

To: Honorable Mayor and City Councilors

From: Michael Spurgeon, City Manager

Date: April 30, 2021

Re: Notes to Council

1. STAFF REPORTS / ITEMS REQUIRING IMMEDIATE ATTENTION

• Utilities Department Monthly Report – March 2021

2. GENERAL CORRESPONDENCE / NOTIFICATION

- Press Release Mission 22 Event
- Press Release Two Broken Arrow road projects scheduled for this weekend
- News Article of Interest Indiana Town PD Shifts to EVs to Save Money

3. SPECIAL EVENTS / ACTIVITIES

• N/A

Respectfully submitted

Michael Spurgeon

clm

Attachments





INTEROFFICE MEMO

To:	Michael Spurgeon, City Manager	
From:	Charles Vokes, Utilities Director	
Date:	April 28, 2021	
Re:	Utilities Department Monthly Report – March 2021	

	March 2021	March 2020
Water Treated, Purchased and Distributed		
Water Purchased from Tulsa	0.4 MG	0.5 MG
Water Produced at Verdigris WTP	275.6 MG	261.6 MG
Total	276.0 MG	262.1 MG
Wastewater Treated		
Lynn Lane Plant	182.0 MG	208.6 MG
Haikey Creek Plant flow from BA	141.6 MG	185.6 MG
Total	323.6 MG	394.2 MG
Haikey Creek Plant flow from Tulsa	205.0 MG	227.5 MG

LLWWTF Summary David Handy, Plant Manager Preventive Maintenance (17.0 person-hrs total)

- 1. Changed out filters on air make up unit at headworks (0.5 hour)
- 2. Tested chlorine leak detection sensors (0.5 hour)
- 3. Checked effluent flowmeter calibration (0.5 hour)
- 4. Weekly lubrication for influent channel screen (1 hour)
- 5. Cleared compactors of built up rags (1 hour)
- 6. Cleaned strainer on headworks non pot and repaired (0.5 hour)
- 7. Washed and dried three bio filters for head works (1 hour)
- 8. Performed quarterly lubrication of equipment and motors (4 hours)
- 9. Checked pumps in non-potable building (0.5 hour)
- 10. Changed out 3 filters on bio filter (0.5 hour)
- 11. Cleared rags off probes in oxidation ditches (1 hour)
- 12. Lubricated overhead door on belt press building (0.5 hour)
- 13. Cleaned strainers in bisulfite room (0.5 hour)
- 14. Cleaned east and west scum pits (0.5 hour)
- 15. Organized and sorted parts in maintenance shop (4 hours)

Corrective Maintenance

- 1. Repaired frame and glass on NW side of transport building
- 2. Replaced motor on #2 grit pump

Other Maintenance

1. Changed out roll off dumpster in head works

Utilities Distribution/Collections Maintenance Summary Water Distribution-Travis Schemonia, Water Supervisor Preventive Maintenance

- 1. Line locates-2204
- 2. Valve truck crew exercised 188 valves for the month, bringing the total to 381 for 2021
- 3. Fire hydrants inspected-120, bringing the total to 346 for 2021
- 4. Fire hydrants painted-0
- 5. Fire hydrants greased/oiled-120

Corrective Maintenance

- 1. Meter leak repairs-20
- 2. Distribution main leak repaired-11
- 3. Curb stops replaced-19
- 4. Defective meters replaced-5
- 5. Water system service requests-103
- 6. Broken meter/valve boxes replaced-15
- 7. Cleaned and restored yards after water line repair-15
- 8. Fire hydrants repaired-0
- 9. Fire hydrants replaced-0
- 10. Service line breaks-33
- 11. After hours sewer calls-8

Other

- 1. New taps and meters-36
- 2. Water pressure tests-3
- 3. Service crossings installed-3
- 4. Assisted Meter Reading with Turn Ons/Offs-10
- 5. Water quality concerns-2
- 6. Installed backflow preventer at Central Park for Parks Department
- 7. Lowered water line in front of 9th grade center for new bike trail

Water Quality

Tim Nix-Water Quality Technician

Preventive Maintenance

- 1. Tested chlorine levels near auto flushers-19
- 2. Bac-T samples collected-101
- 3. Collected 2 chlorine samples (am/pm) daily-62 total
- 4. Distribution system-tests at 12 distribution locations and 5 water tower locations-144
- 5. Checked chlorine levels every Friday at 5 water towers-20
- 6. Flushed dead end lines at 25 locations once a month and 10 locations twice a month-163,365 gallons

