



City of Cambridge

Executive Department

LOUIS A. DePASQUALE
City Manager

LISA C. PETERSON
Deputy City Manager

December 9, 2019

The Honorable, the City Council
City Hall, 795 Massachusetts Avenue
Cambridge, Massachusetts 02139

Re: Annual Surveillance Report

To the Honorable, the City Council:

Pursuant to Chapter 2.128, Section 2.128.060 of the Cambridge Municipal Code, I hereby submit the City of Cambridge’s (the “City’s”) first Annual Surveillance Report concerning City departments’ proposed acquisition or use of Surveillance Technology or Surveillance Data.

The Annual Surveillance Reports and the Surveillance Technology referenced in those reports is as follows:

No.	Department	Technology
1.	Emergency Communications	Rapid SOS
2.	Emergency Communications (Police)	Trespass Tracking
3.	Executive/City Manager	<ul style="list-style-type: none"> Media Monitoring—Meltwater Social Media Monitoring—Meltwater Engage (powered by Sprout Social)
4.	Finance	Atlas Database (RMV)
5.	Information Technology	Checkpoint Firewall
6.	Information Technology	Web Server Access and Error Logging
7.	Law	WestLaw (Public Records Search function)
8.	Mayor’s Office	Tweetdeck
9.	Police – Crime Analysis & CID	<ul style="list-style-type: none"> Accurint Workstation BRIC Omega Dashboard Coplink QED Incident Database



		<ul style="list-style-type: none"> • CLEAR • Lexis Nexis • Focused Deterrence Database • LENS
10.	Police – CID Days; DV/SA; Cyber	<ul style="list-style-type: none"> • GPS tracking devices • Digital Intelligence Workstation • Dell Laptop BCERT • Magnet Forensics–Axiom • Getdata Forensic Explorer • Shotspotter
11.	Police – SIU	<ul style="list-style-type: none"> • Keltech Covert Streetlight Camera • CSA Pole Camera • DTC Body Wire • IVC
12.	Police – Crime Scene Services, Booking & Records	<ul style="list-style-type: none"> • Morpho (AFIS) with camera (MSP) • Live Scan (4 devices)
13.	Police – EOD	<ul style="list-style-type: none"> • Robotex Avatar II 2 Camera Wireless (3) • Foster Miller Tallon Robot 4 Camera Wireless • Foster Miller Dragon Runner 4 Camera Wireless • Remotetec F6A Robot 4 Camera Wireless and Fiberoptic • Tactical Electronics VF52 Fiber Scope • ATF Bomb Arson Tracking
14.	Police – Fleet	<ul style="list-style-type: none"> • Transport Wagon 240 Recording • Transport Wagon 236 Recording
15.	Police – SRT	Throwbot XT
16.	Police – CID	Case Cracker
17.	Police – Professional Standards Unit	Infraware
18.	Police – PIO	TweetDeck
19.	Public Health	MAVEN (Massachusetts Virtual Epidemiologic Network)
20.	School Department	Bus Video Recorders

21.	Traffic, Parking & Transportation	<ul style="list-style-type: none">• ATLAS: Massachusetts RMV Website Portal• Traffic Signal Detection Cameras• MioVision Traffic Count Mobile Camera Units
22.	Water	Automated Meter Reading System (AMR)

I look forward to answering any questions you may have concerning the enclosed Annual Surveillance Reports.

Sincerely,

Louis A. DePasquale
City Manager

Enclosures

1. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Emergency Communications Department
Division or Unit (if applicable):	Emergency Communications Center
Submitted by:	Christina Giacobbe
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Rapid SOS

2. Has any Surveillance Technology data been shared with a third-party?

- The information obtained through this platform is not shared with any third party as the information is presented in real time. The department does share caller information and audio calls with the Police Department and District Attorney's Office as they proceed with prosecution. However, this information is provided through our 911 system, not RapidSOS.

3. What complaints (if any) has your department received about Surveillance Technology?

- N/A

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- N/A

6. Did the department receive any public records requests concerning Surveillance Technology?

- The department works with the City Solicitors Office on all request for caller information and audio calls. The department policy is that we do not release 911 calls, caller information or location information externally. The only exception is if the caller

themselves request the public record. The department shares caller information with law enforcement personnel who are authorized.

7. How much did it cost to acquire and operate Surveillance Technology?

- N/A - The department does not pay for any services related operating the State 911, Next Generation 911 system.

8. Are any communities disproportionately impacted by Surveillance Technology?

- There are no impacts to disproportionately impacted communities as callers who contact 911 are doing so voluntarily to seek emergency services. When callers do contact 911, all calls are processed according to policy and protocol .

2. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Emergency Communications Department
Division or Unit (if applicable):	Police
Submitted by:	Christina Giacobbe
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Trespass Tracking

2. Has any Surveillance Technology data been shared with a third-party?

- The information maintained in the Trespass Tracking is not shared with external parties. This information is shared with Cambridge Police to protect property, public safety and to hold those accountable who violate the orders.

3. What complaints (if any) has your department received about Surveillance Technology?

- N/A

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A
-

5. Has Surveillance Technology been effective in achieving its identified purpose?

- The Trespass Tracking has been effective as it maintains up to date records of active Trespass Orders as well as safe guards those locations to increase public safety and quality of life.

6. Did the department receive any public records requests concerning Surveillance Technology?

- There have been no requests made to ECD for this information as it relates to the number of Trespass orders or individuals.

7. How much did it cost to acquire and operate Surveillance Technology?

For each Surveillance Technology listed in (1) above, list all costs associated therewith. Costs include but are not limited to operating personnel, maintenance, upgrades, training, storage, and acquisition. Also explain the source of funding for each Surveillance Technology for next year.

