R&T Now: Interchanges – July 2024

# Driving Change Together—the Impact of the Transportation Pooled Fund (TPF) Program

**Announcer:**

Welcome to Federal Highway Administration's, or FHWA’s, R&T Now Interchanges. The host of our audiocast is Craig Thor. Craig serves as the chief scientist in FHWA’s Office of Research, Development and Technology. Please welcome our host, Craig Thor.

**Craig Thor:**

Thanks. Glad to be here. And welcome to all. Today we are delving into the world of transportation research, exploring how collaboration and innovation are driving change on our roadways. It is my pleasure to introduce today's topic, Driving Change Together: The Impact of the TPF Program. Joining us here today is someone who knows the ins and outs of the program.

Our guest, Tricia Sergeson, is FHWA TPF Program Manager. Tricia, I'm guessing many of our listeners have heard of the TPF program, but they may not know what makes it different from other transportation research programs and other ways that Federal Highway supports transportation research. Why don't you begin by just describing what the TPF program is, how it works, and what makes it unique compared to the rest of our programs.

**Tricia Sergeson:**

Thanks, Craig. Happy to be here. The TPF program really stands out, I think, in the realm of transportation research for its unique, collaborative approach. Unlike a lot of our traditional funding mechanisms, the TPF program thrives on a model where multiple stakeholders contribute resources. The approach not only pools the financial resources, but it also brings together a wealth of expertise and perspectives from diverse participants like state and local transportation agencies, international partners, universities, the private sector, federal agencies all across the country.

The collective effort really amplifies the impact of the projects undertaken. One of our former acting FHWA administrators, Brandye Hendrickson, once said, your success is our success. And I really love, like quote, I feel like it could not be more true to the TPF program. The success of the program really is fueled by the effort of our partners.

Our partners success is our success, and it truly wouldn't be possible to see all of this great research without all the hard work of our partner agencies.

**Craig Thor:**

Thanks for sure. Yeah, I really like that. I think the idea that their success is our success is really important. And really this program leverages that idea, that way of thinking and unique ways when being able to bring the states and the locals and the universities and the international partners together to work on issues of common interest, I think is really important.

So it's great to see a program that can pave the way for those partnerships. Can you just to give us a little bit of a, an understanding and background of the program itself and kind of the scale of its impact a little bit? Can you give us a brief history of the program and just how much funding has gone into these projects over the years?

**Tricia Sergeson:**

Yeah, yeah. I'm not sure how many people are aware of the Pooled Fund program. For a long time I didn't know about it, but it has been around for over 45 years. It was first defined in 1977, in title 23 as a FHWA Administrative program, in partnership with our State Department transportations. Since then, we've seen the program process over 750 million in research funding, and it continues to grow each year.

Participants in the program have finished over 485, Pooled Fund projects, and there's 163 active now on the site. You'll see there's 11 new solicitations that are looking for partners, funding. So if there's anyone out there that is looking for a new research project to participate in, looking for funds to send our way, go to pooledfund.org and check out some of the, great new research opportunities.

**Craig Thor:**

Yeah, I think that's really interesting that we can spend so much money on projects together, and still see it as an opportunity to save money and time, even though we've already invested so much. And I think that's one of the unique aspects of this program, that makes it different than the other ways that we fund research.

Can you elaborate a little bit more on what some of the other benefits potentially are of the TPF program and how it's benefiting both us and the states and our other partners?

**Tricia Sergeson:**

Yeah, absolutely. So, let's say, you know, you're a transportation agency, wanted to take on a new project. We all know how research and innovation really drive almost every decision we make. But, you know, as critical as the research and innovation piece is, sometimes these research projects are costing hundreds of thousands or millions of dollars. And we all know things aren't getting less expensive.

So, it can be difficult to prioritize what research you want to move forward, what your priorities and goals are, instead of going it alone. The Pooled Fund program provides an avenue for agencies facing similar challenges to join together by sharing this cost, data, your subject matter experts, you're able to achieve the results much more efficiently and cost effectively than if we were conducting the research alone.