Corrective Maintenance

1. Water quality concern calls at 28 locations-359,902 gallons flushed

Other

1. Total gallons flushed to improve water quality-estimated 4,796,517 gallons

Water Reclamation-David Marlow, Wastewater Collection Supervisor Preventive Maintenance

- 1. CCTV inspections done-0
- 2. Routine station visits (29 lift stations and 4 booster stations)-476
- 3. Check valves/pumps cleaned at stations-7
- 4. Sewer line root cut-0
- 5. Sewer line locates-150

- 6. Sewer line cleaning-2,595 ft.
- 7. Lines smoked-0
- 8. Clean fog rods at lift stations-9
- 9. Clean wet wells-2

Corrective Maintenance

- 1. Service request calls-29
- 2. Sewer line blockages relieved-15
- 3. After hour calls-8
- 4. Manholes repaired-11
- 5. Sewer lines repaired/replaced/installed-42'
- 6. Sewer taps-0
- 7. Clean and restored yards after sewer line repairs-0
- 8. Sanitary Sewer Overflows (SSOs) reported to ODEQ-3
- 9. Sinkholes-0
- 10. Lift station repairs-
 - Shadow Trails-replaced bowl
 - South Park-reset trip breaker & cleaned impellar
 - Adams Creek North-drilled out broken bolts, replaced #1A & #2A pumps
 - Greens-replaced #1 & #2 pumps
 - Berwick-cleaned impeller
 - Indian Springs-cleaned impellar & flapper valve, replaced #1 pump

Other

1. Assisted Fire Station #4 with a sewer service line

Meter Reading-Derriel Bynum, Meter Reading Supervisor

- Preventive Maintenance
 - 1. Replace meters-53
 - 2. Install Mach 10 meters-0
 - 3. Replace meter lids-0

Corrective Maintenance

- 1. Replace defective AMR registers-21
- 2. Meter boxes replace-8
- 3. Replace AMR antenna-14
- 4. Construction meters rebuilt-0
- 5. Replace riser-0
- 6. Replace defective meter base-63
- 7. Replace stop-0

Other Maintenance

- 1. Meters read-39,888
- 2. Rereads/Leak Tests-119
- 3. Turn Ons for nonpayment-185
- 4. Turn Offs for nonpayment-234
- 5. New accounts-521
- 6. Finals-505
- 7. Pulled meters-0
- 8. Retrieve water use history from AMR and provide 90-day graph to customer-24 for a total of 66 for 2021
- 9. Place door hangers for bad checks-0
- 10. Misreads-24 for a total of 59 for 2021
- 11. Customer concerns-0

12. AMR Project-

- Registers-693
- Body-281
- Replace meter box-11

Utilities Construction-Tommy Kimbrough, Construction Supervisor Preventive Maintenance

- 1. Garnett water line-installed 1260' of 8" C-900 water pipe
- 2. Date water line-installed 356' of 6" C-900 water pipe and 12 service tie ins
- 3. Urbana water line-installed 450' of 6" C-900 water pipe

Corrective Maintenance

- 1. None for this month
- Other
 - 1. None for this month

Verdigris WTP-Lou Fisher, Plant Manager Preventive Maintenance (41.5 person-hrs total)

- 1. Tested voltage and current readings on all hypochlorite generators (3 hours)
- 2. Installed new water and brine filters on hypochlorite generator systems (2 hours)
- 3. Tested eye wash / shower stations (6 hours)
- 4. Flushed hydrochloric and SBS water traps (1 hour)
- 5. Flushed permanganate containment area (2 hours)
- 6. Installed new battery and wired UPS on hypochlorite generator (2 hours)
- 7. Worked on locating power breaker for pole lights at high service (1 hour)
- 8. Worked on locating arc flash boundary stickers and arc flash study for high service switchgear (2 hours)
- 9. Removed and cleaned brine fill solenoid valve (2 hours)
- 10. Removed and cleaned vial on #3 rack turbidity meter (1 hour)
- 11. Washed and cleaned all VFD filters in admin and high service mcc (4 hours)
- 12. Cleaned turbidimeter 3 (1 hour)
- 13. Greased sludge rakes on trains 1-4 (1 hour)
- 14. Tested portable Honda generator (0.5 hours)
- 15. Went to towers and turned off heaters (2 hours)
- 16. Inspected fire extinguishers (1 hour)
- 17. Acidized hypochlorite generators 1-3 (10 hours)

Corrective Maintenance (141 person-hrs total)

