks outside the group. John – We never received any innovations from outsiders, but it’s good to get ideas from them.
 - Jay – Have a members only section where members can review an innovation, and then if approved, it goes to full website.
 - Kim – We don’t want to stop at just getting it on the website. The tech transfer part involves determining what the members need to get it approved for use and then implemented in their states. Additional support may be needed in the form of a video demonstration, onsite training, etc.
- Jay/Todd – Have a simple template that’s easy to fill out and post on the website. It could include information such as vendor, vendor contact, cost, end user contact, explanation and picture, specs, website link, etc. Use the MoDOT TMA with Panic Lights and Sound as an example. Put it on the website to help recruit other members.
 - Kim – CTC will create a simple form and get member feedback.
- Kim – In term of gathering innovations from others, does the group want to come up with a competition or structure for gathering them or just reach out to folks to share their ideas?
 - Jay – I like something like the [Build a Better Mousetrap](#) competition that LTAP holds. We could build off that because it’s not only maintenance.



- Stephanie – It would be great to have a business card or something to hand to the field personnel to encourage them to share their ideas, and to point them to website. Or a form to give to people (electronically or paper) that they could fill out.
- Jay – PR piece (USB drive or a logoed item) with the No Boundaries logo that we could give out to folks at conferences or tradeshows.
- Diana – One of the best mechanisms for outreach is the Snow and Ice Listserv. We could start a maintenance listserv.
- Mike – Follow up with the MPN results. Would FHWA be willing to fund this study as a clearinghouse for the results of the MPN?

Enhancing the No Boundaries Website

- Jay – Can we add a "Submit an Idea" button on the website? Tie the innovation template to this.
- Todd – Make it easy to locate topics on the site so folks who go to the website can find it. Identify our top topics on the site, list them on the site so other states can easily find them. Have asset management and maintenance management be tabs and let states enter what they do, to provide a snapshot of where they are at in their evolution. Also, capture what bigger groups, such as SCOM, are doing. Also talk about what do we still need to do? Look to the future.
- Todd/Diana – Advertise an on-deck topic on the website, such as employee retention or staffing issues. Have it say something about continuous innovation so visitors know that we can focus on more than just the topics listed.
- Jay – Member state tab – List each partner and their subject matter expert.
- Jay – Create a subject matter contact list for every state DOT so we could contact them.
- Diana – A good way to direct folks to make changes, edits, etc. to website is to put it on the listserv.

Membership Recruitment

- Pat – Several steps for recruiting new members:
 - Go back to the members who were in phase one that aren't in the study now.
 - Approach states that are interested in No Boundaries.
 - ≈ John – I had a long talk with Juan Araya, from Caltrans, about continuing on. They were interested in going in a different direction but we should contact them again. Also, WV and IN are interested.
 - Put together a flyer to give to members to explain what we are doing.
 - ≈ Non-DOT potential partners – Universities and local governments, especially intermediate size governments that are aggressive in innovations. They are big enough to have funds to do innovations, but small enough so that the bureaucracy doesn't get in the way. Diana can pursue APWA members.
 - Upcoming meetings – The TRB Annual Meeting is in January and there about eight meetings there that are related to maintenance. Pat or Kim will go to some of them with the flyers and get on their agenda for a couple of minutes, if possible.
 - Other upcoming maintenance-related meetings:
 - ≈ SCOM – July in Nevada – The pooled fund needs to be represented there.
 - Mike – They set up a booth at the SCOM annual meeting for phase one of No Boundaries. We need to get this pooled fund on the SCOM meeting agenda.

- ≈ Snow-related conferences – These would be good to attend because the maintenance attendees there deal with the non-winter maintenance also.
- ≈ APWA North American Snow Conference – May in Harford, CT.
- ≈ NRVMA (National Roadside Vegetation Managers Association) Conference – August 30th in Franklin, TN – Todd and Stephanie will be attending.
- Conferences and tradeshow:
 - ≈ Western Snow Conference in Seattle in April or the Pacific Northwest Snowfighters Conference in Portland in June. Fund one or two members to set up a booth to talk to attendees about what we are about.
- Canadian partners – Reach out to our Canadian counterparts. Jay has some contacts in Canadian cities, counties and provinces. Les has contacts in Manitoba. Many of them are APWA members.
- Diana – Create short presentation that explains who we are and show an innovation such as the one that was done yesterday.
 - ≈ Jay – A remote demonstration would be great. The innovation demonstrated at the MoDOT TMC came through very well on the website.
 - ≈ John – Video of equipment operation as part of a rodeo or judging of an innovation.
 - ≈ Kim – Do any of you have any videos already? Or the capability to video your innovation?
 - Todd – We are doing more and more video with our equipment, especially on the safety side. Point visitors to our website or create a YouTube channel for video demonstrations.

Next Steps for No Boundaries

- E-newsletter for No Boundaries - Clear Roads does something similar. Is this worth doing?
 - Kim - We will check in with the group after the next one.
- Next meeting – Conference call or set the next face-to-face meeting?
 - John – Start thinking about next face-to-face meeting. Ohio is always willing to host a face-to-face.
 - Mitch – Who can't travel? Washington puts in for travel a fiscal year in advance. If Jay has enough notice, then he could probably attend a face-to-face meeting. There is no travel for Pennsylvania state employees right now, but could possibly host a meeting. Kristin should be able to attend a meeting with enough notice.
 - CTC will put together a budget for the next meeting to give folks some knowledge of how much money you have to work with moving forward with their goals.

Action Items

Asset management and maintenance management

- CTC will gather information on these topics for sharing on the website.
- CTC will survey members, and others (including at the federal level), to document current practices and identify opportunities for sharing and technology transfer among agencies.

Sharing Innovations

- CTC will create a simple form for folks to share information about their innovations.
- CTC will look into creating a maintenance listserv and will continue developing a list of maintenance contacts in the states.



Website

- CTC will create sections on the site for asset management and maintenance management.
- CTC will update the site to include TAC member names and contact information.
- CTC will develop a button or form of some kind for submitting innovations through the site.

Member Recruitment

- CTC will create a flyer that explains No Boundaries to use at the TRB Annual Meeting and other upcoming meetings and conferences.
- CTC will contact former No Boundaries members to determine their interest in joining phase two of the study.
- CTC will contact other states that have expressed interest in the pooled fund, such as WV, IN and MN.
- Diana will pursue APWA members who might be interested in the study.
- Jay and Les will reach out to their Canadian contacts to provide them with information about joining the pooled fund.

Other

- CTC will put together a budget for the next meeting to give folks some knowledge of how much money the group has to work with moving forward with the study goals.