

CITY OF MADISON FLEET BIENNIAL REPORT 2019-2020: 8 SEASONS OF ACCELERATING PROGRESS



All Fleet staff meeting and potluck lunch pre-COVID-19.

Why release a biennial report for the first time? Fleet at Madison has traditionally been an internal service for other City agencies, and still very much is. Our success is only driven by the success of our clients. While we are not a "public facing" department that directly serves the public, our team's work on purchasing, maintaining, and fueling the largest fleet operation in South Central Wisconsin to support Madison's frontline agencies is on display throughout the area: whether Police cruisers, Fire engines, Streets plow trucks, Engineering sewer trucks, Parks tractors, and much more. Our most important duty is vehicle in-service time. As long as they are mechanically functional, the City cars, vans, trucks and construction equipment on the road and in the field every day are in the public eye. That is why for the first time ever in 2019 and 2020, we rolled out an active [website](#), [Twitter feed](#), and [Facebook page](#) to share information in layperson's terms, that we hope you will explore.

COVID-19 has posed an unexpected roadblock but only reinforced the importance of what we do. This biennial report will be of interest to the Madison community, public and private sector fleet managers, automotive enthusiasts, public administration academia, politicians, and technocrats across the United States and beyond. The report will reside on the Fleet website for free and easy access by anyone, anywhere and isn't too technical in nature.

Fleet has come a long way in the last two years by aggressively rolling out a battery of disruptive initiatives, despite management restrictions inherent to the civil service system that make change extremely challenging. To navigate this environment we operate with a startup mentality within city government's parameters: data-driven,

risk-taking, soliciting new ideas, experimenting with new ideas, deep coordination with many partners, and constantly learning and iterating from these experiences.

The efforts our team, Mayor's Office, sister agencies, vendors, and non-profit partners made in 2019 and 2020 towards making this fleet the greenest, safest, and most efficient possible is chronicled here, along with a look at more dramatic changes coming soon. We operate within a global automotive and transportation industry morphing at breakneck speed thanks to innovation. For example, electric vehicles (EVs) and various types of automation and artificial intelligence (AI) features have arrived. Madison is already on the forefront of this high-tech revolution and must continue to be. President Joe Biden announced on January 25, 2021 that the 650,000 vehicles that comprise federal fleets are finally converting to EV. At that scale, the federal government will help bend the international auto market in the right direction, and we applaud this decision.

We have much to do and far to go in 2021 and beyond, sitting only on the cusp of the complete transformation of Madison's fleet. In the meanwhile we are proud of the regional and national recognition received in 2020 from highly reputed organizations, for the first time:

- [Sustainable Transportation Leadership Award](#)
 - [# 34 Greenest Fleet in North America](#)
 - [Top 50 Government Fleet in North America](#)
- Wisconsin Clean Cities Coalition
100 Greenest Fleet Awards
Leading Fleet Awards**

This is an okay start, considering where we were two years ago. There are an estimated 38,000 public fleets in North America and Madison is now firmly on the map as a model. The best part of this recognition is City employees comprehending the greater significance of their work. However, we have higher ambitions for the coming years. How we will get there is transparently shared below. We welcome the intense competition and innovation among so many well-run fleets from near and far, for we can push each other and build on each other for the common good of humanity.

Fleet's Brand New Headquarters and Shop on Nakoosa Trail



Welcome to one of the best automotive garages ever built in the entire Midwest, objectively speaking, public or private.

Our conversation about the 2019-2020 biennial period starts and ends right on Nakoosa Trail. The crowning achievement of the last two years is a seismic event in Fleet's history: the successful construction and move into a brand new, \$33 million state of the art headquarters and radio shop as of December 2020, despite the COVID-19 pandemic. This facility is the new home of Fleet's administrators and the bulk of Fleet and Radio Shop Technicians through a consolidation from four other facilities, including the former headquarters and shop on North First Street in continuous operation since 1954. First Street has already been repurposed into a men's homeless shelter, and is slated to be reincarnated as the future home of Madison Public Market.

Planning and studies for the large 110,000 square foot construction on Nakoosa Trail began in 2012. The highly complex eight year project was led from wire to wire by our colleagues in City Engineering, winding through the complex architectural design and construction project management phases and approvals with ongoing support from multiple Mayoral administrations, Common Councils, Finance Department, sister agencies, and a large community of vendors led by Wisconsin based construction company C.D. Smith. Particular credit goes to Architect Jim Whitney and Construction Project Manager David Schaller of City Engineering who worked closely with Fleet senior staff to get us across the finish line.

With the energy-intensive nature of our work, Fleet can't claim to be truly green without operating advanced facilities. Nakoosa Trail has thrust Fleet infrastructure into the 21st century with cutting edge environmentally sustainable features such as rooftop solar power panels and solar water heating panels, a solar panel heating wall for building heat, solar EV charging stations, automated engine oil reel and fuel pump monitoring, and EV charging being made available for City vehicles, employees, and also the public in 2021. We are outfitted to repair compressed natural gas (CNG) vehicles for the first time ever, in-house. The purposeful natural lighting and radiant floor heat HVAC system make Fleet and the Radio Shop far more energy-efficient than ever. Sunlight is being harnessed like never before and our goal in coming years is to expand our solar energy capacity at Nakoosa Trail even further. Consolidating four separate facilities spread across Madison into one has further added to the efficiency of operations while reducing vehicle miles driven between locations. With this new shop we can finally fit all of the vehicle types inside that we could not before, including Fire Ladders, and have expanded space for radio technicians, welding, washing, auto body, parts, firefighter masks and air bottles under one roof.

We hope you follow these links to learn more about this gleaming new jewel of the City facilities system, one that on a 75-year life cycle may be in continuous operation until the year 2095. In fact, the legacy represented by this building was a key factor in my decision to move to Madison. When COVID-19 is under control we will offer tours for any interested parties from near and far. We also love the multipurpose nature of the facility (for the next two weeks, it is a voting location!).

- [Construction process photos of Nakoosa Trail](#)
- [Podcast about Nakoosa Trail](#)
- [Virtual Tour of Nakoosa Trail](#)

Tyson Roessler & Randy Koch led this initiative for Fleet.

