

Wisconsin Freight Advisory Committee (FAC)
Meeting Minutes from Tuesday, August 6, 2019
9:00 a.m. to 3:30 p.m., Hill Farms Office Building, Madison, Wisconsin

FAC Members Present: Dan Bahr, Andrew Barnes, Marcus Branstad, Mark Brehmer, Tom Bressner, Ron Chicka, Jason Culotta, Brian Doudna, Cory Fish, Mike Friedlander, Glenn Fulkerson, Andrea Gabel, Karen Gefvert, Dean Haen, Paula Henney, Debby Jackson, Neal Kedzie, Mike Koles, Mike Kozak, Larry Krueger, Tony Langenohl, Megan Levy, Kristi Luzar, Kevin Muhs, Dr. Ernie Perry, Richard Pingel, Jen Pino-Gallagher, Mark Rhoda-Reis, Tom Winker

FAC-Member Organizations' Proxies Present: Michael Gay, Tim Marshall

Wisconsin Department of Transportation (WisDOT) Members Present: Brad Basten, Jim Donlin, Alex Gramovot, Jeff Gust, Mike Halsted, Paul Hammer, Randy Hoyt, Thor Jeppson, Steve Krebs, Dave Leucinger, Andrew Levy, Brian Mitchell, Joe Nestler, Joel Nilsestuen, Rose Phetteplace, Dean Prestegaard, Dave Simon, Lisa Stern, Jay Sween, Aileen Switzer, Craig Thompson, Matt Umhoefer, Kaleb Vander Wiele, Chuck Wade

Guests: Adam Binsfeld, Louie Busalacchi, Jeff Caine, Peter Hirthe, Eric Kruse, Andy Laurent, Libby Ogard, Brad Peot, Brad Rostowske, Vivek Sharma, Wayne Thompson, John Umhoefer, Leah Ziemba

- **Welcome and Opening Remarks (9:30 a.m.)**
 - Craig Thompson, WisDOT Secretary

WisDOT Secretary Craig Thompson welcomed the FAC members, noting that he was happy to now sponsor the FAC, on which he previously served with those in attendance. He noted that the FAC is welcoming 11 new members, and then led the attendees through the agenda. Among the points he noted included the cold chain panel and the importance of cold supply chains to the state's economy since the late 1800's. He noted updates would be provided by WisDOT staff on the designation of critical corridors and the implementation of a truck parking information system. He also previewed the maritime freight panel with representatives from the Mississippi River and Great Lakes systems, noting each play an important role in freight transportation for Wisconsin. He concluded by stating Governor Evers has made a commitment to improving the state's transportation infrastructure, and forums like this tell us how we can help meet the business community's needs. He thanked all for their attendance and participation.

- **Recap of the November 2018 (8th) FAC Meeting, WisDOT Update, and New Member introductions (9:40 a.m.)**
 - Aileen Switzer, WisDOT Division of Transportation Investment Management (DTIM) Administrator

Ms. Switzer welcomed the members of the FAC and then gave a brief overview of the folder contents. She gave members a chance to briefly introduce themselves to others at their tables, then asked new members to introduce themselves to the group. Marcus Branstad, representing the American Chemistry Council, mentioned the new opportunities created by the shale gas revolution and the challenges from trade uncertainties. He said all freight transportation modes – especially rail and trucking – were

important to his sector. Jason Culotta noted his previous position on the FAC; he now represents the Midwest Food Products Association and deferred further comments until his “State of Freight” segment. Mike Friedlander said his role at the Wisconsin DNR managed air quality issues; he worked with Roundy’s tech center to improve their emissions and operations at their warehouse. He also deferred additional comments. Glenn Fulkerson is the new Division Director for FHWA in Wisconsin; he previously had served in Kentucky and Illinois. He thanked his Deputy Director, Tim Marshall, who will become the Iowa Division Director in September. Karen Gefvert from the Wisconsin Farm Bureau Federation expressed her interest in ensuring transportation from local roads to major highways in helping connect farmers to markets.

Debby Jackson from the Transportation Development Association briefly discussed the organization’s advocacy for investment in transportation, and noted she assumed her role upon Secretary Thompson’s appointment. Mike Kozak said he spent 25 years at Dawes / All Crane under Wayne Kokta and will use what he learned to represent the voice of oversize loads. Kevin Muhs said that although he is from SEWRPC, he represents all RPCs to present the perspective of regional governments. Mark Rhoda-Reis said he was attending on behalf of appointed member Randy Romanski, as a representative of DATCP. Tom Winker said he wears many hats – former dairy farmer, trucker, Ozaukee County Board member, and member of the Wisconsin Towns Association – but his role will be as the voice of the East Wisconsin Counties Rail Transit Commission. The rail transit commissions hold ownership over the rail lines that Wisconsin & Southern/Watco operates. He said the Oshkosh transload facility to support Oshkosh Corporation’s military equipment production and reconstruction was a positive demonstration of how transportation and government partnerships can work to support business development.

Ms. Switzer gave brief updates on WisDOT’s activities since the previous FAC meeting. The largest accomplishment was the publishing of the Report of the Intermodal Subcommittee. This Report has been well-received, and WisDOT will be working to help coordinate forums in the parts of the state that have shown greatest interest in intermodal freight transportation. WisDOT has also awarded \$16 million in grants and loans for rail projects that support local economic development, along with \$7.1 million in Harbor Assistance Program grants – for projects at Marinette, La Pointe, Milwaukee, and Green Bay. The state is also in the process of updating its statewide OS/OW permitting system. The new system will allow for applicants more specific options for the load type under their permit request.