- There is no cost for having the database as it is part of our CAD platform.

8. Are any communities disproportionately impacted by Surveillance Technology?

- There are no communities that are disproportionately impacted as individuals are warned prior to being issued a no trespass order. The Police Department provides notice and will notify the ECC in the event a trespass is issued so we can track it for them.

3. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Executive/City Manager
Division or Unit (if applicable):	Public Information Office & Communications/Community Relations staff in: Arts Council, Community Development, Library, Police Department and Public Works
Submitted by:	Lee Gianetti
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- **Media Monitoring - Meltwater:** Meltwater is a software as a service (SaaS) company that monitors media channels and social media platforms to identify relevant content based on keyword search terms. The platform provides access to a media influencers (media contacts) database, and is used to distribute city media releases.
- **Social Media Monitoring - Meltwater Engage (Powered by Sprout Social):** Meltwater Engage is a software as a service (SaaS) that allows the City to coordinate the scheduling of social media posts, responding to messages, and evaluating the effectiveness of our social media efforts and strategy.

2. Has any Surveillance Technology data been shared with a third-party?

- No

3. What complaints (if any) has your department received about Surveillance Technology?

Describe how many complaints were received, the subject of the complaints, any department response, and the organizations responsible for the complaints, if any.

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

List all known violations, the department's diagnosis of the reason for the violation, and what remedial action was taken by the department. Also, identify steps taken to determine if violations have occurred.

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- **Meltwater Media Monitoring** – the technology has allowed the City to respond to media reports regarding the City of Cambridge in a timely and appropriate manner and ensure the City’s brand is appropriately represented. The platform allows us to measure the impact of our media outreach efforts and adjust strategy to improve coverage. The tool provides us with access to journalist and media outlet contacts from across the nation. The tool centralizes communication efforts that takes place by communications staff integrated throughout various city departments. It allows for centralized monitoring and coordination of citywide efforts.
- **Meltwater Engage** – the tool has allowed City departments to better coordinate social media efforts in terms of content reaction, strategy evaluation, and responsiveness to our followers. Not all departments have migrated into the tool yet but will in the coming years. The advantage of this tool is that all our social platforms can be accessed within one account, that is secured by various permission levels. It allows for quick access and control of City social media accounts during an emergency situation, and provides a way for the city to coordinate the dissemination of information to the public.

6. Did the department receive any public records requests concerning Surveillance Technology?

Describe how many requests were received, how many records the department produced in response thereto, and generally what information the requests were seeking.

- The Public Information Office did not directly receive any public records requests.

7. How much did it cost to acquire and operate Surveillance Technology?

For each Surveillance Technology listed in (1) above, list all costs associated therewith. Costs include but are not limited to operating personnel, maintenance, upgrades, training, storage, and acquisition. Also explain the source of funding for each Surveillance Technology for next year.

- Meltwater Media Monitoring - \$23,100 from OOM from Public Information Office budget.
- Meltwater Engage - \$33,500 from OOM from Public Information Office budget.

8. Are any communities disproportionately impacted by Surveillance Technology?

- The Public Information Office is not aware of any.

4. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Finance
Division or Unit (if applicable):	Revenue
Submitted by:	Michele Kincaid
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Atlas Database (RMV) is used by three members of the Finance team to release taxpayers from RMV Non-Renewal hold once they outstanding motor vehicle excise (“MVE”) bill has been paid. The RMV Non-Renewal program assists the City in the collection of unpaid MVE taxes.

2. Has any Surveillance Technology data been shared with a third-party?

- The City does NOT share the any data from the Atlas Data base with any other third party entity.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Yes, the Registry Non-Renewal Surcharge program through the Atlas Database has been an effective tool in the City’s collection process. For instance, the program has attributed to the collection of 2,176 past due Motor Excise Tax bill representing approximately \$750,000 in FY19.

6. Did the department receive any public records requests concerning Surveillance Technology?

- No

7. How much did it cost to acquire and operate Surveillance Technology?

- No Costs incurred except the Annual Cherry Sheet assessment. The assessment is based upon the number of vehicles that have been marked for Non-Renewal at the Registry. The following are the City's assessments for the last three years:
 - 2018 – \$481,300
 - 2019 – \$423,400
 - 2020 – \$461,860

8. Are any communities disproportionately impacted by Surveillance Technology?

- An inquiry into this data base is only made if the tax payer is paying a delinquent MVE tax bill that has been marked as Non-Renewal at the RMV. The taxpayer must pay their bill in cash or via credit card for the license hold to be released on this system.

5. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Information Technology
Division or Unit (if applicable):	
Submitted by:	Mike Dugas
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- **Cambridge Firewall** – Used to protect the City of Cambridge personnel and data from malicious activity and unauthorized access.

2. Has any Surveillance Technology data been shared with a third-party?

- We do not share this data.

3. What complaints (if any) has your department received about Surveillance Technology?

- We have not received any complaints about this technology.

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A.

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Yes, the Cambridge firewall is achieving its identified purpose, currently we block:
 - Overall about 1.5 Million events per day.
 - 100-200 Critical events daily.
 - 10-25 Anti-bot events daily.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None.

7. How much did it cost to acquire and operate Surveillance Technology?

- \$20,000 ongoing training
- \$50,000 annual maintenance
- \$25,000 Hardware maintenance

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, this technology is not impacting specific communities. It is used to protect the City employees, City Data, City networking, and infrastructure; allowing city business to be conducted safely.

6. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Information Technology
Division or Unit (if applicable):	
Submitted by:	Mike Dugas
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- **Web server access and error logging** enabled on all servers – used to assist in troubleshooting website and web server errors and performance issues.