- 1. Repaired leak on feed pump strainer 2 (4 hours)
- 2. Assembled and installed EQ basin level transducer (4 hours)
- 3. Rebooted UPS for IT server (1 hour)
- 4. Adjusted low level cut out on raw water flow meter (1 hour)
- 5. Diagnosed and removed slide gate 2 actuator (8 hours)
- 6. Installed new bulbs in 8 parking lot pole lights, diagnosed non-working lights (6 hours)
- 7. Diagnosed membrane building wall pack lights (4 hours)
- 8. Changed out hypochlorite generator 2, cell 2. Installed refurbished cell (6 hours)
- 9. Installed new 60ft and 100ft cable on train 1 sludge system (5 hours)
- 10. Removed and installed new motor on sludge pump 3 (5 hours)
- 11. Removed battery from hypochlorite generator 2 UPS for replacement (1 hour)
- 12. Removed trees from main road and around west basin drains (6 hours)
- 13. Installed new drain line on rental air compressor (0.5 hours)
- 14. Changed SC200 turbidity controller for rack 2 (2 hours)

- 15. Finished cleaning around basin drains and picking up secondary containment left by contractors around new pre-treat (3 hours)
- 16. Filled in low spot right outside of maintenance bay door. Worked on filling large hole east of membrane building near fence (4 hours)
- 17. Rebuilt 2" pvc left of heat exchanger on hypochlorite generator 3 (4 hours)
- 18. Replaced pressure sensor on hypochlorite generator 2 blower system (1 hour)
- 19. Tested 4-20 loop on surge tank differential transmitter (2 hour)
- 20. Removed damaged water line, rebuilt surge tank pressure transmitter water line and installed new 1" SS valve (10 hours)
- 21. Swapped out water softening tank 3 to 2 so we could get number 2 softening system online (4 hours)
- 22. Diagnosed water softener tank 3 (1 hour)
- 23. Checked surge tank and compressor operation (2 hours)
- 24. Changed out lights in high service pump area (2 hours)
- 25. Repaired leak on Hawk cl17 color cell on at high service (2 hours)
- 26. Swept high service MCC (1 hour)
- 27. Changed 3 way valve, y-strainer and rotameter on hypochlorite generator 1. Removed pressure relief valve, unclogged and reinstalled (10 hours)
- 28. Worked on turbidity supply line at raw water (6 hours)
- 29. Calibrated 1-4 JMS sludge rakes, encoders and adjusted proximity switches (6 hours)
- 30. Repaired acid cart plumbing (3.5 hours)
- 31. Installed new pulley bracket and pulley set on train 4 sludge system, worked on sludge rake, installed new 100ft cable (12 hours)
- 32. Repaired seal water line on raw water pump 2 (4 hours)
- 33. Worked on trains 1-4 sludge rake system, adjusted wheels (10 hours)

Operator Preventive Maintenance (34.5 person-hrs total)

- 1. Cleaned trains 1-4 (10 hours)
- 2. Flushed settled turbidimeter (0.5 hours)
- 3. Cleaned sludge train 5, flock zone 1 (2 hours)
- 4. Cleaned sludge train 6, floc zone 1 (2 hours)
- 5. Filled hypochlorite generator 3 with softened water (1 hour)
- 6. Cleaned rack 1-10 turbidity bubble traps, replaced hoses (4 hours)
- 7. Assisted calibrating sludge rakes on trains 1-4 (6 hours)
- 8. Flushed settled and filtrate turbidity lines to the meters and lab (1 hour)
- 9. Completed CIPs on racks 3,7 and 8 (8 hours)

Operator Corrective Maintenance (23 person-hrs total)

- 1. Assisted installing new 60ft and 100ft cable on train 1 sludge system (5 hours)
- 2. Installed new 60ft and 100ft cables on train 2 (3 hours)
- 3. Adjusted 100ft cable on train 3 (1 hour)
- 4. Installed 60ft and 100ft feet cable on train number 4 (3 hours)
- 5. Flushed bathroom floor drains (1 hour)
- 6. Assisted in switching out the pulleys and bracket on train 4 (9 hours)
- 7. Put down grass seed on NW corner of admin building (1 hour)

Other Maintenance

- 1. Performed grounds keeping duties
- 2. Cleaned and disinfected membrane building

Lynn Lane and Haikey Creek WWTP Industrial Pretreatment Program Summary Lauren Kimbrough, Pretreatment Coordinator

Fats, Rags, Oil & Grease Program (FROG)-

Grease interceptor inspections

- 245 interceptors were inspected in March. Facilities that have interceptors that need immediate maintenance are being asked to have maintenance performed within 15 days.
- 43 facilities were asked to perform maintenance.