• **State of Wisconsin’s Freight-Related Economy / Industries (9:45 a.m.)**

- o Mark Brehmer, Wisconsin Builders Association
- o Jason Culotta, Midwest Food Products Association
- o Mike Friedlander, WisDNR
- o Larry Krueger, Lake States Lumber Association

The Summer 2019 FAC’s “State of Our Industry” presentations featured perspectives from four attendees.

Mark Brehmer from the Wisconsin Builders Association noted year-over-year new starts are down, with statewide permit applications 13 percent lower in April 2019 than in April 2018. He said that weather likely played a large part in that reduction; the May 2019 difference was only 8 percent less. He said many of the same issues continue to affect the sector, including labor shortages, truck driver shortages, and access to bulk materials such as fill and concrete. These factors – and global trade issues – contribute to rising material costs for lumber. Lumber costs spiked but have now eased back somewhat. Rising costs for land and for infrastructure are also putting pressure on construction.

Jason Culotta from the Midwest Food Products Association said his organization is comprised primarily of vegetable processors. The biggest issue for his members has become the cost of the dump trailers used to carry raw vegetables from field to processing facility. From the cost of the steel, to the technology used in their operation, this equipment raises costs greatly for the processors. That also becomes a pressure point for farmers. Other issues are in keeping with other members – driver pay, more retirees than new drivers, and non-alignment of state and federal regulations – especially weight limits across state lines.

Mike Friedlander from the Wisconsin DNR said he was involved in three top level items of relevance to the freight community, all focused on making diesel equipment operate more cleanly. DNR's efforts to reduce diesel emissions started in 2008, in recognition of more technology being introduced to equipment that has a long operating life. But that still leaves 10 million old engines – unregulated – that are still operating. WisDNR's program incentivizes the equipment owners to repower with newer equipment and technology, and to reduce idling. Through our efforts, Wisconsin users saved 54 million gallons of fuel and contributed \$238 million in public health benefits.

The 2019-2020 Diesel Emissions Reduction Act (DERA) funding cycle is currently underway; it will focus on repowering off-road equipment for applications such as construction and agriculture. The WisDNR program provides 75 percent of replacement costs. After that, the future collaboration WisDNR will seek is to replace diesel equipment at port facilities. Vessels and locomotives are major contributors to the emissions, but there are examples of projects in Cleveland, Ohio and at Ports of Indiana where funding to reduce emissions replaced equipment such as cranes and off-loaders. WisDNR would like to start moving that process forward.

Larry Krueger from the Lake States Lumber Association discussed his organization's perspectives. He said that 46 percent of Wisconsin's land area is woodlands, and those woods contribute to 13 percent of the state's employment. Nationally, half of the hardwood lumber produced is exported, and half of those exports (\$3.5 to \$4 billion) had been going to China. Most of the lumber sent to China (80 percent) stayed there for their market demand. But now there is a 25 percent tariff on lumber going to China; the next closest nations in trade – including Vietnam and Italy – demand less than 1/10 of what China had been importing. The use of intermodal containers for export is crucial but lack of an eastern Wisconsin facility makes shipping more expensive – at least \$500 more per load. A Wisconsin facility is desperately needed.

- **Legislative Update (10:15 a.m.)**

- o Jim Donlin, WisDOT OMB

- o Joel Nilsestuen, WisDOT Assistant Deputy Secretary

The meeting next moved to an update of freight-related transportation legislation at both the state and federal levels. Assistant Deputy Secretary Nilsestuen began discussion on the state's budget. He noted that while it doesn't accomplish all that Governor Evers had hoped to address, it does begin to look at the system's needs through assessing transportation conditions. One example is \$320 million for the State Highway Rehabilitation (SHR) program, which will fund many projects around the state. Funding for the biennium also includes \$32 million for the Harbor Assistance Program and \$30 million for freight rail programs. The key was to improve sustainable funding, and there are some increases. Those include vehicle registration fees, a surcharge on hybrid vehicle registration, and an increase in title fees at transfer. WisDOT will be able to start addressing some of the needs on 2-lane highways; there are more than 200 projects that have been identified. The budget also provides a 10 percent increase in General

Transportation Aid, allows the Zoo Interchange to be finished, and allows the state to begin work on I-43. It also will address needs in Brown and Outagamie Counties to add a lane in each direction along I-41. There is also a new local grant program that will be a competitive process, taking economic impact into consideration. He said there have been successes in the bridge strengthening and local bridge pilot programs, with the Wisconsin Counties Association as a partner on projects throughout the state.