2. Has any Surveillance Technology data been shared with a third-party?

- Web server log data has not been shared with third parties.

3. What complaints (if any) has your department received about Surveillance Technology?

- No complaints have been received regarding web server logging.

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A.

5. Has Surveillance Technology been effective in achieving its identified purpose?

- The access logs were instrumental in diagnosing a major site performance and availability issue earlier in the year.

6. Did the department receive any public records requests concerning Surveillance Technology?

- No

7. How much did it cost to acquire and operate Surveillance Technology?

- No costs are associated with this logging

8. Are any communities disproportionately impacted by Surveillance Technology?

- No communities are impacted by this surveillance technology. Web server logging logs all requests to the server used only for troubleshooting web site issues.

7. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Law
Division or Unit (if applicable):	
Submitted by:	Nancy Glowa
Date:	12/9/2019

- 1. What Surveillance Technologies has the department used in the last year?**
 - WestLaw Public Records Search function
- 2. Has any Surveillance Technology data been shared with a third-party?**
 - The vendor, in circumstances where due to technical difficulties with the software the vendor, rather than the attorney, performs the search and provides the report.
- 3. What complaints (if any) has your department received about Surveillance Technology?**
 - None.
- 4. Were any violations of the Surveillance Use Policy found in the last year?**
 - N/A
- 5. Has Surveillance Technology been effective in achieving its identified purpose?**
 - Yes.
- 6. Did the department receive any public records requests concerning Surveillance Technology?**
 - No.
- 7. How much did it cost to acquire and operate Surveillance Technology?**
 - Unknown. The WestLaw subscription total cost is not broken down by feature.
- 8. Are any communities disproportionately impacted by Surveillance Technology?**

- This technology is only used in litigation on an as-needed basis to search public records for filings or documents concerning other litigants.

8. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Mayor's Office
Division or Unit (if applicable):	
Submitted by:	Wilford Durbin, Chief of Staff
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Social media monitoring software (Section 2.128.020(G)(1)(l), Twitter monitoring via Tweetdeck. Used by Chief of Staff and Community Engagement and Communications Liaison to follow conversations on Twitter relevant to the Mayor's constituent services responsibilities, and to follow public discussion on matters before the Council. Current search criteria being compiled on Tweetdeck for Mayor's Office use include the following: @Cambridge_Mayor, #CambMA, #Mapoli, @CambMA, +@CambMA.

2. Has any Surveillance Technology data been shared with a third-party?

- No.

3. What complaints (if any) has your department received about Surveillance Technology?

- None. In fact, we usually hear the opposite—people who appreciate our responding to their constituent concern.

4. Were any violations of the Surveillance Use Policy found in the last year?

List all known violations, the department's diagnosis of the reason for the violation, and what remedial action was taken by the department. Also, identify steps taken to determine if violations have occurred.

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Quantifying the effectiveness of the use of Tweetdeck by the Mayor's Office is admittedly difficult. Constituent concerns communications via Twitter have been used to generate policy orders to the City Manager, and Mayor's Office staff have transmitted

information to Tweeter users, engaged in a public conversation, or otherwise interacted with a Tweet on a discretionary basis.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None.

7. How much did it cost to acquire and operate Surveillance Technology?

- No costs associated with acquiring or operating Tweetdeck, office personnel may monitor Tweetdeck data occasionally as part of their regular office duties.

8. Are any communities disproportionately impacted by Surveillance Technology?

- Impacts to privacy would likely not be felt by any individual, as a simple search of one's Twitter profile shows all Tweets, likes, retweets, and other activity from a user over the course of that profile's existence, and Tweetdeck would not provide any additional information than could be found during such a search. It is Tweetdeck's ability to monitor public conversations in real time across multiple Twitter accounts that could trigger a privacy concern, as one could use the information to build a network of individuals who used keywords or hashtags associated with certain ideologies: #MeToo, #MAGA, #NobodyWins, #NeverTrump, #BlackLivesMatter, etc. As Twitter's search functions become more advanced, it is becoming possible to search people's sentiments in a Tweet, collecting all posts that mention Cambridge in a positive or negative sentiment, for example. Current search criteria being compiled on Tweetdeck for Mayor's Office use include the following: @Cambridge_Mayor, #CambMA, #Mapoli, @CambMA, +@CambMA.
- Twitter is the only social media platform that is regularly monitored by Mayor's Office staff, which means that those constituents who use other social media platforms do not have the same access to Office staff as Twitter users. Additionally, Twitter users are typically younger, more educated, and more likely to identify as Democrats than the general population. Twitter has been shown to be disproportionately popular among African American and Hispanic users.
- The Mayor's Office has attempted to make itself available to a wider proportion of residents by hosting regular open office hours, employing a community engagement team, attending community events, and responding to communications that are received through mail, email, telephone, or other mediums.

9. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	Crime Analysis (and CID)
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Accurint Workstation: Crime Analysis Software for mapping, etc
- BRIC Omega Dashboard: Intel portal for Boston Regional Intel CTR
- Coplink: Nespun portal for exchange of CJ reports
- QED: Record Management System
- Incident Database: Access database of corrected RMS Data
- CLEAR: Public Records search engine
- Lexis Nexis: Public Safety Search Engine
- Focused Deterrence Database: Algorithm to query RMS data
- LENS: Federal Probation Database (active Cambridge federal probationers)