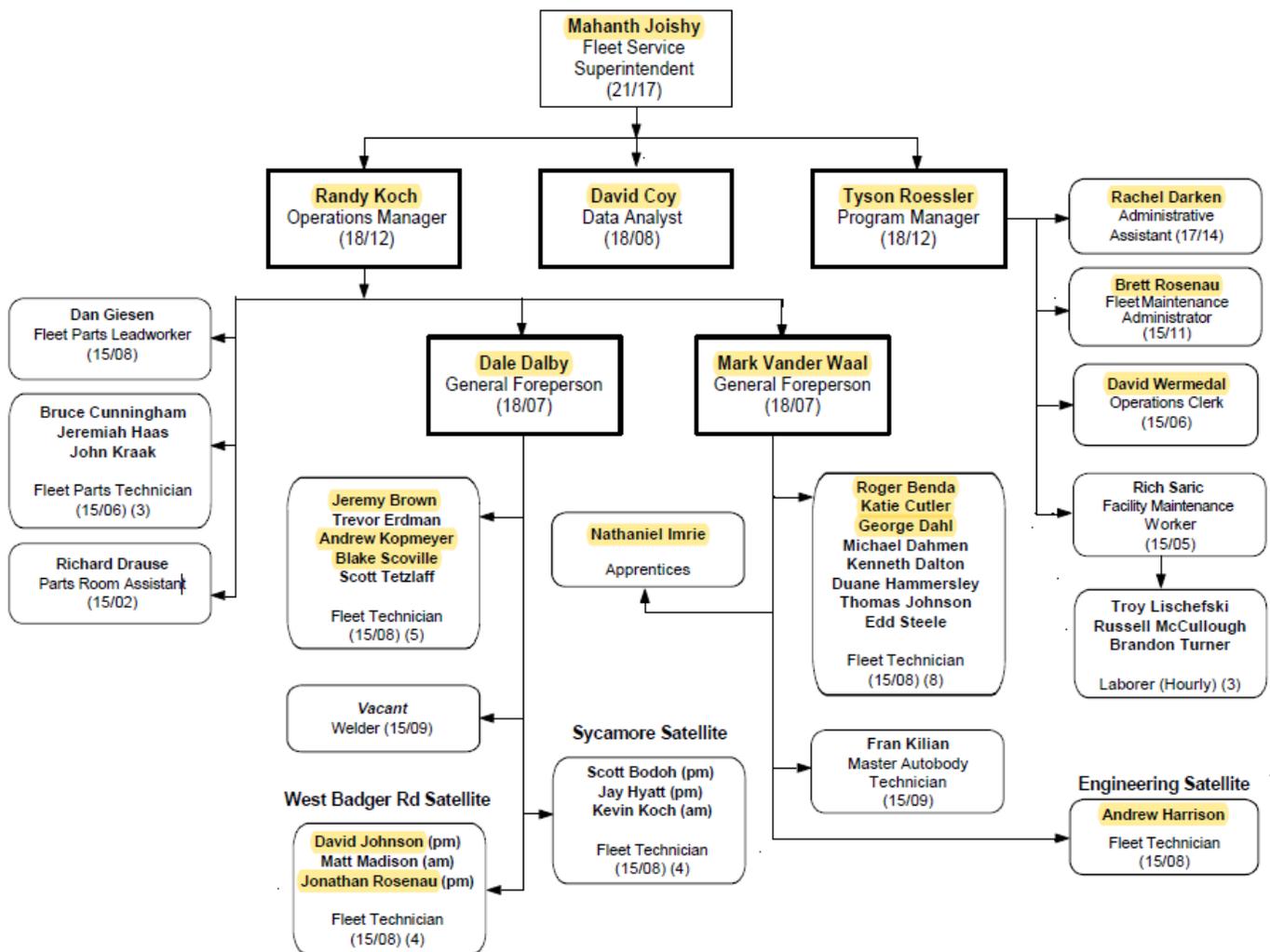
The Upgraded Fleet Team

Fleet's best asset is not our \$100 million-plus inventory of rolling stock, parts, machinery, and facilities, but our highly skilled and talented human resources. A dramatic shift at Fleet has happened over the last few years due to a large contingent of baby boomer retirements. Our division is made up of 40 staff, half of whom started service in 2017, like me, or after- highlighted in yellow on the org chart. A number are US military veterans. In 2019 Katie Cutler became our first female Fleet Technician ever, and Marissa Seeley our first female High School Apprentice ever. Our field is admittedly great to be in for job security: our roles cannot be outsourced to remote

work or to another country; and automation and robots won't do our jobs for at least several decades to come. These factors are not true of most jobs.



Amazingly, all 9 members of Fleet senior staff are new to their roles in this biennial period, through outside hires and promotions. All of the initiatives listed in this report have the specific names and faces of one of these folks attached to them, so each section credits at least one of them. This new team operates at a very high level, especially when it comes to integrity, loyalty to the City's interests, organization, customer service, and quality. Finally, it is worth mentioning that all Fleet staff, as essential workers of the City, have been physically coming to work throughout the COVID-19 pandemic period to help keep the City running without a single complaint.



High School Apprentices



Fleet technician, George Dahl, works with apprentice, Marissa Seeley.

My favorite initiative at Fleet bar none is about the future of our workforce, the mechanics of tomorrow. Fleet's high school apprentice program has become the elite apprenticeship for high school automotive students in Southern Wisconsin. Students work in our shops part-time, gaining hands-on training on real City equipment with personally assigned mentors who are experienced full-time City auto mechanics. The students hail from Madison high schools with vocational automotive programs, receive school credit through Madison Metropolitan School District (MMSD), are paid well, and perform real mechanical work on police cars, ambulances, garbage trucks, grass tractors, and more. The students are

chosen through a highly competitive application process in a close partnership between Fleet and MMSD teachers and administrators.

Launched in 2018, 11 Juniors and Seniors have matriculated so far in the program, a majority of whom are minorities or women. These demographics are severely under-represented in our industry both locally and nationally. The arrangement is a win-win, as City staff enjoy working with the energy that the apprentices bring to the shop floor, the apprentices learn tricks of the trade on a variety of vehicles they cannot pick up anywhere else, and we have laid down a pipeline for future talent recruitment at Fleet with students we know, like, and trust. It is not easy to hire qualified auto mechanics in our civil service system, but if the students graduate from high school and successfully complete a 2-year technical college degree, they will become eligible for full-time hire at Fleet. Although we were forced to temporarily pause the high school apprenticeship program due to safety concerns around COVID-19, the pipeline still flows with our first technical college apprentice Nathaniel Imrie still in action with us after completing high school, with expanded responsibility and independence, and we expect the process to bear fruit in 2021 and beyond. We know that being a mechanic is a great career path, but this path isn't for everyone. Regardless of whether these students eventually become mechanics or not, we are glad to contribute toward a well-rounded education for them, whichever path they ultimately choose. We are confident they will remember their time in our shop, for life.

The apprentice program also allows us to train the automotive professionals of tomorrow on the vehicles that will dominate the future, EVs. Working with MGE, Madison College, local startup company Zerology, and Memorial High School, we organized a field trip and curriculum for high school students to look under the hood of EVs, get a ride in a Tesla, and learn about charging and EV repair infrastructure. This curriculum along with hybrid drives will continue again once COVID-19 is under control. For most students, this was their first exposure to EVs.



Fleet technician, Edd Steele, works with apprentice, Carlos Hernandez.

We further support the local high school automotive programs by serving on their vocational education advisory board, offering field trips to our facilities year-round, inviting high school students and staff to our major special events, and temporary donation of used vehicles for classroom instruction.

Randy Koch, Mark Vander Waal, and Rachel Darken lead this initiative for Fleet.