Next, Jim Donlin discussed the Federal funding context. He noted the bipartisan 2-year budget deal that just passed, lifting the debt ceiling and avoiding a fiscal crisis for now. In the longer term, efforts are underway for the next reauthorization. The existing FAST Act expires on September 30, 2020, and the Senate Environment and Public Works Committee has been moving forward with a mostly bipartisan bill with the preliminary title of “America’s Transportation Infrastructure Act.” It would cover FY 2021 to FY2025 and authorize \$292 billion towards transportation; \$5 billion of that would come from general funds, with the remainder coming from the Highway Trust Fund. State funding would remain at more than 90 percent formula funds. Overall annual funding would see a substantial boost – from the projected \$47 billion in the current FY2020 budget, to \$55.1 billion in FY21, to \$56.2 billion in FY22, to \$57.4 billion in FY23, to \$58.7 billion in FY24, and \$59.8 billion in FY25. The bill emphasizes safety and features a competitive grant program for bridges in poor condition. There are also provisions to reduce vehicle/wildlife crashes. The bill includes provisions to expedite project delivery to two years or less through streamlined environmental reviews. There is a large section on resiliency (recovery from natural disasters), as well as sections on environmental changes (carbon emissions) and alternative fuels. There are also goals to reduce congestion, reduce truck idling at ports, and reduce diesel emissions overall. Under the formula funding, states will see an eight percent boost the first year (from FFY2020), then two percent increases each of the following years. There will be more flexibility for intermodal and for critical urban and rural freight corridors. The bill is just a first step, but the language is encouraging.

- **Cold Supply Chain/Refrigerated Logistics - Panel Presentation (10:50 a.m.)**

- o Facilitator: Jen Pino-Gallagher, Madison International Trade Association

- o Panel Members:

- o Dr. Aparna Tatavarthy, U.S. Food & Drug Administration (FDA)

- o Jeff Caine, Caine Warehousing

- o Brad Peot, Watco Companies

- o Leah Ziemba, FaB Wisconsin

- o Eric Kruse, Kwik Trip

The first panel session of the day gave an overview of the transportation supply chain for refrigerated and other temperature-controlled goods. Jen Pino-Gallagher introduced herself and the session’s panelists. She noted that most people have an assumption that the cold chain will come through to deliver fresh food year-round, at affordable prices. There’s a complex system that functions almost invisibly to customers, and the panel will only be scratching the surface of how it operates, from regulation to delivery.

The first speaker, Dr. Aparna Tatavarthy, joined the session via video conference, along with two of her colleagues. The critical legislation to her role is the 2011 Food Safety Modernization Act (FSMA). Following the act, the FDA began a rule-making process. The proposed rules were published in 2014, and after 200 public comments were received, the final rules were published in April 2016. The rules cover transportation by rail and truck – not by air or water. The rules apply to operations of over \$500,000, for food consumed in the U.S. or food produced in the U.S., including food for humans and

animals. The rules establish the roles and responsibilities at each stage of the shipping process, covering shippers, loaders, and carriers. Rules include:

- Designing and maintaining storage appropriate to prevent unsafe food storage (including the presence of adequate temperature controls);
- Operating facilities to ensure temperatures are controlled, with prevention methods that eliminate opportunities for cross-contamination or contact with allergens;
- Training for carriers and staffs through an FDA online module, and record-keeping to demonstrate such training was completed;
- Record-keeping to document the responsible parties for temperature monitoring, cleaning, and other efforts (including shipper specifications in contractual agreements); and
- Waivers where other food safety programs already exist, including Grade A milk and shellfish.

The implementation of these rules will be conducted to ensure awareness of the rules as part of inspections, and recognizing the need to train, document, and coordinate efforts. For the 2019 Fiscal year, more than 150 facilities have been inspected – most produce food for humans. There were no trends in the inspections; most firms are taking appropriate actions. The worst offenses seem to be lack of written procedures.

Ms. Tatarvathy identified several resources available for FSMA education, including a carrier training module, a small entity compliance guide, and a technical assistance network that has already answered more than 1,200 questions.

The next panelist, Jeff Caine, offered his background and insights. Caine Warehousing has 600,000 square feet of storage; 200,000 of that is refrigerated. That business has existed for 40 years. Caine also has a truck fleet of 50 powered units and 150 trailers and has operated for 70 years. He said agriculture in an \$88 billion part of Wisconsin's economy; dairy is \$43 billion of that. Wisconsin is the #1 cheese producer (3.42 billion pounds); frozen pizza manufacturing is a major cheese user, with Nestle the largest company. The state also leads in cranberry production (550 million pounds) and green beans (658 million pounds). Corn and potatoes are also major food crops. Wisconsin has 228 million cubic feet of cold storage; the 4th largest volume per capita in the U.S. There are 88 public storage facilities and many private facilities. The trend has been to build cold storage in smaller communities near large metropolitan areas. Some of the big operators in the state include AmeriCold, Central Storage, and WOW Logistics. E-commerce has changed operations in cold storage from warehousing to order picking spaces.

Caine added that cold storage challenges include finding workers trained in electrical and refrigeration technologies. New systems for refrigeration are higher efficiency and better than Freon for the environment. Buildings are constructed with insulation on all sides, plus the top and bottom. With the implementation of the FSMA, many of the rules fall on warehousing, including employee training and record keeping. His company routinely has third-party audits from accredited organizations and they expect to score high on those audits.

On the trucking side, he said that the Wisconsin Motor Carrier Association lists over 70 carriers who operate refrigerated transportation; there probably are more than 100 in the state. Marten, based in Wisconsin, is the fifth-largest temperature-controlled transporter in the country. Two-thirds of the state's refrigerated transporters have 40 units or less. The FSMA rules have brought a new generation of technology into the equipment used. Refrigerated trailers have temperatures monitored by satellites and by relays to truck cabs, so the drivers can monitor the temperature continuously. There are seals

and inspections that verify the chain of custody on loads. Electronic Logging Devices log the driver's hours of service. If drivers have delays they can be forced to take a 10-hour break. There's also the lack of parking at rest areas, and most distribution centers don't allow trucks to park there. Mr. Caine believes these places should be required to have truck parking.