2. Has any Surveillance Technology data been shared with a third-party?

- BRIC Omega Dashboard: The Department shares incident data with the BRIC on a daily basis for effective regional law enforcement.
- Coplink: the Department shares incident data with Coplink on a daily basis for effective statewide law enforcement.
- QED: the Department regularly shares incident data with fellow law enforcement and provides records for public records requests.
- Incident Database: The Crime Analysis Unit creates weekly, monthly and annual reports based on this crime data.
- The Department provides the Middlesex District Attorney's Office with mandatory discovery on all criminal prosecutions.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Accurint Workstation: Crime Analysis Software for mapping, etc
 - Yes, the technology has been effective in realizing the stated purpose. This technology allows the Crime Analysis Unit to effectively analyze and map crime, which is an essential function of a modern police department.
- BRIC Omega Dashboard: Intel portal for Boston Regional Intel CTR
 - Yes, the technology has been effective in realizing the stated purpose. The technology allows the Department to obtain regional crime data (and crime mapping) about local offenders/offenses on a daily basis to help effectively solve crime and make arrests.
- Coplink: Nespın portal for exchange of CJ reports
 - Yes, the technology has been effective in realizing the stated purpose. The technology allows the Department to obtain statewide crime data (and crime mapping) about local offenders/offenses on a daily basis to help effectively solve crime and make arrests.
- QED: Record Management System
 - Yes, the technology has been effective in realizing the stated purpose. QED serves as the central report writing and incident documentation system for the Department. The Department is required by state and federal law, as well as court procedural rules to document a variety of police encounters, whether for criminal, civil or administrative matters.
- Incident Database: Access database of corrected RMS Data
 - Yes, the technology has been effective in realizing the stated purpose. This database is a condensed accounting of QED incidents for purposes of crime incident statistical reporting. This database is effectively utilized for weekly, monthly and annual crime reporting.
- CLEAR: Public Records search engine
 - Yes, the technology has been effective in realizing the stated purpose. The technology allows Department personnel to effectively search public records to locate offenders, victims and witnesses for criminal investigations.
- Lexis Nexis: Public Safety Search Engine
 - Yes, the technology has been effective in realizing the stated purpose. The technology allows Department personnel to effectively search public records to locate offenders, victims and witnesses for criminal investigations.
- Focused Deterrence Database: Algorithm to query RMS data
 - Yes, the technology has been effective in realizing the stated purpose. The technology allows the Department to analyze criminal data and objectively

identify those individuals who are causing the greatest amount of social harm to the community and/or are in need of social services.

- LENS: Federal Probation Database (active Cambridge federal probationers)
 - Yes, the technology has been effective in realizing the state purpose. The technology allows the Department to identify Cambridge residents who are on federal probation.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Accurint Workstation (Lexis Nexis): Crime Analysis Software for mapping, etc
 - \$30,000
- BRIC Omega Dashboard: Intel portal for Boston Regional Intel CTR
 - None
- Coplink: Nespun portal for exchange of CJ reports
 - Not available
- QED: Record Management System
 - Not available – multi-agency product
- Incident Database: Access database of corrected RMS Data
 - None
- CLEAR: Public Records search engine
 - Not available
- Focused Deterrence Database: Algorithm to query RMS data
 - None
- LENS: Federal Probation Database (active Cambridge federal probationers)
 - None

8. Are any communities disproportionately impacted by Surveillance Technology?

- Accurint Workstation: Crime Analysis Software for mapping, etc
 - No – this is general incident data for the entire city.
- BRIC Omega Dashboard: Intel portal for Boston Regional Intel CTR
 - No – this is combined general incident data for the Boston region.
- Coplink: Nespun portal for exchange of CJ reports

- No – this is combined general incident data for the state.
- QED: Record Management System
 - No – this is the Department’s general records management system
- Incident Database: Access database of corrected RMS Data
 - No – this is a condensed version the Department’s general records management system
- CLEAR: Public Records search engine
 - No – this is a public records search engine used to locate people.
- Lexis Nexis: Public Records search engine
 - No – this is a public records search engine used to locate people.
- Focused Deterrence Database: Algorithm to query RMS data
 - No – this is an algorithm utilizing the general incident data from Department’s records management system.
- LENS: Federal Probation Database (active Cambridge federal probationers)
 - No – this is a database identifying those Cambridge residents who are on federal probation.

10. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	CID Days; DV/SA; Cyber
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- GPS Tracking Devices (2): Location tracking through satellite triangulation for property (bicycles/packages) stolen from the Cambridge Police Department
- Cell phone and computer forensic analysis:
 - Digital Intelligence Workstation: Desktop computer hardware
 - Dell Laptop BCERT: Hardware for computer evidence recovery
 - Magnet Forensics – Axiom: Forensics software for computers & mobile devices
 - Getdata Forensic Explorer: Software for analysis of digital evidence
- Shotspotter: Gun shot detection system

2. Has any Surveillance Technology data been shared with a third-party?

- Shotspotter: Gunshot detection system
 - Members of the Metro Boston UASI region can receive Cambridge Shotspotter notifications for officer and public safety.
- The Department provides the Middlesex District Attorney's Office with mandatory discovery on all criminal prosecutions.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- GPS Tracking Devices (2): Location tracking through satellite triangulation for property (bicycles/packages) stolen from the Cambridge Police Department.
 - Yes, the technology has been effective in realizing the stated purpose. The technology has allowed the Department to identify a number of bike and package thefts.
- Cell phone and computer forensic analysis:
 - Digital Intelligence Workstation: Desktop computer hardware
 - Dell Laptop BCERT: Hardware for computer evidence recovery
 - Magnet Forensics – Axiom: Forensics software for computers & mobile devices
 - Getdata Forensic Explorer: Software for analysis of digital evidence
 - Yes, the technology has been effective in realizing the stated purpose. The technology has allowed detectives from the Department’s Cyber Unit to effectively search and analyze computers and cell phones in dozens of criminal investigations.
- Shotspotter: Gunshot detection system
 - Yes, the technology has been effective in realizing the stated purpose. The technology has effectively detected gunshot activity and allowed officers to more efficiently respond to relevant crime scene.