Outstanding Employee Recognition



Photo by C.D. Smith

L-R: Program Manager Tyson Roessler, Mahanth Joishy, employees of the year Fleet Techs Roger Benda & Scott Tetzlaff, Mayor Satya Rhodes-Conway, Operations Manager Randy Koch

Like most government fleets we operate in a civil service management system in which hiring new staff is difficult, all staff are paid by title on the same scale regardless of effort, pace, skills, or performance, and lateral transfers of staff is absurdly based on seniority rather than the best business fit. Too often we have been dragged into labor issues that require disciplinary action. The disciplinary system and possibility of termination have roles to play. However, employee morale and motivation are better influenced by positive reinforcement in our experience.

Our answer for improving morale in this environment is an employee awards program. In 2018 Fleet launched a sweeping new initiative to publicly recognize high performing Fleet employees with stellar work performance and a commitment to serving the community. We gave out certificates and pins for years of City service at an all-staff barbecue. We recognize Fleet Employee of the Year at special events such as the Nakoosa groundbreaking ceremony, after a months-long deliberative process among senior staff. We run a contest based on Fleet's critical vehicle service metrics that employees compete to reach, and win prizes from. Finally, we frequently highlight our employees, and important external partners on our website and social media. Here are just a few examples we hope you'll check out:

- [Fleet Recognizes 2020 Employee of the Year Blake Scoville](#)
- [Black History Month Fleet Employee Profile: Edd Steele](#)
- [Interview with Apprentice Marissa Seeley](#)
- [Fleet Employee Profile: John Kraak](#)
- [Fleet Business Partner Profile: Renee Schnabel](#)
- [Fleet Sister Agency Profile: Matt Parks](#)

We are pleased that Fleet's recognition program in 2020 became expanded into a new citywide program thanks to a decisive and innovative Mayor Satya Rhodes-Conway. As of 2021 this citywide recognition program has become institutionalized, hundreds of employees and teams have received awards, and Fleet is proud to continue working on recognizing employees and teams from every City division in Mayor Satya Rhodes-Conway's bimonthly #TeamCity Recognition ceremonies for years to come.



First #TeamCity Award Recipients

L-R: June Goglio, Meg Hamilton, Mayor Satya Rhodes-Conway, Brian Jensen, Tameaka Bryant

David Coy leads this initiative for Fleet.

Environmental Sustainability



Mayor Satya Rhodes-Conway driving the Mayor's Office All Electric Chevy Bolt during her first weeks in office

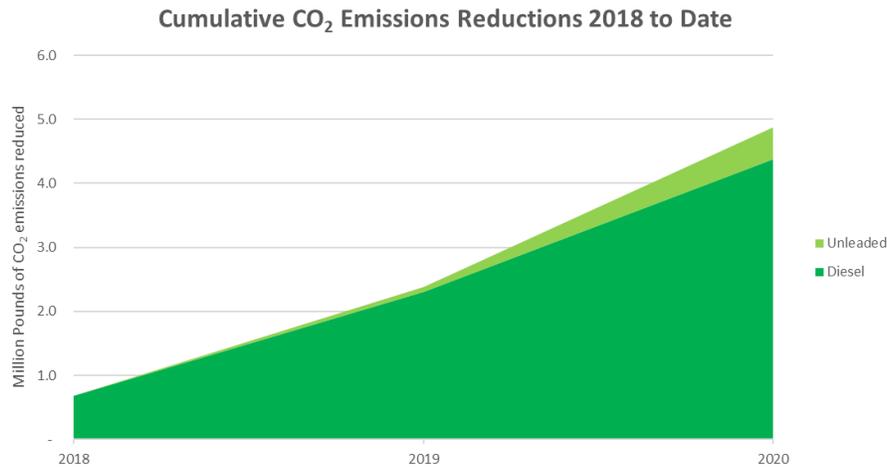
Fleet has received the most [media attention](#) locally and nationally for aggressive environmental sustainability initiatives. The Fleet sustainability plan we are currently riding on launched in earnest in 2018.

The City of Madison has set the holistic and ambitious goal of reaching [100% renewable energy and zero net carbon](#) emissions by 2030. The transportation sector makes up 38% of the total greenhouse gas emissions in the state of Wisconsin, and that is the number Fleet is attacking *with prejudice* every single day.

We mentioned above our state of the art new facility on Nakoosa Trail and the improvements it represents. Fleet's efforts to transform our vehicle operations have already resulted in over 5 million pounds of CO₂ reduction, and counting. We have done it by leading and taking on risk. When it comes to biodiesel, hybrids, EVs, solar charging, anti-idling, or soy tires- *we are leaders in every category.*

I keep reminding my staff, it will be much easier for any mediocre fleet manager to figure out how to run a more sustainable fleet in the year 2025 as readily available and cheaper options will only increase. But leadership

means being early adopters when it is *not* easy, and we consider this a race against time, and the challenge of our lifetimes for all humanity. The time has chosen us, but we can bend it. We plan to stay securely in the vanguard and have benefitted heavily in this area thanks to the pioneering efforts of NYC Fleet and their sister agencies including their definitive technical research.



The star of our sustainability show by far, coming in with over 90% of our CO₂ emission reductions over the last few years, is **biodiesel**. Biodiesel is typically processed from soybean plants, used cooking oil, and agricultural waste, which makes us less dependent on fossil fuels shipped from out of state or other countries with even more emissions – and boosts our local economy. Every gallon of biodiesel consumed by City agencies is renewable, grown and processed right here in Wisconsin. Biodiesel is blended with regular diesel to meet a specified ratio. For example, B5 fuel is 5% biodiesel. We use B5 or B20 depending on the season, unless our temperatures are forecast to be below freezing. Madison is the only government fleet in Wisconsin to use B20 for all of our diesel trucks in spring, summer, and fall. Biodiesel has no adverse effect on operations.

Hybrid-electric vehicles have an impact on emissions and lower our dependence on fossil fuel. These vehicles are great replacements for most operations, and we expect to cut fuel consumption, emissions, and costs significantly with our hybrid-electric fleet. These cars have both a fuel tank and small electric motor which complement each other without driver effort.

While hybrids cost a bit more up front, the City will see a return on investment within a few years as each car uses less fuel and needs less maintenance. All new police cars on the road are hybrids and make up the bulk of our 100+ fleet of hybrids- each of which gets an estimated 60% better fuel economy. This is a no-brainer.



EVs charging at a solar-powered charger.

Even better than hybrids are the zero-emission plug-in **electric vehicles (EVs)**, which have given up on gasoline entirely. The City now operates 54 EVs, including 3 Metro busses, 20 Chevrolet Bolts purchased in 2019 and 2020 with \$140,000 of grant assistance from Wisconsin State Office of Energy Innovation (OEI) and MGE, Nissan Leafs, and more. This is from a starting baseline of *zero* EVs in 2018. We now operate a variety of equipment types in Wisconsin’s largest fleet of EVs including off-road turf utilities, forklifts, a minivan, and golf carts. In 2021 we are highly looking forward to getting our feet wet with our first-ever EV trucks, which are finally starting to become available and will turbocharge our CO₂ reduction numbers. Electric vehicles are a great way to lower vehicle emissions. However, our electric grid in Wisconsin is still dependent on coal and other fossil fuels. While (EVs) are zero emission in operation, there are “upstream” environmental effects to charging. However, the grid can be

zero emission in operation, there are “upstream”

avoided altogether with alternative energy sources, the main reason why Fleet has procured three completely off the grid, **solar charging stations** from Beam.