It's really a win win for all sides. You know, we've heard from partners like Iowa DOT, who said that without participating in pooled funds, it would take Iowa DOT 67 years to fund the same research that they've conducted and one year through the Pooled Fund program. Or Washington State DOT that explained, by combining funds and participating in the program, that for every dollar they've invested in the program, they've benefited an estimated $24 in return.

A lot of different agencies or states may be interested in studying a similar issue, and instead of producing similar research that could be duplicative, they can come together and evaluate the results and get shared benefit. We also don't get to say this a lot in government, but I feel like the Pooled Fund program is very flexible. We have, you know, a wide diversity of projects, research topics, different project sizes. The program really is there to be agile and try to meet the needs of our different transportation partners to really help move innovation and research forward.

**Craig Thor:**

That's great. And I think just the ROI that you discuss from Iowa and Washington state and, you know, the flexibility and the ability to reduce duplication and the fact that we're looking at applied research products here that go out to the state when the when the project is done, we're actually making impact in the real world.

I think that that's fantastic. And that's just highlights some of the opportunities that come along with this program. Can you talk a little bit more about some specific projects and highlight the benefits that you've described? And so it's a little more illustrative for our audience about what we're actually doing through this program.

**Tricia Sergeson:**

Yeah. And I think that's one of my favorite parts in this role, is getting to see all of the amazing successes that Pooled Fund program participants have moved forward and, and really see what work is being done and then incorporated. We've seen studies that show, you know, immense benefits, like the Nevada led Wildlife Collision Reduction and Habitat Connectivity Study. For $20,000 a year states are able to participate in a research project with a budget of over $1.2 million in collaborative research, with researchers estimate that nearly 2 to 3 million collisions each year involve large animals, costing those victims and agencies more than $10 billion. This is a huge impact, the work that's being done through this one study, many partners have utilized the TPF deliverables and the more effective strategies to reduce this animal vehicle collisions and improve the safety on our roadways.

We've also seen examples like the Low-Cost Safety Improvement Study and of all the TPF studies, this one boasts the most members. It has over 43 partners and seems to be getting more each year. But I think the real highlight of this study and the real success is it's looking at research solutions for budgets of all sizes.

As a driver, we may not notice some of the safety improvements that were developed as a result of the study, but it doesn't minimize the huge impact it has towards advancing safety. Looking at retro reflectivity, looking at lane markings, all of these research products that have come from the study have really helped make our roadways safer. We've also seen, some of the work be implemented around the world.

One of our Pooled Fund studies, the Transportation Avalanche Research Pooled Fund study, is a great example of, pooled fund study that has worked with many of the states and then also worked with our global partners. Milford Road and New Zealand has said that they find the work and the research hugely valuable. And has really helped to increase the safety on their roadways, especially during the winter season.

**Craig Thor:**

Yeah. That's great. I think it's interesting to hear about the different types of projects in the different focus areas in some very unique and different places that maybe we wouldn't be investing as much in, things like wildlife vehicle collisions. That's an area that's a lot of interest to a lot of states and so the states that are interested in exploring that, they can pool their funds together and explore a very, critical topic in those places.

And then, of course, being able to partner with international organizations as well is very unique, so that's excellent. Can you talk a little bit about what are the types of products that come out of the TPF program? I mean, we talked a little bit about some of the innovations, but is that is that all that comes out of this program, or are there other types of products as well that we can expect out of these research projects?

**Tricia Sergeson:**

Yeah, that's a great question, Craig. So I think when we think about, you know, research, it's so varied. Right. Sometimes we do have specific products that come out of our research and innovation. But another, you know, big benefit that we see coming out of these pooled funds studies is the technology and knowledge transfer side. So many, you know, organizations, we all, I think, have experienced the consistent staffing turnover and changes that have happened. Now through Pooled Fund studies, we provide a way for new staff, senior staff, others to really come together and their subject matter area to, you know, document past challenges, look at lessons learned and share that expertise. Almost every pooled fund study has an annual Technical Advisory Council meeting. This really allows a chance for all members to come together, discuss the current and future research efforts, discuss their experiences, and to many participants, these meetings are invaluable.