Industrial Pretreatment:

Self-Monitoring Laboratory reports received and reviewed for compliance

- Blue Bell No deficiencies were noted. Monthly surcharges for conventional pollutants above residential thresholds were calculated in the amount of \$4,722.65. Surcharges have been submitted to the Finance Department for billing.
- Unifirst –No deficiencies were noted. Monthly surcharges for conventional pollutants above residential thresholds were calculated in the amount of \$1,133.67 and submitted to the Finance Department for billing.
- Comgraphx/Communication Graphics No deficiencies were noted. Monthly surcharges for conventional pollutants above residential thresholds were calculated in the amount of \$4.56. Surcharges have been submitted to the Finance Department for billing.
- Baker Hughes No deficiencies were noted.
- Solar Turbines No deficiencies were noted.

Permitting

• CSI Aerospace – Permit was renewed. Staff reviewed permit application, toxic organic management plan, accidental spill prevention plan, and safety data sheets.

Wastewater Treatment Plant

• Lynn Lane Wastewater Treatment Plant – Influent and effluent priority pollutant testing was performed with no deficiencies noted.



SECTION 2 - GENERAL



For Immediate Release Date: 04/28/2021 Contact: Lesa Jones, City of Broken Arrow 918-259-2400 Ext. 5436 | Email: lljones@brokenarrowok.gov CBA Release No. 21-26

Military History Center to posthumously honor SSG Michael K. Coon with ceremony and Mission 22 Silhouette

The silhouette will be on permanent display at the Military History Center

A Mission 22 silhouette unveiling ceremony will be held in honor of SSG Michael K. Coon on Saturday, May 8 at 1 p.m., at the Military History Center, 112 N. Main Street in Broken Arrow.

SSG Michael K Coon, who lost the War at Home to Post Traumatic Stress Disorder, will be honored with a ceremony and a mine sweeping silhouette statue from his service in Afghanistan. Coon served 10 years in the U.S. Army deployed to Iraq and the Persian Gulf and was considered a Muscogee Creek and Cherokee Tribal Warrior.

A number of military service personnel, the Muscogee (Creek) Nation Honor Guard, the Seminole Nation Honor Guard, the Kiowa Black Leggings Society and the presentation of the Gold Star Mother's Flag will be a part of the ceremony.

Also, this Saturday, May 1, at the Broken Arrow Events Park, 21101 E 101st St, a Kentucky Derby Polo Benefit Event will be held from 1:30 p.m.- 9 p.m., benefiting the Mission 22 War at Home Memorial coming Spring 2022.

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Background: The City of Broken Arrow, the Muskogee (Creek) Nation, and the Mission 22 organization are working together to bring the **Mission 22, The War at Home National Memorial** permanently home to Broken Arrow. The memorial honors those who have fallen in the war against Veteran suicide. Each steel plate is created in the likeness of a real American Veteran who lost their battle with Post Traumatic Stress Disorder. These 20 silhouettes are representative of those men and women who are suffering in the fight here at home every single day. The Mission 22, War at Home Memorial will be installed at Veteran's Park at 1111 S. Main Street, near the Broken Arrow Veteran's Center which currently under construction.



For Immediate Release Date: 04/29/2021 Contact: Lesa Jones, City of Broken Arrow 918-259-2400 Ext. 5436 | Email: lljones@brokenarrowok.gov CBA Release No. 21- 27

Two Broken Arrow road projects scheduled for this weekend Short-term detours will be in place on New Orleans and Washington Streets that are part of larger projects

Two separate road projects are planned over the weekend in Broken Arrow, one on New Orleans Street (101st St.) and one at the intersection of Washington (91st St.) and Olive (129th E. Ave.) Streets. A detour will be in place on New Orleans Street, between Olive Street and Aspen Avenue, beginning Friday, April 30 at 7 p.m. The roadway will be closed to through traffic until Monday, May 3, at 5 a.m.

Becco Contractors, Inc., will install three, 36-inch in diameter concrete sewer lines across the length of the roadway, east of South Chestnut Avenue. Due to the narrow existing roadway, and the lack of any shoulders, there is not enough room to complete the work without closing this street section. Please use caution when traveling in construction zones and refer to the attached detour map for more information about traveling in the vicinity of this project.