6. Did the department receive any public records requests concerning Surveillance Technology?

- Shotspotter – three.
 1. Requestor was looking for gun fire data generated by Shotspotter. The Department provided relevant CAD data.
 2. Requestor was looking for records on live fire testing for Shotspotter, which were provided.
 3. Requestor was looking general information about Shotspotter and the accuracy of the technology. The Department provided relevant CAD reports and gunshot data for the requested timeframe.

7. How much did it cost to acquire and operate Surveillance Technology?

- GPS Tracking Devices (2): Location tracking through satellite triangulation for property (bicycles/packages) stolen from the Cambridge Police Department.
 - Not available
- Cell phone and computer forensic analysis:
 - Digital Intelligence Workstation: Desktop computer hardware
 - Dell Laptop BCERT: Hardware for computer evidence recovery

- Magnet Forensics – Axiom: Forensics software for computers & mobile devices
- Getdata Forensic Explorer: Software for analysis of digital evidence
 - None
- Shotspotter: Gun shot detection system
 - None

8. Are any communities disproportionately impacted by Surveillance Technology?

- GPS Tracking Devices (2): Location tracking through satellite triangulation for property (bicycles/packages) stolen from the Cambridge Police Department
 - No – this technology tracks bicycles and packages stolen from the Department.
- Cell phone and computer forensic analysis:
 - Digital Intelligence Workstation: Desktop computer hardware
 - Dell Laptop BCERT: Hardware for computer evidence recovery
 - Magnet Forensics – Axiom: Forensics software for computers & mobile devices
 - Getdata Forensic Explorer: Software for analysis of digital evidence
 - No – this technology is utilized for all investigations in which a cell phone or computer device is lawfully seized. The technology is only utilized where there is no reasonable expectation of privacy, after consent is provided or a search warrant is obtained.
- Shotspotter: Gunshot detection system.
 - No – this technology detects the sound of gunshots.

11. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	SIU
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Keltech Covert Streetlight Camera: Covert camera
- CSA Pole Camera: Pole camera
- DTC body wire: Audio surveillance for officer safety
- I.V.C.: Exterior point, tilt and zoom camera

2. Has any Surveillance Technology data been shared with a third-party?

- The Department provides the Middlesex District Attorney's Office with mandatory discovery on all criminal prosecutions.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- None

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Surveillance cameras: Yes, the technology has been effective in realizing the stated purpose. The cameras were effectively deployed to surveil public locations that were hotspots for firearm activity.
- Body wire: Yes, the technology has been effective for officer safety during undercover drug and vice operations.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Not available

8. Are any communities disproportionately impacted by Surveillance Technology?

- Surveillance cameras: This technology was deployed this year in public places in communities where there was a documented pattern of firearms activity. Deployment of this technology occurred with Command Staff level approval after a demonstrated risk to public safety.
- Body wire: No, the technology is deployed during undercover drug and vice operations for officer safety.

12. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	Crime Scene Services, Booking & Records
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Morpho (AFIS) with camera (MSP): Fingerprint database with MSP
- Live Scan (4 devices): Digital fingerprint system with live feed to FBI and MSP for criminal history

2. Has any Surveillance Technology data been shared with a third-party?

- Morpho (AFIS) with camera (MSP): Fingerprint database with MSP
 - For each case where this technology is utilized, data is shared with the Massachusetts State Police (“MSP”). If a latent print is individualized to a known print by members of the Department’s Crime Scene Services Unit, the data will be shared with an external police department for verification purposes under the ACE-V methodology for fingerprint analysis.
- Live Scan (4 devices): Digital fingerprint system with live feed to FBI and MSP for criminal history
 - Every live scan procedure is shared with the FBI and MSP
- The Department provides the Middlesex District Attorney’s Office with mandatory discovery on all criminal prosecutions.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Morpho (AFIS) with camera (MSP): Fingerprint database with MSP.

- Yes the technology has been effective in realizing the stated purpose. The technology has allowed Department to identify a number of offenders based on latent fingerprints left a crime scenes or on evidence.
- Live Scan (4 devices): Digital fingerprint system with live feed to FBI and MSP for criminal history
 - Yes the technology has been effective in realizing the stated purpose. The technology allows the Department to verify the identity of someone in police custody and obtain their federal and state criminal history for law enforcement purposes.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Morpho (AFIS) with camera (MSP): Fingerprint database with MSP
 - \$4,571 maintenance.
- Live scan booking & records (4 devices): Digital fingerprint system with live feed to FBI and MSP for criminal history
 - Approximately \$29,000 for each device plus \$9,660 in maintenance.

8. Are any communities disproportionately impacted by Surveillance Technology?

- Morpho (AFIS) with camera (MSP): Fingerprint database with MSP
 - No – the technology is utilized to identify latent fingerprints.
- Live Scan (4 devices): Digital fingerprint system with live feed to FBI and MSP for criminal history.
 - No – all individuals who are lawfully in police custody are subject to having their fingerprints taken via Live Scan.

13. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	EOD
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Robotex Avartar II 2 camera wireless (3): small platform robot gripper and camera assist
- Foster miller Tallon robot 4 camera wireless: Medium platform robot gripper and camera assist
- Foster Miller Dragon runner 4 camera wireless: Medium platform robot gripper and camera assist
- Remotetec F6A robot 4 camera wireless and fiberoptic: Large platform robot gripper and camera assist
- Tactical electronics VF52 Fiber scope: optical scope technology used to view enclosed or secure areas for explosive mitigation
- ATF Bomb arson tracking: ATF reporting online system

2. Has any Surveillance Technology data been shared with a third-party?

- Camera and Scope Technology:
 - The EOD does not use this technology to record.
- ATF Bomb/Arson tracking: ATF reporting online system
 - The Department enters bomb and arson cases in to this system.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Camera and Scope Technology: Yes the technology has been effective in realizing the stated purpose. This technology has been regularly deployed to determine whether explosive devices in a given location or piece of property.
- ATF Bomb/Arson tracking: ATF reporting online system: Yes the technology has been effective in realizing the stated purpose. The technology allows the Department's EOD to report and track arson and bomb cases.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Robotex Avartar II 2 camera wireless (3): small platform robot gripper and camera assist:
 - Original cost was approximately \$40,000 with on-going maintenance cost as needed.
- Foster miller Tallon robot 4 camera wireless: Medium platform robot gripper and camera assist:
 - Original cost was approximately \$105,000 with on-going maintenance cost as needed.
- Foster Miller Dragon runner 4 camera wireless: Medium platform robot gripper and camera assist:
 - Original cost was approximately \$102,000 with on-going maintenance cost as needed.
- Remototec F6A robot 4 camera wireless and fiberoptic: Large platform robot gripper and camera assist:
 - Original cost was approximately \$150,000 with on-going maintenance cost as needed.
- Tactical electronics VF52 Fiber scope: optical scope technology used to view enclosed or secure areas for explosive mitigation:
 - Original cost was \$56,000 with on-going maintenance cost as needed.
- ATF Bomb arson tracking: ATF reporting online system:
 - None

8. Are any communities disproportionately impacted by Surveillance Technology?

- Camera and Scope Technology: No, this technology is deployed whenever there is a threat that an explosive device may be present in a building or package.

- ATF Bomb/Arson tracking: No, this technology is used to track all arson and bomb cases.

14. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	Fleet
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Transport Wagon 240 recording: Prisoner Transport Security Cameras
- Transport Wagon 236 recording: Prisoner Transport Security Cameras

2. Has any Surveillance Technology data been shared with a third-party?

- The Department provides the Middlesex District Attorney's Office with mandatory discovery on all criminal prosecutions.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Yes the technology has been effective in realizing the stated purpose. The cameras are used to view persons lawfully in police custody who are being transported by the Department and are effectively use for their safety and the safety of the transporting officers.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Transport Wagon #240: \$2,500
- Transport Wagon #236: \$2,280

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, the cameras are utilized for to view all persons lawfully in police custody who are being transported by the Department.

15. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	SRT
Submitted by:	Jim Mulcahy
Date:	12/9/2019

- 1. What Surveillance Technologies has the department used in the last year?**
 - 1 Throwbot XT: Robotic camera for remote viewing (no recording)
- 2. Has any Surveillance Technology data been shared with a third-party?**
 - None
- 3. What complaints (if any) has your department received about Surveillance Technology?**
 - None
- 4. Were any violations of the Surveillance Use Policy found in the last year?**
 - N/A
- 5. Has Surveillance Technology been effective in achieving its identified purpose?**
 - The technology has been effective in realizing the stated purpose. This technology has allowed the Special Response Team to assess whether a threat exists before making lawful entry or taking further action.
- 6. Did the department receive any public records requests concerning Surveillance Technology?**
 - None
- 7. How much did it cost to acquire and operate Surveillance Technology?**
 - Original purchase price of \$14,000, plus the most recent maintenance (\$1,750)

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, this technology is utilized in any situation where the SRT needs to assess whether a threat exists before making lawful entry or taking further action.

16. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	CID
Submitted by:	Jim Mulcahy
Date:	12/9/2019

- 1. What Surveillance Technologies has the department used in the last year?**
 - Case Cracker; Video Recording - Interview Rooms
- 2. Has any Surveillance Technology data been shared with a third-party?**
 - The Department provides the Middlesex District Attorney's Office with mandatory discovery on all criminal prosecutions.
- 3. What complaints (if any) has your department received about Surveillance Technology?**
 - None
- 4. Were any violations of the Surveillance Use Policy found in the last year?**
 - N/A
- 5. Has Surveillance Technology been effective in achieving its identified purpose?**
 - Yes, the technology has been effective in realizing the stated purpose. The technology effectively records interviews in the Criminal Investigations Division.
- 6. Did the department receive any public records requests concerning Surveillance Technology?**
 - None
- 7. How much did it cost to acquire and operate Surveillance Technology?**
 - Approximately \$40,000

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, this technology records all interviews in the Criminal Investigations Division.

17. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	Professional Standards Unit
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Infracore; Dictation Software

2. Has any Surveillance Technology data been shared with a third-party?

- No, this technology is utilized for internal investigations through the Department's Professional Standards Unit.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Yes, the technology has been effective in realizing the state purpose. This technology has allowed the PSU to obtain transcripts for internal investigations.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- Not available.

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, this technology is utilized to obtain transcripts of voluntary interviews given during PSU investigations.

18. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Police
Division or Unit (if applicable):	PIO
Submitted by:	Jim Mulcahy
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- TweetDeck

2. Has any Surveillance Technology data been shared with a third-party?

- None, other than the actual posting of social media on Twitter.

3. What complaints (if any) has your department received about Surveillance Technology?

- None

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- Yes, the technology has been effective in realizing the state purpose. This technology has allowed the PIO to view Twitter mentions and posts about the Department.

6. Did the department receive any public records requests concerning Surveillance Technology?

- None

7. How much did it cost to acquire and operate Surveillance Technology?

- None

8. Are any communities disproportionately impacted by Surveillance Technology?

- No, this technology is utilized to aggregate publically available Twitter posts and mentions about the Department.

19. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Cambridge Public Health Department
Division or Unit (if applicable):	Public Health Nursing Epidemiology and Data Services
Submitted by:	Anna Wielgosz Manager, Epidemiology and Data Services
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- MAVEN (Massachusetts Virtual Epidemiologic Network) is a PHIN (Public Health Information Network) compliant, secure web-based surveillance and case management system for infectious diseases that enables rapid, efficient communication among local and state health departments and laboratories. MAVEN allows us to conduct case investigations and management.

2. Has any Surveillance Technology data been shared with a third-party?

- Surveillance data is only shared with the Massachusetts Department of Public Health, as required by state law.

3. What complaints (if any) has your department received about Surveillance Technology?

- N/A

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A.

5. Has Surveillance Technology been effective in achieving its identified purpose?

- MAVEN remains an essential tool for CPHD to complete state-mandated infectious disease investigation work. In 2018, CPHD received reports of 873 reportable infectious diseases among Cambridge residents; of these, 148 required follow-up and investigation by public health nursing and epidemiology staff.

6. Did the department receive any public records requests concerning Surveillance Technology?

- No public records requests were received.

7. How much did it cost to acquire and operate Surveillance Technology?

- Costs for the acquisition, operation, and maintenance of MAVEN are covered by the Massachusetts Department of Public Health. CPHD staff use MAVEN to do state-mandated infectious disease investigations, but are not involved in the initial or ongoing maintenance of the system.

8. Are any communities disproportionately impacted by Surveillance Technology?

- All confirmed and suspected cases of reportable infectious diseases among Cambridge residents are required to be reported to the state health department and/or the Cambridge Public Health Department through MAVEN, where they are managed and investigated. Representation in the MAVEN system, then, is a function of the distribution of disease in the Cambridge population and the health care utilization rates among Cambridge residents, both of which may vary by sub-group within Cambridge. Wherever possible, CPHD considers the potential over- or under-representation of marginalized communities in Cambridge in our infectious disease investigation work.

20. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	School Department
Division or Unit (if applicable):	Safety & Security, Transportation (buses)
Submitted by:	Diane Fisk Johnson
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- Bus video recorders on individual buses, used to provide a visual recording of any incidents that take place during bus runs. Can be reviewed by the Transportation Director on an as needed basis to aid in investigation.

2. Has any Surveillance Technology data been shared with a third-party?

- Any reviews of bus incidents would be first reviewed by the Transportation Director, and then would be shared with appropriate parties. If it is an incident involving a driver or monitor, it would be shared with the transportation company. If it is an incident involving a student, it would be shared with the student's principal, and possibly the student's parents, for appropriate disciplinary action within school department policy.

3. What complaints (if any) has your department received about Surveillance Technology?

- The only complaints received were on occasions when cameras malfunctioned and desired footage was not obtained. There have been no complaints about any footage acquired this year.

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A.

5. Has Surveillance Technology been effective in achieving its identified purpose?

- The use of onboard cameras on school buses has been very beneficial in allowing speedy resolution of reported incidences, allowing facts to be separated from hearsay, and aiding in appropriate responses to inappropriate behaviors.

6. Did the department receive any public records requests concerning Surveillance Technology?

- Not in this year.

7. How much did it cost to acquire and operate Surveillance Technology?

- There were no direct costs associated with the cameras in this year.

8. Are any communities disproportionately impacted by Surveillance Technology?

- The bus cameras impact all riders of the buses equally.

21. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Traffic, Parking, and Transportation
Division or Unit (if applicable):	Parking Management, Street Management
Submitted by:	Joe Barr, Brooke McKenna, Stephanie McAuliffe
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- **ATLAS: Massachusetts RMV Website Portal (Parking Management)** ATLAS: Massachusetts RMV Website Portal (Parking Management) is a web application provided by the Commonwealth of Massachusetts to access the RMV system. It used by Parking Services staff. Internal access only with user restrictions by name and password. Information accessed includes name, address, license plate number, registration status, vehicle details, vehicle addresses and garage code. Used to issue resident parking permits; view handicap placard information and clear holds on licenses and vehicle registrations. No data is collected or stored, and the public cannot access it.
- **Traffic Signal Detection Cameras (Street Management):** Deployed at a limited number of signalized intersections across the City. Used for detection of roadway users, to classify their mode of transportation, and to quantify their movements at signalized intersections in the City of Cambridge, and to assist in the optimized operation of traffic signals. The aggregated data collected will be analyzed and used to improve the efficiency and safety of operations for all roadway users. The technology will also provide City staff with continuous roadway user counts to allow for evaluation of seasonal and annual traffic volume variations to assist in future design and planning projects. The detection cameras include 360 degree units manufactured by MioVision and directional cameras manufactured by Iteris.
- **MioVision Traffic Count Mobile Camera Units (Street Management)** These units are deployed in the field by transportation consultants, at various locations on a temporary basis. The units are typically attached to a signal, utility, or streetlight pole within the right of way. This technology collects traffic video and data that is later processed to provide a variety of traffic related data such as turning movement counts, intersection counts and classifications, road volume counts, and travel times.

2. Has any Surveillance Technology data been shared with a third-party?

- MioVision Intersection Cameras are accessed by the Vendor, MioVision, for purposes of set up, training, and trouble shooting of the product.
- Video from MioVision Traffic Count Mobile Camera Units is collected and accessed by Transportation Consultants. Given that past deployment has taken place without City approvals, we cannot determine who has accessed the data. Moving forward, a permitting system will allow us to understand who is collecting data.

3. What complaints (if any) has your department received about Surveillance Technology?

- The department has received inquiries about the installed cameras from time to time, but typically the inquiries are not complaints. We explain the use of the technology and that has been satisfactory for individuals inquiring. Moving forward, we will formally log all incoming inquiries about the technologies.