Sometimes it's the best part that comes from the pooled fund study. It allows members to learn about the research is being done here, what's going on at other agencies, and be able to make those connections and network with subject matter experts across the country. The pull from program also has studies that really focus on peer exchanges or, you know, looking at the technology transfer that happens at conferences.

One example is the No Boundaries Pooled Fund study, which holds biannual peer exchanges to discuss current maintenance challenges and explore innovative maintenance and operations practices. These peer exchanges provide the opportunity to see technology and innovation practices firsthand, and ask questions directly to the subject matter experts.

**Craig Thor:**

Yeah. That's great. I think that technology knowledge transfer piece, the peer exchanges, that, again, just highlights the value of these partnerships that we get out of this program. So it's not just about developing the innovation, but bringing these different groups together to talk about their research problems, the issues they're having in their states or their cities, and being able to work on them together.

And so I think it just highlights the unique nature, again, of this program. We talked about a few of the different specific projects and some of the great things that come out of these projects. So as people are thinking about how they could potentially be engaged with pooled fund studies or maybe even lead a pooled fund study, can you give them some ideas about what are the characteristics that make a successful TPF program study?

**Tricia Sergeson:**

Sure. Yeah. There's many different successful TPF studies of various sizes, you know, topic areas that can be kind of hard to define. But I do think one of the common threads that we see amongst our most successful pool fund studies is the strength of communication. It's I think one of our most challenging things when we're in the workplace is, you know, how are we better our communication, how we do communication differently.

But it's been exciting to see some new and innovative ways, how different TPF studies have reached out to get feedback from their partners, to do different types of kickoff meetings, how they engage their users to shape the scope of work. All of this, you know, I think active communication and collaboration really makes the end product much more successful.

I think a great example of this, is our traffic control device consortium pooled funds study. Big shout out to Laura Mero for, all her work and running that and leading that effort and all the partners in that effort. But they do a once a month lunch and learn series. And, you know, they get to talk about the research that they've done, different questions that might have come up with the pulled them program or their pooled fund study. And it's really a great way to actively engage their users regularly with study updates.

**Craig Thor:**

Great. It's excellent to hear about all the different unique capabilities and aspects of this program, the specific projects themselves, and all the great things that they're doing. And along those lines, I understand there's some exciting news on the horizon coming out of the TPF program, the Transportation Pool Fund Excellence Awards program. So why don't you tell us a little bit more about that initiative?

**Tricia Sergeson:**

Yeah, I'd be happy to. So both FHWA and AASHTO really wanted to come together to showcase the incredible achievements that have been made by our partners through the TPF program. We were able to form a working group of, you know, state D.O.T. representatives, federal highways representatives, and AASHTO to really help shape and develop this new award idea, give feedback on, you know, what we wanted to showcase, look at the criteria. So yeah, we now have the Excellence Awards program, which is a great way to recognize and celebrate the outstanding achievements made possible through the TPF framework. The program will announce winners biannually, with a call for nominations in the fall of year one and announcing the winners in the summer of year two. So anyone who knows a great TPF study, you know, please keep in mind submit a nomination. We'll put a call out next summer and we'd love to hear about more projects.

**Craig Thor:**

So definitely excited to encourage people to nominate for next year's awards. But what I really want to know is who are this year's winners? So can you reveal to us today who the winners are of the inaugural TPF Excellence Awards program?

**Tricia Sergeson:**

Sure, absolutely. You know, we had a lot of competitive nominations this year. It was really hard to choose. I'd like to give a huge thanks to our judges panel that, you know, volunteered their time and effort to go through all of these excellent nominations. And also a big thanks to everyone who submitted nominations this year. It was really exciting to see all the different studies and the great work that's being done around the country.