Caine said his drivers' average age is 58, and that's in line with national averages. There is a national driver shortage of 300,000 drivers. Insurance companies won't write policies for drivers under 23, but by then most people have chosen a different career. There's a long lead time for ordering equipment – a backlog of over a year; Caine uses dealers and the used equipment market. The highway system needs to have more funding in the Highway Trust Fund, with indexing for fuel taxes. Hybrids should pay more. Caine opposes open road tolling – there are high initial costs and maintenance; in many locations it has not been successful, becoming burdensome for governments. He added that a rail container terminal would help with the state's \$3.5 billion in agricultural exports. There are high costs moving product to Illinois terminals. There is also a legislative bill circulating to allow 91,000-pound loads, LRB 0400. The state highway system can't handle it. Trucks at those higher weights would move off of the federal highways to the local system if that bill is adopted.

Next, Brad Peot of Watco gave a PowerPoint presentation on railway cold supply chains. Watco has four core operational areas – railroads, terminal operations, rail equipment repair, and supply chain solutions. Railroads have conducted refrigerated transportation ever since the 1870's, when rail cars that were refrigerated by ice bunkers at each car end were used. These were the cars that served Wisconsin companies such as Oscar Mayer in Madison and Schlitz on Milwaukee's Beer Line – when freight volumes warranted round-the-clock switching. These cars were also key to the California perishable trains – hauling fruits and vegetables to cities in the Midwest and East Coast. Now, there are only a few dedicated trains for refrigerated shipments, including Tropicana orange juice trains to New Jersey and Cincinnati.

The rise of trucking through the 20th century was driven by flexibility and the dispersion of both producers and customers. This led to a decline in rail use; restrictive labor costs and regulations also led to a loss of customers. The current use of rail for temperature-controlled shipping is split into two service levels. High-value products, such as fresh refrigerated products that are time-sensitive, are transported by intermodal containers on unit trains. Lower-value products, including price-sensitive frozen goods, can be shipped by manifest (mixed) trains as carloads. Items with longer shelf-lives get essentially "free" storage – cheese is an example of a product that benefits from aging. Butter, cream, and frozen vegetables are some of the refrigerated products Wisconsin & Southern ships on its system.

There are still dedicated operations to ship produce from California eastward. RailEx was a company that built blocks of cars at a warehouse – transloading the produce from truck to train. It's now owned by Union Pacific. Most often, refrigerated cars are assembled in manifest (mixed) trains. Rail shipping of refrigerated products does save shippers on cost, but the cost of the cars themselves (\$300,000 to build) and the need for dunnage (blocking and bracing the contents to prevent movement during transit) are negatives. When unit trains can be assembled, the advantage for shippers is faster movement of goods; the disadvantage is that unit trains are limited to operate along certain corridors and require more equipment. Refrigerated intermodal is the fastest of the rail alternatives; it typically results in less damage as contents get loaded one pallet high (versus two pallets high in other configurations). The negatives are the small number of terminals and additional equipment requirements.

Peot then talked about the Watco Perishable Express service. Watco's short line railroads serve several food warehouses in Idaho; these locations have a large volume of food produced but no intermodal access. In keeping with the role of short lines as a feeder to the Class I railroads, Watco worked with the shippers to develop a way that protects rail shipments and grows the cold chain. Manifest service had a 20- to 30-day turn-around cycle, and the 50' refrigerated rail cars could only replace 2.5 semi-truck trailers. Dunnage also added costs; pallets had to be rotated in the cars before bracing. That process took 5 or 6 people 4-5 hours. The volume of loads going east was established – 25,000 cars going east from Burley, Idaho. The solution for the shippers involves adding a block of cars to a Union Pacific train heading east. The cars used are larger and more efficient, with a built-in racking system (pioneered by FedEx) for faster loading and unloading. This arrangement gets cars to Rochelle, IL in 3 days, and to Harrisburg, PA in 6 to 7 days. At present, there are 21 cars in carload service. As equipment is added, Watco is targeting less-than-carload (LCL) service, so multiple customers and multiple products can be shipped to the same destination. The success of these cars is also going to be used to deliver beer from St. Louis to Houston. The keys to success are focusing on strong origin/destination pairs and on connections with Class I lines. Could Wisconsin support a Perishable Express service? Peot believes it's worth exploring.

Following Brad Peot, Leah Ziemba from the FaB Wisconsin team offered her perspectives on the cold supply chain and refrigerated logistics. FaB – which stands for Food and Beverage – is affiliated with the Metropolitan Milwaukee Association of Commerce (MMAC). Its efforts focus on supporting the cluster of food and beverage companies, and their affiliated suppliers, in the state. FaB has 250 members at present; half of those are in production and operate at all scales. FaB focuses on three support areas: supply chain maximization, food safety compliance, and international opportunities. The food safety element is important for FaB because not every company in the state has sufficient staffing to support compliance.

Other areas of concern for FaB include the shortage of trained carriers, since compliance with federal regulations requires transportation companies also have training (and documentation of that training) on safe handling; complete traceability of products; challenges with less-than-truckload shipping; and shipping delays (including contractual issues). An important thing FaB is emphasizing to its members is the chain of custody must be maintained, door-to-door. One break in that chain opens liability. It underscores that shippers play many roles in the process, so a sophisticated carrier is critical. Insurance companies also impose mandates to ensure their underwriting, including documentation of procedures.