These charging stations can power up two EVs simultaneously, resulting in completely zero emissions when driving electric vehicles. Not only can they charge vehicles, in case of a power blackout, the solar charging stations would function fine and could be used as emergency generators. In addition, to maximize the amount of solar charging, the solar panels move to follow sunlight automatically. EVs powered by solar is the cleanest transportation application possible for our fleet needs.

Certain pieces of equipment in our fleet need the engine to run to use equipment on the vehicle. Some examples are repair trucks with a bucket lift, and ambulances with life-saving equipment running inside. Idling wastes fuel, hurts engines, and emits more greenhouse gases, but anti-idling technology helps limit that. **Anti-idling or stop-start** reduces the time the engine is running when the vehicle is not moving. It also keeps the operation running (e.g., heat, air conditioning, and/or electricity) in the vehicle or equipment after turning off the engine while the vehicle is parked. All new Fire ambulances will come with anti-idling technology already installed.

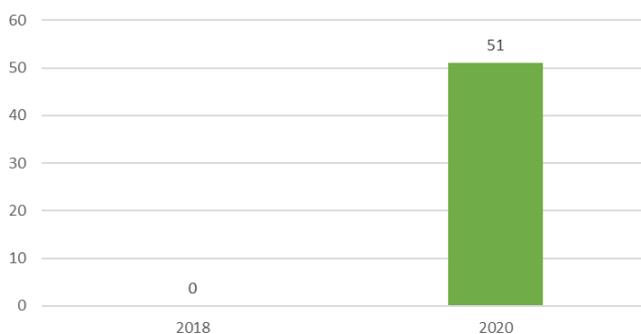


L-R: Former Deputy Mayor, Leslie Orrantia, and Mayor Satya Rhodes-Conway at the 2019 Madison Transportation & Innovation Expo.

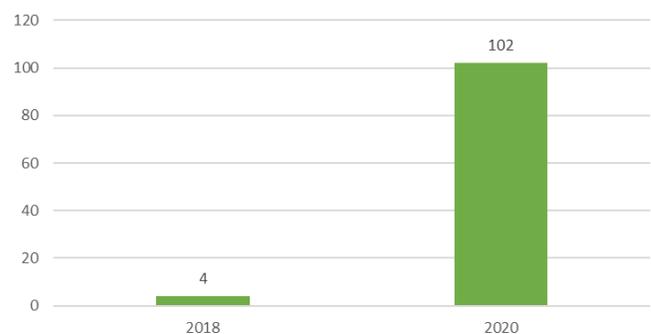
We have purchased **soybean oil based tires** for 170 Police vehicles at Fleet. The response has been overwhelmingly positive. They have better traction than traditional tires with improved flexibility during lower temperatures. This is great news as we are not sacrificing reliability for environmental sustainability. Soy tires are created by substituting petroleum that is used to make the tire with soybean oil. By switching to these, made by Goodyear, we are breaking away from the dependency to petroleum and towards a greener future, while also supporting the agricultural economy of soybean growing Midwestern states such as Wisconsin.



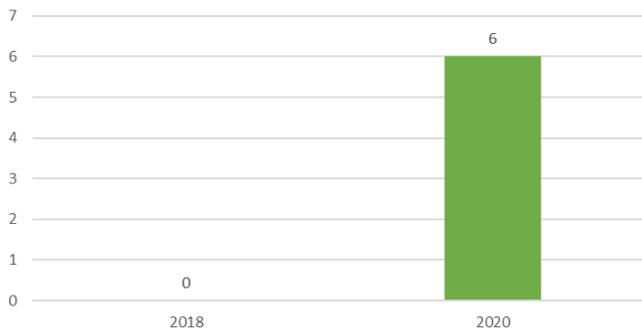
EVs in Fleet



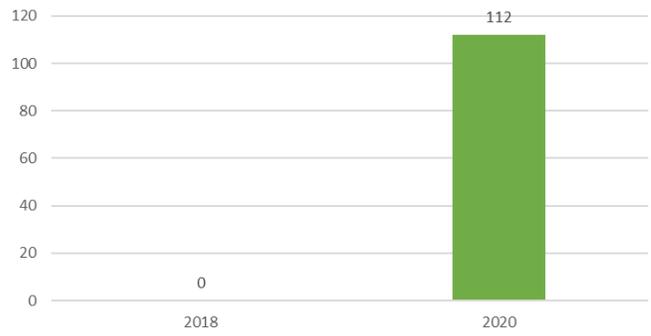
Hybrid Vehicles in Fleet



Anti-Idling Vehicles in Fleet



Vehicles in Fleet with Soy Tires



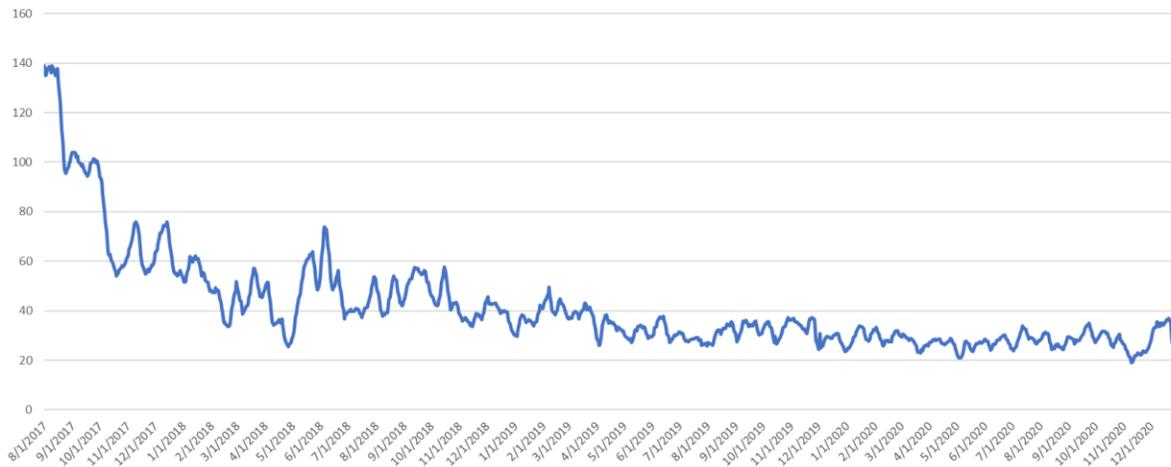
All 9 senior staff work on this initiative.