It's a really hard decision. Our first award winner, excited to say was the Clear Roads Winter Maintenance Pooled Fund study. This pooled fund study I think is a great example of the core values of the pooled fund program. You know, since its inception in 2004, Clear Roads has brought together 39 member agencies, including global representatives from Norway, to revolutionize winter maintenance practices through rigorous evaluation of materials, equipment and methods in real world conditions, Clear Roads identifies the most effective techniques and technologies to help save agencies money, enhance safety, and boost efficiency.

Some of the group's latest projects and partnership initiatives have included a strong emphasis, as well on looking at how they're going to implement the research results. 70% of different members have implemented the findings from Clear Roads projects within their own agency. One of these examples that we heard from MDOT after implementing this research was that they were able to stop well contamination claims and save their agency over 90 million in funds over the last nine winter seasons.

Clear roads also focuses on creating free training available to any entity requesting. They've seen these training resources requested by over a thousand different agencies, both public and private sector. So it's a really excellent example of the knowledge and technology transfer. Clear Roads has helped serve as that catalyst for change in the transportation industry. It's paving the way for a safer, more efficient winter maintenance practices nationwide.

**Craig Thor:**

That's great. I think it's a great example of the benefits that we get out of this program. You see 70% of the members implementing the findings. We see significant cost savings, multiple states, international partners. It's obvious why they were chosen as one of our winners. can you tell us who the second winner was?

**Tricia Sergeson:**

Absolutely. Another great study that was selected was the Member Level Redundancy in Built-up Steel Members study. This study really showed an incredible partnership among seven different state DOT's, the Army Corps of Engineering, AASHTO committees, and the extensive work with the private steel industry. I think one of the great features of the study is their work with the private industry and how they've been so collaborative with that.

The steel industry was able to provide specimens and fixtures for testing at either no cost or substantially reduced cost. Without the support of the industry, it's unlikely this project would have been able to conduct the large scale number of full scale tests really needed to fully develop the new specifications. The project allows designers to utilize economical and innovative designs that were not favored, and that can now be shown to be internally redundant and reliable.

As a result of the study, there were two new guidance specifications put out in June 2018. These specifications are really having a huge impact in transportation agencies and industries across the country in the bridge sector.

**Craig Thor:**

Excellent. Another great example of the benefits of this program working with multiple states AASHTO, Corps of Engineers and private industry and really gaining those benefits from that collaboration with private industry. And as you noted, we wouldn't been able to achieve these results without that collaboration. So another great choice. So congratulations to both winners. So with that I'd like to go and give you the last word here and just say, is there anything else you want to tell us about the Pooled Fund program before we wrap up?

**Tricia Sergeson:**

Well thanks again, Craig, I really appreciate the opportunity to be here and chat with you today. I guess I'll just end with if you're interested in learning more about any of the new research studies or just about the pooled fund program in general, you know, we do have a quarterly newsletter we send out. Let me know and we can, you know, get you on that newsletter, get you on the listserv. We also have our website that is updated every day with news, recent successes and any updated resources you might, might want to know about the pooled fund program. It really is a true collaboration effort, so I'd like to thank all our participants in the program.

Again, your success is our success. Together I think we can keep seeing how TPF studies can really pave the way for creating transportation solutions for tomorrow. So thanks again for the opportunity. And if you want to know more, let us know.

**Craig Thor:**

Excellent. Thanks for joining us today, Tricia. That was a great conversation about the TPF program, the research successes, and primarily how we can work together on a lot of these issues of common interest across the states in our industry partners, academia, even international partners. I think it's it's really critical that we all work together on these problems. Their success is our success, as you said. That's all the time we have for today. Thanks for tuning in to this episode of R&T Now. Interchanges.

**Announcer:**

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