Next, Eric Kruse from Kwik Trip discussed his company's cold chain operations and concerns. Kwik Trip is unusual in that it performs multiple roles – as retailer, distributor, and manufacturer. The company has its own bakery, dairy, and ice manufacturing; these are things the customer doesn't see. The challenges come with regulatory impacts – what do they impact, and how does Kwik Trip ensure product safety? The FSMA is the act where the FDA gets involved with transportation – entering into regulatory areas usually covered by U.S. DOT and the Federal Motor Carrier Safety Administration (FMCSA). Kwik Trip employs 572 drivers. Under FSMA, all of them need to know the rules for safe food handling, and the company needs to document that. Much of what the Food Safety Modernization Act (FSMA) requires is common-sense logic, but Kruse understands why the act was passed. What should be reviewed is which regulations are beneficial and which ones are not needed.

Next, Ms. Pino-Gallagher opened up the floor to questions. Dick Pingel said he had been through the training and agreed that a lot was common sense, but that the paperwork was excessive. . Eric Kruse replied 40 percent of company sales are fuel – 60 percent are not. But all drivers have to document how

deliveries are handled. Jeff Caine said that when his company's facilities are audited, they go through a mock recall and follow the documents to the products. His company needs to provide that documentation within an hour. They need to use a technical system that allows them to produce that documentation in that time. Michael Gay asked if cold storage also included frozen products. Several panelists confirmed that it does. One other guest noted there are many steps in the process of food production, storage, and delivery. He asked if there is a framework for splitting liability, or if challenges are handled on a case-by-case basis. Leah Ziemba said that all agreements are negotiated separately, but there are similarities, based on the modes used, the customers, and more. Those elements are identified in the contracts. It becomes a business decision and varies by the insurance company or the demands of the customer. Jeff Caine said they have standard terms in their warehouse contracts but that many large customers look to put the liability back on the warehouse.

Mark Brehmer asked if the tracking rules differed based on the size of the company. Leah Ziemba replied there is a small revenue threshold for producers – businesses with under \$500,000 in revenue are outside the scope. But the carrier rules are different. Dave Leucinger asked if there were indications that the FSMA rules had demonstrated measurable improvements in food safety. Aparna Tatavarthy replied that the FDA is still collecting baseline data at this point and is focusing on ensuring the responsible parties are educated. There isn't data there yet. Eric Kruse said Kwik Trip was already documenting its food network – one difference is that the company previously didn't keep records as long as FSMA now requires. FSMA also doesn't define training, other than it needs to be 'adequate.' Improvements in this area would help reduce confusion. When outbreaks of illness have happened, it's been traced to poor handling or poor storage – not issues with transit, generally. Customer handling is always an issue as well. Leah Ziemba said that most of the food safety issues have found that the consumer is responsible for poor handling. Kwik Trip already had a protocol for handling and tracing. Smaller producers can improve their efforts by having a better framework for transportation, including conversations with carriers. There are improvements that can address safety in less sophisticated ways, and the FDA has modules for training.

Following the panel, attendees conducted tabletop discussions for the Cold Supply Chain and Refrigerated Logistics. The results of these discussions are in the Appendix. Following those exercises, the FAC adjourned for lunch.

- **Critical Rural and Urban Freight Corridors - Update (1:20 p.m.)**

- o Chuck Wade, WisDOT DTIM

Next, Chuck Wade gave a brief update on the status of Wisconsin's designation of Critical Urban Freight Corridors (CUFCs) and Critical Rural Freight Corridors (CRFCs). These corridors will increase Wisconsin's roadways on the National Highway Freight Network. Federal criteria allow Wisconsin to designate up to 75 miles as CUFCs, and 150 miles as CRFCs. The rules also give MPOs with populations over 500,000 the ability to designate their own systems; in Wisconsin, that power is limited to the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Any corridors designated as critical freight corridors would be eligible for federal freight funds – approximately \$77 million in national highway freight program funds for FY2018 to FY2020.

Mr. Wade said the process to designate the corridors was both quantitative and qualitative. The freight factor scores of the corridor accounted for 50 percent of the value assigned to the corridor; those scores are derived from WisDOT-established criteria. The connectivity score adds 30 percent; it looks at the role of the corridor in connecting to freight generators. Safety and crash data, as measured through

crash data for all vehicles, accounts for 20 percent. Qualitative evaluations were added through engagement with MPOs and RPCs; through the mapping exercises conducted at a previous FAC meeting; through institutional knowledge; and by filtering out road segments where improvements had been made recently. Final release of these maps is expected at the next MPO directors' quarterly meeting.

- **Regional Truck Parking Information Management System - Update (1:30 p.m.)**

- o Randy Hoyt, WisDOT Division of Transportation System Development

The next update of WisDOT freight efforts was provided by Randy Hoyt, who presented an update on the department's deployment of the regional Truck Parking Information Management System (TPIMS). The efforts were compelled by Jason's Law, which was named in recognition of a trucker parked in an abandoned gas station – the only parking he could find – who was robbed of \$7 and killed. Another challenge to trucking operations from limited parking is that trucks cost \$120 per hour to operate, and that finding a vacant truck stall can take 30 to 60 minutes on average, longer in urban areas.