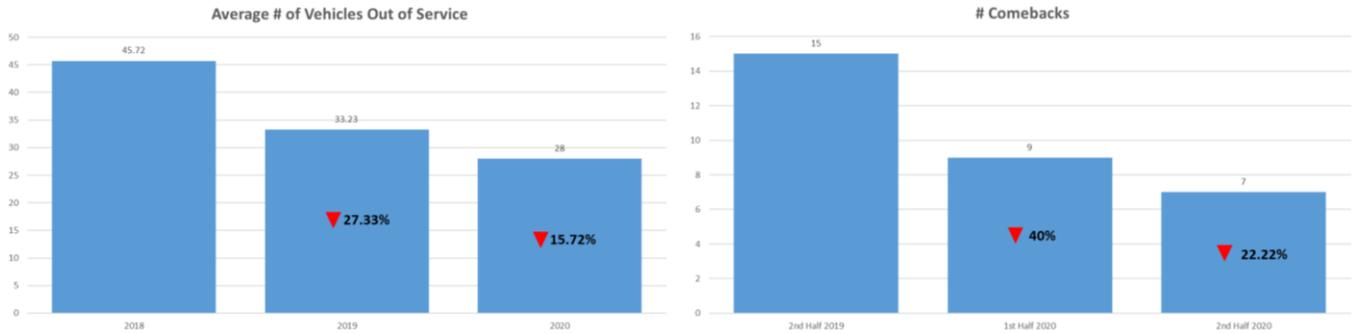
Vehicle Service

Running 1,400 vehicles and equipment pieces on the road offers data sets so rich, it is a challenge to harness and utilize all of it effectively. Fleet hired its first-ever full-time Data Analyst David Coy in 2019 tasked with just that- including the difficult integration of fleet management software, fuel management software, and GPS data. Fleet hangs its hat on our vehicle service metrics starting with accurate daily out of service, overdue preventative maintenance inspections (PMs), and recalls reporting. Our goal is to be unrivaled in using data management to improve and inform the work done by every employee. Here are some of the statistics we would like to highlight, none of which were ever properly tracked, let alone managed, prior to 2017. The bottom line: our vehicle service has dramatically improved, despite COVID-19, which provides more vehicle uptime for our customer agencies – specifically out of service dropped by **38.76%** since 2018.

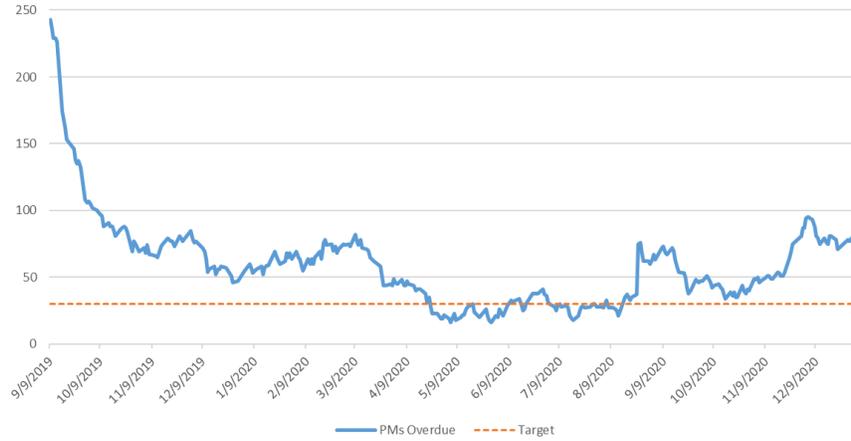
For those interested in digging deeper into some of the vehicle service metrics we measure ourselves on, please look into our [Fleet Contest](#), an idea we learned from City of Baltimore.

Vehicles Out of Service - 7 day Average

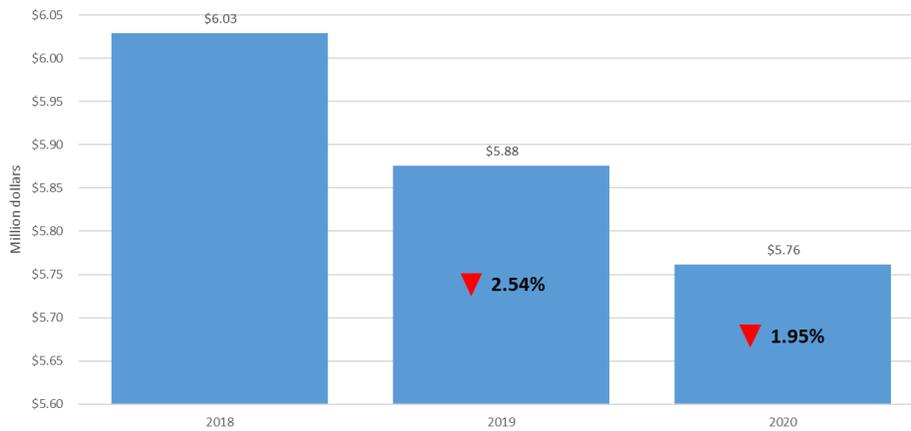




PMs Overdue



Total Maintenance Costs



Here are the Cliff's Notes on the charts and fleet contest above: *Fleet is providing better service to our customers than before, at lower costs year on year.* Doing so under inflation and in the government context is far more difficult. But these charts mean everything. If the vehicle service numbers above didn't hit close to our targets, ALL of the other initiatives in this report would have less meaning.

All 9 senior staff work on this program.

Partnership with City Engineering



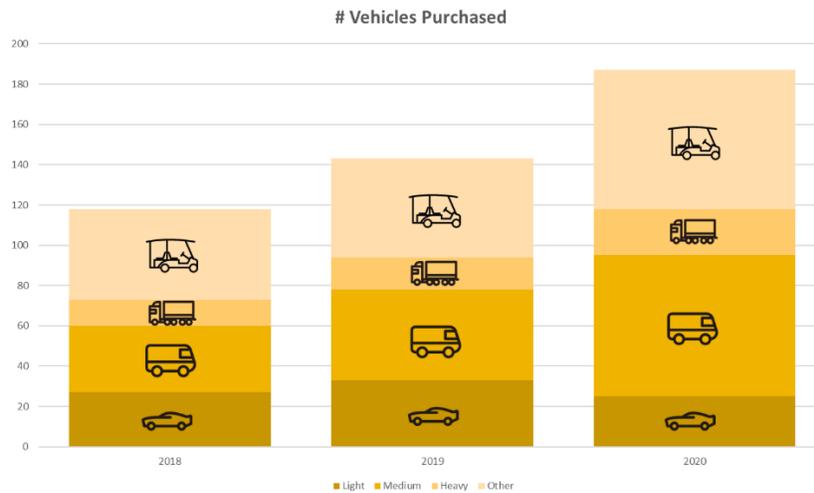
In early 2019, Fleet partnered with City Engineering management to in-house most of the maintenance for that agency's critical fleet of 163 units that operate on the frontline. This diverse fleet includes a variety of sedans, vans, pickup trucks, construction vehicles, sewer trucks, and more. Many of these are used for emergency infrastructure response. For the first time, a Fleet civil service mechanic is embedded full-time within the client agency operations center on Emil Street providing top-shelf service. This partnership will continue, keep saving the City funds in comparison to sending routine maintenance out to vendors. Thanks to this expansion, Fleet maintains vehicles on behalf of all City agencies except Metro and Water Utility, and has managed the 163 vehicle expansion using only existing staff.