On Saturday, May 1, beginning at 6:30 a.m., intersection improvements at Olive Avenue (129th E. Ave.) and Washington Street (91st St.) will be performed with traffic, but motorists should expect delays. Crews will mill the existing 2.5 inches of asphalt surface in association with the Washington Street widening project.

Then, on Monday, May 3, at 9 a.m., the intersection of Olive Avenue and Washington Street will be closed to apply 2.5 inches of new asphalt roadway surface. The intersection will re-open at approximately 5 p.m. on Monday, May 3. For more information, please reference the attached detour route map.

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www.BrokenArrowOK.gov

Indiana Town PD Shifts to EVs to Save Money



April 28, 2021 • by Kaylee May and George Clark, Greater Indiana Clean Cities

In August 2019, the Bargersville Police Department introduced its first all-electric patrol vehicle, making it one of the first departments in the United States to implement the Tesla Model 3 as a squad car. Since then, three more Tesla Model 3 vehicles have been added to the department's fleet.

For many years it was believed electric vehicles could not provide the speed, handling, and power needed in pursuit vehicles. Police Chief Todd Bertram of the Bargersville Police Department said, "That is not the case."

Following Bargersville's lead, the <u>Westport Police Department</u> in Connecticut and the <u>Windham</u> <u>County Sherriff's Office in Virginia</u> have purchased their first Tesla vehicles.

Chief Todd Bertram and the Bargersville Police Department found the Tesla Model 3 vehicles are saving the department each month. August of 2020 marked the one-year birthday of the first Tesla Model 3 purchased by the department. Bertram reported over the course of its first year, the Tesla Model 3 <u>saved the department</u> \$6,320 in fuel and maintenance costs in comparison to the gasoline-powered sedan the department traditionally purchases.

The Tesla Model 3 vehicle purchase price is \$14,500 more than its traditional vehicle. With the fuel and maintenance savings the department has seen over the course of the first year, the department expects to recoup its investment in just 19 months.

Over the course of the six-year span the department typically has a vehicle, each Tesla will save the department approximately \$38,000. After recovering the \$14,500 from the increased purchase price, the department will net approximately \$23,500 for each Tesla in the fleet. With the four Tesla Model

3s currently in the department, the Bargersville Police Department is on track to save approximately \$152,000 over the next six years.

The department currently has 14 patrol cars. With an all-electric police fleet, Chief Bertram hopes Bargersville will one day achieve a goal of saving more than \$88,500 each year. The additional savings will go a long way for the Bargersville Police Department. Like many police departments, Bargersville has a finite budget. With the introduction of the all-electric patrol cars, the department could repurpose the dollars saved on fleet fueling and maintenance to fund other budget items without needing to increase the overall budget.

Environmental Benefits

In addition to the cost savings experienced with the addition of an electric vehicle, fleets also benefit from reduced emissions resulting in cleaner air. Each electric vehicle introduced to the Bargersville Police Department fleet reduced the carbon monoxide (CO) and nitrogen oxide (NOx) emissions by 100% compared to the conventional vehicle being replaced. Overall, the addition of four electric vehicles reduced the fleet's NOx emissions by 28.5% and CO emissions by 28.5%.



This shows the Bargersville Police Department's emissions reductions from using an electric vehicle. The data is based on AFLEET calculations from the Argonne National Laboratory.

Image: Greater Indiana Clean Cities

Maintenance and Fuel Costs, Travel During COVID-19

Despite COVID-19, Chief Bertram reported the department saw an "increase in trips taken." He went on to say, "The electric vehicles saw increased mileage and savings" during the months of March and April 2020, when the pandemic prompted a sharp decrease in travel throughout Indiana.

Overall, the department budgeted \$49,000 for fuel in 2020 and by June, 75% of the department's fuel budget was still available.

The department installed one electric vehicle charger to the side of the Police Department Building and another on town property. In total, the department spent \$1,000 to install the EV chargers.

Moving forward, the department hopes to expand the charging infrastructure available to six level 2 chargers and one DC Fast Charger.

Since August 2019, the department has experienced minimal maintenance related expenses for its electric vehicles. "The only time the cars have been up on a lift was to have the tires replaced," Chief Bertram explained. The vehicles have minimal maintenance requirements, keeping the vehicles on the road and out of the shop.