The goals of the TPIMS is to increase both safety and efficiency. In Wisconsin, deployment has been in two stages. In 2016, the system was installed at four areas along eastbound I-94; those areas cover 172 miles and comprise 157 truck stalls. In 2018, coverage was installed for additional eastbound I-94 rest areas, as well as the westbound rest areas. For the 2016 installations, two systems were deployed. One rest area uses a video pattern recognition system with three cameras. The other three rest areas had magnetometers installed. The camera system is slightly more accurate than the magnetometers - the magnetometers need to be manually reset twice daily due to accumulation of random error. The camera system also costs more; its installation also led to the discovery that cameras facing the rear of semis have up to 2 percent more errors than those capturing the front of trucks, due to issues with detecting flatbed trailers and other non-traditional configurations.

The data feeds from these systems are being standardized and disseminated through variable message signs, the 511 system, and other means. WisDOT is in the process of changing vendors for the back-end communications systems and expects a 65 percent cost savings. The 2018 deployments were funded largely via a U.S. DOT TIGER grant that was distributed to eight Mid America Association of State Transportation Officials (MAASTO) states. This application marked the first multi-state, multi-corridor project in the country. The cost of the entire deployment was \$94 million; the added value from the system is calculated at \$300 million. This calculation is informed by survey data showing 29 percent of truck drivers have problems finding parking occasionally; 11 percent have frequent problems.

For the northbound I-94 deployment, the decision was made to not install TPIMS at the Kenosha rest area, as it is full almost all the time. Instead, deployment was made at the rest area between Johnson Creek and Lake Mills.

Mr. Hoyt added that the system performance has varied due to site conditions, the speeds of trucks entering and exiting the rest areas, and by season. One observation is that snow plows will throw the system off as they move back-and-forth to clear snow. Other maintenance equipment occasionally counter-flows, also throwing the system counts out of accuracy. There are also challenges from specialized moves, such as wind towers and blades – even though one truck enters the parking area, it takes up multiple stalls. Similar problems arise with military convoys. Overall, magnetometers are between 80 and 91 percent accurate, for about \$50,000 in initial infrastructure costs at each location. Video cameras are 94 percent accurate, but the cost for those systems is \$400,000 per location. WisDOT believes the magnetometers are sufficient for the needs of truck drivers and will use those systems for

future deployments.

Mr. Hoyt then fielded questions from attendees. One noted that the MASTO system does not include Illinois, and that not having Chicago and Illinois in the network is the biggest drawback to its usefulness. There is no place to park in the Chicago area and few offramps on the Tollways. Mr. Hoyt replied that Illinois will be doing a system in the near future. Dr. Ernie Perry noted in the Mid-America Freight Coalition study of urban parking challenges, they found a lot of available land, but the cost of real estate was an obstacle to creating truck parking. Some of the parking in consideration is actually owned by state-level DOTs, especially in Michigan. Another attendee noted the aversion truck drivers had to private truck stops, some of which have problems with sex trafficking and drug trafficking problems – that compounds the problems with finding safe parking for truckers.

Another question was raised about the now-closed weigh station facilities – had any thought been given to keeping them open as parking areas? Rose Phetteplace said that to keep them open would require, at a minimum, a rest room. There are other issues that made those locations unusable. WisDOT will be closing the Sparta facility soon but will be adding parking at the La Crosse rest area. The main factor for not retaining Sparta is the cost to maintain it. Would a portable toilet work, or would truckers use other means? What about lighting for safety? Those were some of the primary factors. An attendee stated that if you don't add parking, the information system won't help. Ms. Phetteplace replied that trucking needs more private-sector solutions to step up. The ideal is to have the warehouses receiving deliveries to allow parking. Paul Hammer added that when WisDOT was scouting locations for the new Safety and Weight Enforcement Facilities, the department made sure they had more parking areas and restrooms. But few truckers want to park at those locations – there's a cultural fear by truckers of the DOT. Ms. Phetteplace added that WisDOT didn't want to accept unsafe parking areas – those would be more of a detriment than a help.

• **Wisconsin's Ports, Harbors, and Waterways - Panel Presentation (1:50 p.m.)**

o Facilitator: Lisa Stern, WisDOT DTIM

o Panel Members:

Dean Haen, WI Commercial Ports Association

Andrew Barnes, U.S. Army Corps of Engineers

Peter Hirthe, Port Milwaukee

Adam Binsfeld, Brennan Marine

Next, the FAC was given a presentation on the status of Wisconsin's maritime freight transportation system. Panel Facilitator Lisa Stern introduced herself and noted the recent hiring of Mike Halsted as the new manager of the Harbor Assistance Program and planning for Wisconsin's ports and harbors.

Dean Haen began the presentations; he stated his dual role as both the director of the Port of Green Bay and as the director of the Wisconsin Commercial Ports Association (WCPA). He began discussing the Port of Green Bay. Its primary bulk commodities include limestone, coal, cement, salt, ash, pig iron, land liquid asphalt. The Port has also been essential for inbound petroleum products since the failure of a pipeline; it also sends ethanol outbound to Montreal. Additional commodities include forest products, petroleum coke, tallow, fuel oil, and project cargoes. The existing high water levels on the Great Lakes are advantageous to shippers, who can carry 24,000 tons in a typical vessel. The economic impacts of the Port of Green Bay are \$140 million per year. Green Bay is pursuing the Wisconsin Public Service (WPS) site at the point where the Fox River empties into Green Bay. WPS is closing coal-fired power plants there and will make the site available. The site has rail access and waterfront access with deep

draft; Haen thinks it's a special property with the potential for intermodal operations.