All 9 senior staff lead this program.

New Vehicle & Equipment Acquisitions

In each of the last few years Fleet has requested Capital budget funding for new equipment on behalf of customer agencies to Mayor's Office, Finance Department, and Common Council, and every budget has been approved. This allowed several straight years of strong acquisition and specification plans, which allow us to replace agency vehicles that are older and facing increased maintenance problems. With better replacement cycles than in previous years, and purchasing the right types of equipment for the job, the fleet is more modern, fuel efficient, and generally in better repair for our customers. For example, a 2020 model year truck that replaced a 2004 model year truck of the same type is likely to have better fuel economy, less down-time and ongoing maintenance costs. Vehicle technology changes a great deal in 16 years and that trend is only accelerating, which demonstrates the importance of capital investment. A younger fleet results in ROI which we can point to. We are planning now for the next few years ahead with our friends in Finance.





Tyson Roessler and Brett Rosenau manage this program for Fleet.

Auto Parts



The new parts stock room at Nakoosa Trail.

Fleet maintains an inventory of about \$855,794.90 in auto parts on hand at the current time. If we don't have a needed item on hand, a network of local and regional private vendors are available to deliver. Four parts room professionals at Nakoosa Trail provide the mechanics what they need to fix and inspect Madison's vehicles and equipment. Through improved annual inventory auditing and other simple efficiency best practices, the parts inventory has been reduced by **21.81%** since 2017, and is leaner and meaner than ever before.

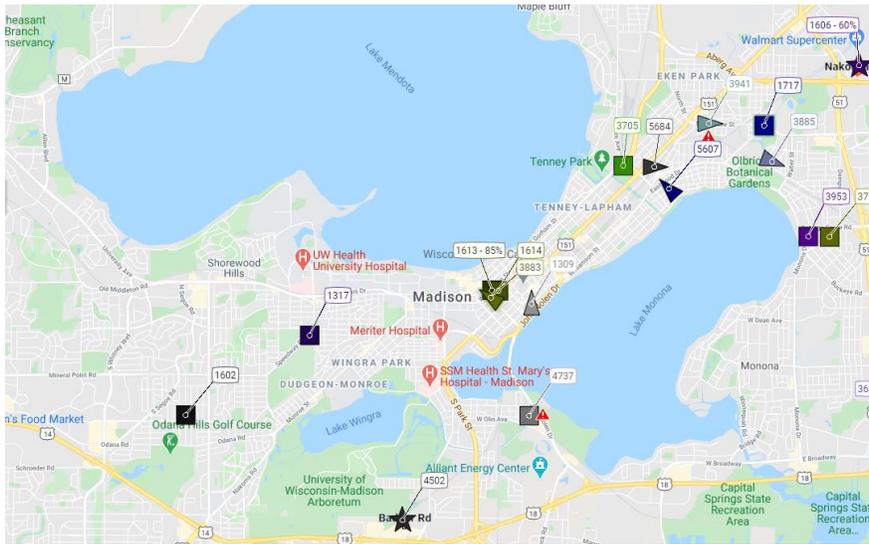
Randy Koch manages this program for Fleet.

Vehicle Safety & Vision Zero



Fleet is proud to sit on Mayor Satya Rhodes-Conway's Madison Vision Zero steering team, and that Madison became an official Vision Zero city in 2020. Vision Zero plans across the United States and around the world aim to eliminate serious collisions and fatalities on the road entirely. City vehicles and drivers are on the road throughout the city every day, and can set the examples of safe driving and cutting edge safety technology to the general public. Fleet is using any and every tool at our disposal to improve the safety of City drivers and the public, whether pedestrians, bicyclists, or other vehicles. Our focus is on leveraging technology and driver training to achieve these challenging goals. Our aim is for every City driver to get back home safely to their families at the end of their shift.

Fleet and sister agencies have developed a strong GPS program that allows supervisors to track critical safety indicators such as seat belt usage, speeding, hard braking, and hard acceleration. Every instance is recorded and can be used to coach drivers on safe driving behaviors, and improve those indicators day to day. GPS is also used to track and reduce idling, which results in both emissions and engine maintenance issues.

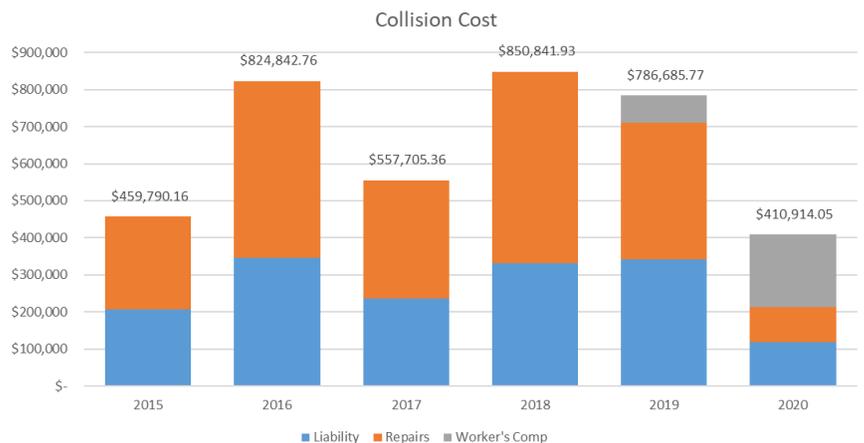


We are working on other vehicle safety technology such as making sure all possible vehicles are procured with back-up cameras and side view cameras already built in. We are also interested in seeing the automotive industry more widely adopt automatic emergency braking (AEB) and advanced driver alert systems (ADAS) for all vehicle types. We are also working jointly with NYC Fleet in this area, especially their deep research into every available safety technology on the market in their Safe Fleet Transition Plan (SFTP) in partnership with the USDOT Volpe Center.

Since 2019 Fleet has worked with a number of City committees to overhaul the City's vehicle driver rules, with an increased focus on safety and reducing unnecessary vehicle trips. Among the important updates are a more clearly defined policy on City vehicles being driven home, and a new ban on cell phone usage, both handheld AND hands-free while driving City vehicles, a dangerous behavior that causes 26% of all collisions in the United States due to distracted driving.

In 2021 Fleet hopes to partner with all sister agencies to lead an implementation of enhanced driver safety training for City employees, including in vehicle, in classroom, using a high-tech simulator, and online.

The end goal of these initiatives is to reduce collisions, injuries, and fatalities along with the related costs to the City in auto body damage, insurance payouts, and worker's compensation claims. Fleet is partnering with Risk Management and the Vision Zero steering team on tracking our collisions and their costs more closely in 2021, and how to prevent at least some of them. As we can see here, collisions have cost the City over \$4 million since 2015, not including significant vehicle downtime (we also do not yet have accurate data for Worker's Comp until 2019; and 2020 is incomplete).