Maintenance Schedule Analysis

A significant portion of the cost savings associated with EV comes from the reduction in fuel costs. However, when considering the nature of working vehicles, the maintenance cost savings are often significant over the vehicle's operational lifetime. Analyzing the maintenance schedule of EVs reveal not only a reduction in the cost of maintenance, but a reduction in the frequency of service. This includes time spent off the road, adding to the opportunity costs of operating their gas-powered equivalents. Below is a list of the maintenance requirements and schedule from the manufacturer.

Yearly Maintenance:

Brakes: Brake pads do not require replacement due to regenerative braking. However Tesla recommends cleaning and lubricating all brake calipers every 12 months or 12,500 miles for cars in cold weather regions.

Tires – Rotation, Balance, and Wheel Alignments: Tesla recommends rotating tires every 6,250 miles or if tread depth difference is 2/32 in or greater, whichever comes first. Unbalanced and misaligned wheels affect handling, tire life, and steering components.

Scheduled Maintenance:

Cabin Air Filter: Teslas are equipped with an air filter that prevents pollen, industrial fallout, road dust, and other particles from entering through the vents. Tesla recommends replacing your cabin air filter every two years. If your Tesla is equipped with a HEPA filter, Tesla recommends replacing it every three years.

Brake Fluid Test: Tesla recommends testing brake fluid lines for contamination every two years and replacing as needed.

Air Conditioning Service: An air conditioning service replaces the desiccant to help the longevity and efficiency of the air conditioning system. Tesla recommends an air conditioning service every two years for Model S, every four years for Model X and Model Y, and every six years for Model 3. **EV Patrol Car: Myth vs Fact**

Pursuit: When considering vehicles for law enforcement, pursuit and high-speed chase are often the first challenges posed by officers and police councils. When asked about the EV's pursuit rating, chief Bertram gave a brief background of these ratings saying, "The performance is what you rate it on." He continued to highlight a few of the specifications that set it apart from its traditional incumbent, stating, "You don't have all of the junk that happens in a gas car."

He recalls a pursuit early on while in the Model 3 and highlighted a few facts from the chase. "It was not a high-speed pursuit, most of them are not." The idea that every pursuit result in a high-speed chase doesn't reflect in his experience. "They're trying to get away from you, they're not trying to race you," he said. During these types of pursuits, the EV's instant acceleration and low volume makes it more agile in urban and suburban areas.

Range: When considering the area of operation for officers, range is often highlighted as the second biggest concern. Rural police departments often have larger jurisdictions, leading some to believe

the range of an EV may cause limitations. To address the topic of range, Chief Bertram said, "When you start your shift out on an empty tank, the same thing will happen in a gas car." He went on to say that even with the heat or air-conditioning, lights, and computer running the car could "run for days."

When asked how the department has addressed their charging situation, Chief Bertram gave some insight, stating, "We've since put another charger on town property, resulting in more charging options." With plans for a new building, the department is also factoring in more Level 2 chargers and a DC fast charging station.

Equipment: Some manufacturers offer pre-outfitted patrol vehicles that come fully equipped with traditional equipment like lighting and auxiliary power. However, in most cases, police departments purchase their vehicles without the added equipment, opting to install after the purchase. Chief Bertram remarked that its traditional vehicle is no different in that it also comes stripped down. When asked if the Tesla Model 3 had the features he needed, Chief Bertram replied, "Of course the Tesla has all of that, and it gets better over time." This is in reference to the Tesla's ability to improve through software updates over the air (wireless capability).

Surveillance: Over the last year, surveillance has been a priority for police departments across the country. The Tesla Model 3 is equipped with eight surround cameras that provide 360 degrees of visibility around the car at up to 250 meters of range. Not only do the built-in cameras aid in accident prevention, they have aided Chief Bertram in picking up useful footage in the field even before he has begun recording, proving invaluable to the department.

Overall, Todd Bertram has found their new electric patrol cars have "outperformed the other patrol cars" the department uses.

Advice for Fellow Departments

When asked if there were any lessons learned during his experience, Bertram said, "I've talked to hundreds of police departments from all over the country. People have called wanting to know how it's going, what we did, and how we did it."

"I've become a spokesperson for police Tesla adoption. Because of the savings we've experienced and the fact the cars have multiple capabilities, we continue to add them to our fleet," he added. "Eventually, we would like to have an all-electric vehicle fleet."

He expressed departments should "do their homework" when considering an electric patrol car to find out more about the vehicles, their capabilities, and the availability of charging stations in the area. Bertram said he couldn't see how the electric cars wouldn't work for an agency or municipality, encouraging departments interested to take a look at the available options and test drive an electric car to see for themselves.