Mr. Haen then talked about the WCPA. Wisconsin's ports handle 40 million tons of material valued at \$8 billion each year. The state is bordered by three international waterways – Lakes Michigan and Superior and the Mississippi River. The infrastructure that is used on those systems lasts for 75 years and is starting to near that age in some locations. The economic impact of Wisconsin's ports includes 8,800 jobs, \$622 million in personal income, \$1.4 billion in business revenue, and \$176 million in local purchases. Some of the issues articulated by the American Great Lakes Ports Association include port infrastructure grants, Customs and Border Protection staffing (for cruise vessels), the harbor and maintenance taxes (ensure they are used for dredging projects), overall marine infrastructure, pilotage and navigation rules (reform on costs is needed), a new Great Lakes icebreaker, Aquatic Invasive Species (especially the Chicago area's challenge with Asian Carp), the limits of the Seaway season, and state assistance for ports.

The vessels that travel the Seaway System are divided into "lakers" (vessels that stay in the Great Lakes) and "salties" (vessels that enter and exit the system). The modern "laker" fleet is comprised of more than 150 ships – 65 on the U.S. side and 89 on the Canadian side. Thirteen of those vessels are over 1000' in length; the maximum vessel capacity is 68,000 metric tons. The "salties" come from across the world and are limited to 740 feet due to lock size in the St. Lawrence. These vessels can carry 19,000 to 25,000 metric tons.

Next, Andrew Barnes of the U.S. Army Corps of Engineers (USACE), Rock Island District, spoke. He said the USACE has three responsibilities in managing waterways: flood risk management, environmental stewardship, and navigation. The Upper Mississippi – from the Twin Cities to Cairo, IL (where the Ohio River flows into the Mississippi) is comprised of 37 locks, managed under three USACE Districts. The navigation duties cover 1,200 miles of waterway with locks built mostly between 1930 and 1945. Most of the lock chambers on the river are 600 feet, which is half of the standard barge tow. There are some 1,200-foot locks. Most locks only have a single chamber.

Wisconsin's waterways are covered by three Corps Districts. The Rock Island District covers the section of the Mississippi River south of where the Wisconsin River enters the system at Prairie du Chien. The St. Paul District covers the portion of the Mississippi north of there. The Detroit District covers the Western Great Lakes, including Lake Superior and Lake Michigan.

Tonnage on the Upper Mississippi has been steady in recent years, affected most by flooding that closed the lock systems for prolonged periods. There were flood-related drops in 2008 and 2013, and a drop is probable for 2019. Much of the volumes are tied to agriculture – food and farm products heading down-river; chemicals (for fertilizer) going up-river. One standard tow (of 15 barges) is the volume equivalent of 216 rail cars or 1,050 semi trucks. That illustrates the importance of river transportation – the cost of freight movement is highly-competitive and allows the U.S. to ship grains at more competitive prices than Brazil.

High water impacts the ability to operate the locks; once water levels reach a certain point, the locks need to be shut down until water levels are lower. In 2019, some locks were out of operation from 60 to 90 days. Debris – in the form of trees swept downriver – built up against the locks and dams. Removing these items to restore safe navigation takes a great deal of mechanized equipment.

The Corps tries to keep the locks in as operable a condition as possible. Funding for maintenance comes

in three different categories. At the lowest level are minor improvements. In the middle tier is major rehabilitation, which is funded through the Inland Waterway Trust Fund. Most of the existing facilities have already been rehabilitated once; they have been at or over the 50-year life cycle beginning in 1987. Capital improvements are the top tier. In 2007, the Corps was authorized to conduct capital improvements comprised of seven new lock chambers, each of 1200' – these would be located down-river from Wisconsin. They would allow improvements in efficiency and ecology. However, these projects were not funded. The Corps is still waiting for \$5 billion in funding to conduct these capital projects. The Corps has been funded well for regular maintenance, however. Sample projects include bulkhead recess installation, which requires dewatering; miter gate replacement; and construction of guide walls – many of these are rock or timber. In general, the Corps cycles its projects from south to north.

Next, Peter Hirthe of Port Milwaukee updated the FAC on the port's operations. Port Milwaukee is a landlord port, owned by the City of Milwaukee who in turn leases portions of the property to various commercial and recreational operations. There are currently 20 tenants across the port's 470 acres. The port is a multimodal logistics hub and has been designated as Foreign Trade Zone (FTZ) #41. Port Milwaukee's economic impact includes 1,300 jobs and \$100 million in business revenue generated. The foreign trade zone status covers 12 counties in southeastern Wisconsin, with customs approval on an individual customer basis. Broan and Mercury Marine are among the manufacturers benefitting from this designation; to date, the FTZ has saved participating corporations more than \$1 million. The benefit of the FTZ status is that it eliminates customs for products that are being re-exported.

Port Milwaukee has two separate zones. The North Harbor Tract includes land that falls under the public trust doctrine – it includes Discovery World and other sites. That tract also has seen interest from cruise vessels – in 2017, three vessels combined for six visits; in 2018, four vessels combined for six visits. In 2019, the traffic grew to six vessels and eleven visits. It's a niche business for both Great Lakes and international travel.