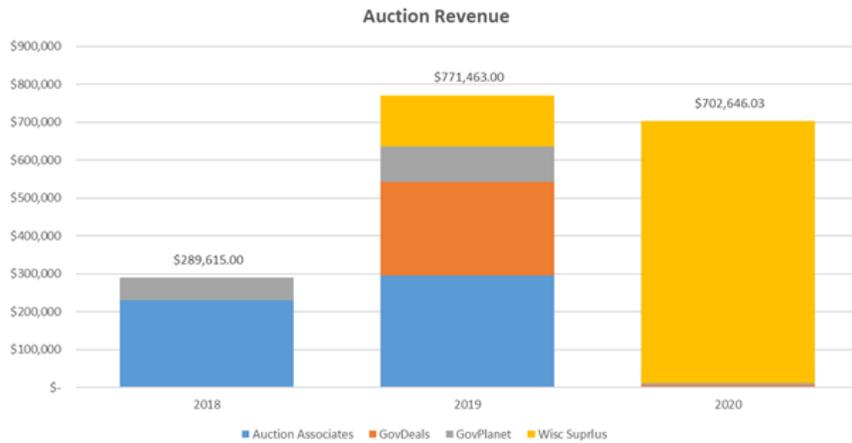


Auction Revenue

Fleet has only one source of revenue, auto auction. At the end of the life cycle of each City vehicle, the vehicle may live on in another incarnation somewhere else. For example, when we are letting go an old fire engine and are replacing it with a new one, that truck may be of interest to a volunteer fire department in a different parts of the country with a small budget inadequate for new equipment. Abandoned or seized vehicles found in the area

by Police are also dropped off at Fleet for auction sales. Fleet sells all salvaged assets through auction vendors, and aspires to get the best sale prices to feed back into the City of Madison general fund, even if a vehicle is a total loss and worth just the parts and scrap.

Auto auctions take place in different ways, but most of it has migrated online through the Internet, where bidders



may view sales from anywhere in the world. The only option available to increase auction revenue is experimenting with different auction vendors, and marketing on the Web, which we have done more aggressively in the last few years. The last biennial period resulted in record high auction revenues for the City, to the best of our knowledge. We will continue attempting to find ways to increase auction revenue further.

Randy Koch and David Wermedal lead this program for Fleet.

Personnel Actions

We mentioned before the heavy turnover of staff due to retirements, which is continuing into 2021 as additional folks contemplate retirement after many years of service to the City. The personnel actions of outside hires and promotions conducted in partnership with the Human Resources Department were substantial in the last 3 years. The greatest benefit of this shift is the opportunity to bring into Fleet talented new employees following highly competitive processes, all of whom acutely understand the City's mission, vision, and values shared during the application process. And particularly understand the priorities of Fleet's highly particular new culture. We are exceedingly pleased with the current makeup of our workforce, and expect to hire a handful more due to upcoming retirements in the next biennial period.

Fleet's management like many other organizations has also made difficult decisions and sacrifices during the COVID-19 pandemic, including modifying schedules and shifts to reduce exposure at the workplace, and participating in Workshare in 2020 to save the City \$65,000 through reduced working hours. Workshare is being utilized again in 2021 and re-set on January 31. These modifications were completed with minimal disruption to customer service and will hopefully help Fleet and other agencies avoid mandatory furloughs or layoffs. They also resulted in many less miles driven on personal vehicles to get to and from the workplace, which is added savings in gasoline costs and emissions. Finally, Fleet redeployed staff to assist with revitalizing State Street after the riots of spring 2020, while also redeploying a Fleet employee for an extended period to Parks to save the City funds.

Fleet has also worked with Human Resources and the employee association representing most Fleet shop employees, Local 236, to arrive at an agreement in late 2020 that personal vehicles belonging to Fleet employees, their family members, and friends could no longer be repaired using City garages on unsupervised evenings and weekends, a practice that was heavily used spanning back for decades. The new agreement was negotiated over 3 years, and will save the City funds on utility bills and wear and tear on shop resources meant for servicing City vehicles, while every Fleet Technician received an increase in his or her tool allowance starting in December 2020.

Technology Initiatives

The world of technology around us changes rapidly not just in the automotive sense, but for all work. COVID-19 has accelerated this factor as many organizations including City of Madison have successfully implemented working from home during the pandemic. We are trying to leverage technology for improving Fleet operations and streamlining processes, especially bureaucratic ones. For example, all Fleet staff are now trained and able to use Zoom for meetings rather than travelling.

Public Information. The [Fleet website](#) is a public portal into everything that Fleet is working on, including all of the initiatives in this report, and more. There's also [Twitter](#) and [Facebook](#). We encourage you to visit.

Going Paperless. Fleets and especially government fleets face the prospect of mountains of paper being produced from reporting, trade magazines, personnel actions, interagency memos, invoices, receipts, delivery packing slips, vehicle manuals, parts directories, and triplicate forms for work orders or parts requests. In the biennial period we have made a concerted effort to eliminate as much of that paper as possible. It turns out that most of it is unnecessary.

Mounds of old paper files from as far back as the 1980s that nobody will ever read again, have been recycled. Automotive magazine subscriptions that piled up all over our shops have been cancelled en masse- and most of the content is online now anyway. Management uses a battery of daily performance reporting which is all on the cloud or in email inboxes. Personnel and other types of memos are handled by email. Important documents are being digitally signed on PDF without printing. Most of Fleet's files are in folders on the network drive. Fleet Technicians have begun ordering parts and tracking work orders using the digital asset management software rather than triplicate forms. Research is taking place on the Internet instead of poring through the library of old books and manuals. All of Fleet's vendors are being directed to send invoices and receipts by email. We are increasingly headed online for diagnostics, parts directories, and bill payment. And perhaps the biggest update of all: Fleet's workforce has finally transitioned from a punch card system to log employee hours, into a digital login system called Kronos.

It's an uphill battle. On a frequent basis we find some paper process that we had not thought of before. But most of these have been addressed. We now stand at about 90% paperless for our division's processes, with the goal of eliminating the need to handle or print paper entirely. This goal was given a boost by tablets.



Fleet technician Katie Cutler uses a tablet in her repair bay.

Tablets. Until 2020, Fleet Technicians never had access to their own IT device at work. They were using shared workstations in offices or on the shop floor some distance away from their work bays. Computing power needed for email, diagnostics, Internet research, or work order updates required traveling to the shared workstation and logging in and out. This process caused problems, including having to wait to use a computer at times. COVID-19 only encouraged us to accelerate the rollout as we worked to prevent shared touch points in the workplace.

In 2020, every Fleet Technician was assigned their own tablet that had all the computing power they needed right at their fingertips in their bays at all times. This simple practice and investment along with the appropriate training has resulted in increased productivity. For the first time important citywide or Fleet communications could be easily shared with all 40 staff in 5 shop locations working two different shifts, with a single email. This was unheard of before at Fleet, though it may sound routine to most office workers. Our tablet initiative was a strong partnership with City IT, and has been [profiled nationally](#).

Outreach and Events

We recognize our work can be replicated only if we take advantage of the force multiplying nature of cooperation beyond our own jurisdiction. When it comes to society's major problems, we are in this together. This biennial report actually falls into this category of external outreach.



The biennial period saw a significant ramp up in external outreach and special events activities, something Fleet did not much participate in before 2019. In May 2019, Fleet partnered with the [Wisconsin Clean Cities Coalition](#) and [Alliant Energy](#) to co-host the inaugural [Transportation & Innovation Expo](#) at Madison's Alliant Energy Center, the largest alternative fuel vehicle display Wisconsin has ever seen. A large slate of excellent speakers from across the country were in attendance, including newly inaugurated Mayor Satya Rhodes-Conway, and numerous EVs, hybrids, biodiesel trucks, CNG vehicles, and propane vehicles were on display and available for test drives in the parking lot. Several hundred guests participated in this first of a kind event, a new tradition that will continue. Our partner teams at Wisconsin Clean Cities and Alliant Energy were amazing to work with, and we threw the event together in less than two months. [MGE](#) has joined the group effort to work on these events in the future. Because of COVID-19 and safety precautions, the 2020 Expo was postponed, but a well-attended virtual speaker series was held online in the Fall of 2020. Fleet was proud to participate and looks forward to working with our partner groups to hold in-person events again, bigger and better than ever, once it is safe to do so.



L-R: Mayor Satya Rhodes-Conway and Superintendent Mahanth Joishy pictured with a New Flyer electric bus at Madison Transportation & Innovation Expo.

Fleet has conducted a large amount of group and individual outreach with other fleets in the area, including UW-Madison, MGE, MMSD, Metro, Water Utility, Dane County, State agencies including Department of Administration (DOA), Sun Prairie, Verona, Fitchburg, Middleton, and other nearby municipalities. An informal working group of many of these fleet managers has met several times a year to exchange best fleet practices, and participated in the 2019 Expo. Mayor Satya Rhodes-Conway and Dane County Executive Joe Parisi have specifically encouraged deeper interchange between City and County counterparts to tackle climate change challenges together, and we look forward to continuing this ongoing work. It has resulted in tangible results,

including fleets purchasing the same types of sustainable vehicles, and those types of vehicles becoming available on State DOA contracts that any state, municipal, and county fleet in Wisconsin can purchase off of.

Further afield, I was invited to give the opening keynote address at the 2019 Government Fleet Expo in New Orleans, my first attempt at speaking for 45 minutes in front of 300 fleet managers from across North America, to discuss Fleet's change management work. I was also fortunate to celebrate my 40th birthday down in the bayou during that conference with my deputies Fleet Program Manager Tyson Roessler and Fleet Operations Manager Randy Koch. We brought back a long list of new ideas from vendors and other fleets across North America, because we weren't just there to share ours.

In fall 2019, Fleet, Alder Samba Baldeh, and other sister agencies hosted Lord Mayor BenSouda of Kanifing, The Gambia for a productive exchange of ideas- acting locally, thinking globally. We introduced one of the youngest and most innovative major city mayors in West Africa, and Madison's Sister City, to our EVs and emergency vehicles as he works to build out his departments.



Lord Mayor BenSouda of Kanifing, The Gambia discusses EVs with Fleet Superintendent, Mahanth Joishy.

I was also invited to speak as a panelist at the [2019 New York City Vision Zero Fleet Safety Forum](#), a high-level international gathering of public, private, and non-profit organizations focused entirely on reducing collisions, injuries, and fatalities on the road. These forums always go by too fast while I catch up with the latest international initiatives and meet old friends and colleagues. I

helped launch this tradition for New York City's Vision Zero plan with the first-ever forum in 2014, as the Fleet Safety Director for New York City, and it is a pleasure to see the tradition continue. Fleet Analyst David Coy is being handed the mantle of leadership for the Fleet Vision Zero plan in Madison and was able to learn more in the Big Apple about what the most advanced Vision Zero fleets in the world are doing.

In December 2020, I presented on all of Fleet's sustainable programs for a large online group at the [Wisconsin Clean Cities annual stakeholder meeting](#), joined on the speaker list by Lieutenant Governor Mandela Barnes and State Director of Sustainability and Clean Energy, Maria Redmond.



Lorrie Lisek
Executive Director
[Wisconsin Clean Cities](#)



Mandela Barnes
Lieutenant Governor
[State of Wisconsin](#)



Maria Redmond
Director
[Wisconsin Office of Sustainability & Clean Energy](#)



Mahanth Joishy
Fleet Superintendent
[City of Madison Fleet Service](#)

In March 2021, I look forward to presenting on a fleet management panel organized by the Government of Quebec, Canada due to their interest in Madison's fleet work, and to kick start additional interchange between our operations and theirs.

Just last week on January 28, 2021 I was graciously invited and approved to become an Auxiliary Board member of Wisconsin Clean Cities Coalition. I immediately accepted this invitation, and look forward to working with this august group led by amazing women including Executive Director Lorrie Lissek, to further environmental sustainability for the entire state of Wisconsin in any way we possibly can in the next few years.

Fleet has participated in countless other external regional and national events and webinars, and on a routine cadence advise government fleets from places such as Milwaukee, Colorado, South Carolina, Florida, Minnesota, and Canada on a wide range of fleet management challenges. We view this as part of our regular job, and part of the meaning of public service itself. We similarly benefit immensely from constant contact with our friends running the largest municipal fleet in the world at NYC Fleet, and the partnerships built here with Wisconsin Clean Cities, MGE, MMSD, Alliant Energy, Calstart, UW-Madison, and others.

The Road Ahead Beckons Us



Fleet team at Nakoosa Trail groundbreaking in 2019.

If you made it this far into the biennial report, thank you for reading. We hope you found it informative. This sort of report typically appeals to a niche audience, but we aimed to make it accessible. You won't find this type of report very often by a municipal fleet operation, most of which prefer going about their business quietly. Nothing wrong with that, but that is not who we are.

If you enjoyed the 2019-2020 Biennial Report... just wait until the next one.

Finally, I would like to thank several people outside of Fleet who are responsible for helping make all of the above happen. Mayor Satya Rhodes-Conway has provided exactly the type of encouragement, leadership, and support Fleet has needed to succeed since 2019. Former Mayor Paul Soglin and Deputy Mayor Katie Crawley were instrumental in getting me over to Madison in 2017. Keith T. Kerman and the teams we were a part of over 16 special years at NYC Parks and NYC Fleet helped me build the initiatives playbook and management style I am using in another city halfway across the country. And with these names, I have shared all of the supervisors of my adult life. They've been matched only by the outstanding quality of the senior staff we've built here at Madison Fleet, and the immensely productive lateral and diagonal relationships at many sister agencies including Mayor's Office, HR, Finance, Police, Fire, Traffic Engineering, etc. The ingredients are all in place to get to where we want to be.

Mahanth S. Joishy is Superintendent of Madison Fleet



Mahanth test-driving a loaner from Tesla.