The South Harbor Tract was the recipient of a recent Harbor Assistance Program Grant that is helping cover the costs of structural rehabilitation for the port's pipeline dock. State assistance also played a role in another major project, the new headquarters and manufacturing facility for Komatsu mining equipment. Komatsu's facility will be on the site of the old Solvay Coke dock. They will be exporters out of the port.

Port Milwaukee has maritime access to both the St. Lawrence Seaway and the Inland River System (via the Chicago/Calumet Canal System). The inland river cargoes are typically agricultural goods or large manufactured items. The port owns 14 miles of railroad track, which are undergoing renovation.

The St. Lawrence Seaway is celebrating its 60th Anniversary. Recent improvements include hands-free mooring systems at 15 of the locks in the system. This helps Milwaukee with its European trade, much of it using the Fednav fleet. That company has invested hundreds of millions of dollars into a new fleet.

Port Milwaukee has a good trade in project cargo. For example, one load this year included beer brewing tanks for New Glarus Brewery. Another project item was a "cage" for NASA rockets, destined for Alabama. Agricultural exports are one of the port's top commodities; for each of the past five years, the port has loaded at least ten vessels with agricultural products for export. There is concern that the tariff battles could threaten to end that streak in 2019. Another item Milwaukee receives in bulk is road salt; average annual arrivals are around one million tons. Last year's harsh winter weather quickly

reduced the salt supply; six vessels were brought in this past winter to replenish the supply. The port and railroads work together to reduce trucking to the role of first- and last-mile hauls. Inbound steel imports for regional markets are an example of that. This steel had gone by truck; it now moves by rail.

Port Milwaukee's number one goal is to re-establish the intermodal rail yard. The facility had been operated by Canadian Pacific until it closed in 2012. In the past few years, market changes and growing demand have combined to revisit intermodal service; both CP and UP have shown interest in spite of the international trade situation. The closing meant that all container shipments need to be trucked to and from the Chicago area. A lot of that is agricultural goods. The cost of tolls, plus enforcement of hours-of-service regulations through ELD systems, have made container trade cost more. To help improve the conditions in support of a potential return of intermodal service, the port has a \$3.7 million project underway to renovate its rail network (noted earlier) and to expand the potential footprint of an intermodal terminal. The project should be completed by April of 2020.

Lastly, Adam Binsfeld of Brennan Marine spoke. Brennan Marine specializes in harbor management; its sister company, J.F. Brennan, specializes in marine construction. Brennan Marine works both above and below the waterline; it is a family business that has had many multi-generation families in its employment ranks over the decades.

The inland waterways operate with tug tows and barges. The fleet includes 5,500 U.S.-flagged boats and 31,000 barges, operating on 12,000 miles of inland navigation channels. The system hauls 785 million tons of commodities annually, according to Price Waterhouse. These marine highways give the Midwest an advantage due to location. Each barge can haul 1,500 tons (sometimes more), with most tows at least six barges. Where there aren't locks, below St. Louis, tows can be 25 or more barges; in good conditions (when there are no flooding or low water challenges), 40 to 45 barge tows are not unheard of. The record tow (in 1981) was 72 barges.

Brennan is based in La Crosse and manages the Port of La Crosse. That facility has seven docks and two tugs, and a 300-ton capacity drydock. The cargo volume through La Crosse varies between 500,000 and 1 million tons per year; lower volumes are typical during years with flooding that leads to lock closures. Grain is about 47 percent of the volume shipped through La Crosse; cement is another 23 percent; pig iron is about 9 percent. Flooding took a heavy toll on the Upper Mississippi this year; from March 16 until June 13, the waterway was under an action stage – 89 days of closure or other restrictions. Normally, La Crosse gets its first inbound barge in March; in 2019, the first barge didn't arrive until July. The normal turn-around time to the Gulf of Mexico is three weeks; with the locks closed, there is not enough equipment to supply the Upper Mississippi.

One area of expertise for Brennan Marine includes training. Under federal regulations the company participates in a towing safety management system that incorporates crew training, audits, and vessel surveys, in combination with drills that have included the DEA and La Crosse's Tactical Response Unit.

The key areas of concern include the age and capacity of the system. Most of the system was built in the 1930s, and the delays are growing at many locks. On the Illinois River, delays are up to 115 hours. Part of the issue is lock capacity – only a half-tow can fit into many of the locks. With standard 12-barge tows, this requires splitting the tow to get it through the lock. This adds delays to the tow and to tows behind it that need to wait.

Funding for the system is provided from several sources; the largest is the Waterways Resources

Development Act (WRDA), which provided \$6.99 billion in the last federal budget. The Inland Waterways Trust Fund (IWTF) collects a 27 cent per gallon tax on diesel; this amounted to \$116.8 million in 2018. Wisconsin also has the Harbor Assistance Program, which has helped for specific dock projects.

Some of the changes underway on the system include container-on-barge movement – mostly, it's St. Louis, Memphis, and downriver. There are more efficient engines being installed in vessels – Tier 4 for emissions. The company is also working on policies for beneficial sand dredging. Climate change impacts are a major concern – whatever is causing it, it's clear that weather events have changed around the river system.

At this point, attendees conducted tabletop discussions for Waterborne Freight. The results of these discussions are in the Appendix.

- **Closing Remarks (3:25 p.m.)**

- o Paul Hammer, WisDOT Deputy Secretary

Deputy Secretary Hammer thanked the members of the FAC for their attendance and the staff of WisDOT for their efforts in putting together the content of the meeting.