4. Were any violations of the Surveillance Use Policy found in the last year?

- N/A

5. Has Surveillance Technology been effective in achieving its identified purpose?

- ATLAS: Massachusetts RMV Website Portal (Parking Management) is used daily by Parking Services staff to issue resident parking permits, view handicap placard information and clear license and registration holds. In 2019, 38,381 Resident Parking Permits have been issued. In FY19, there were 17,973 chargeable clears for license and registrations holds.
- Traffic Signal Detection Cameras: The MioVision units were installed in late 2019 and are functioning as expected. We will be better able to assess the success of the units once we have collected enough data to use for analysis.
- MioVision Traffic Count Mobile Camera Units: These data collection units are a significant improvement over past manual and tube data collection methods. In the past, counts have been taken by hand, which is far more labor intensive and limits the amount and timeframe of the data collected. Tubes used for data collection frequently malfunctioned or were destroyed by road traffic or street cleaning vehicles. Overall, the video-based data collection allows for better data collection, and as a result, far better data analysis for transportation planning. In addition, it is becoming increasingly difficult to obtain detailed counts using any other methodology as most vendors are using this technology.

6. Did the department receive any public records requests concerning Surveillance Technology?

- In January we received a request from John Hawkinson that was sent to via email to the City Manager's office. He requested records that answered the following questions about the Signal Detection Cameras at Ames/Main Street:
 1. Make/model number of the cameras?
 2. How many are deployed?
 3. Where are they installed?
 4. Date of installation and activation?
 5. Whether the fact that they do not record is enforced by configuration, by software, by hardware, or some other mechanism?
 6. Effect on bicycles and non-auto vehicles?
 7. Effect on cycle times?

The Public Records Access Officer responded with a sales brochure about the cameras and the signal plans for the Ames and Main Street intersection.

- In late March we received a request via an email to the Public Records Access Officer for all records related to the City's pilot programs with MioVision and Draper. The requestor did not provide any more details about what they were looking to learn. The Public Records Access Officer provided all records except for emails. One document was withheld as it was exempt from disclosure because the document related to policy positions being developed by the City. A total of 10 records were provided.
- In total, we've received two requests, both of which came via email, and provided 12 records.

7. How much did it cost to acquire and operate Surveillance Technology?

- ATLAS: Massachusetts RMV Website Portal (Parking Management):
 - Operating: \$20.00 RMV surcharge for license plate clears. In FY 2019, there were 17,973 chargeable clears for license and registrations holds.
 - Personnel: zero
 - Maintenance: zero
 - Upgrades: zero
 - Training: zero
 - Storage: zero

Acquisition: zero

- Traffic Signal Detection Cameras:

Operating: N/A

Personnel: N/A

Maintenance: N/A

Upgrades: N/A

Training: N/A

Storage: N/A

Acquisition: \$166,000 funded by Casino Mitigation Funds.

- MioVision Traffic Count Mobile Camera Units

Operating: N/A

Personnel: N/A

Maintenance: N/A

Upgrades: N/A

Training: N/A

Storage: N/A

Acquisition: N/A

Note that these are typically installed by traffic engineering consultants as part of the overall cost of a transportation planning or traffic engineering study, such as a Traffic Impact Study required for a private development project.

8. Are any communities disproportionately impacted by Surveillance Technology?

- ATLAS: Massachusetts RMV Website Portal (Parking Management): The use of the Massachusetts RMV Website Portal does not have any disproportionate impact on any population:
- Traffic Signal Detection Cameras: The use of Detection Cameras does not have any disproportionate impact on any population. Although they are installed in specific communities that have specific demographics, they observe all users that pass through an intersection, whether or not those users come from those local communities. Typically, these units are installed at major intersections which carry both local and regional traffic.
- MioVision Traffic Count Mobile Camera Units: The use of MioVision Intersection Cameras does not have any disproportionate impact on any population.

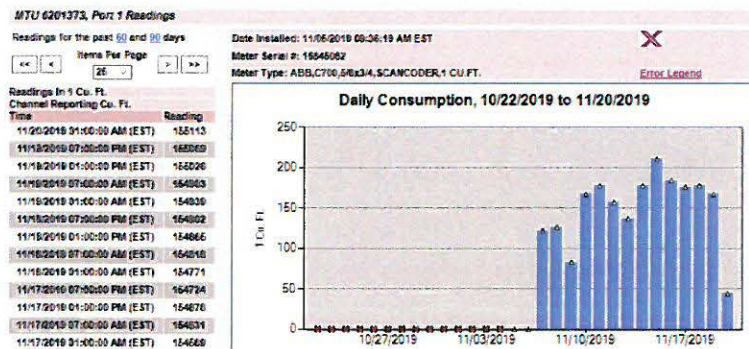
22. CITY OF CAMBRIDGE ANNUAL SURVEILLANCE REPORT

Department:	Water
Division or Unit (if applicable):	
Submitted by:	Fred Centanni
Date:	12/9/2019

1. What Surveillance Technologies has the department used in the last year?

- **Automated Meter Reading (AMR) System:**

The Water Department’s AMR system is a radio-based system which transmits on a Federal Communication Commission (FCC) licensed/reserved frequency. Meter Transmitter Units (MTUs) are attached to every water meter throughout the city. The MTU transmits water meter reads in a propriety format. These reads are transmitted every 4 hours on a floating schedule. For example, an MTU will transmit a read today at 6:00AM, and then transmit a read tomorrow at 6:03AM. The reads are received by the Data Collection Units (DCUs) located within the city. The DCUs transmit the meter readings, using a cell phone network, to a communications computer located at the Water Department. The communications computer then transfers the data to a database computer which translates the data in order for the city to view the water meter reads. This allows the Water Department to provide actual reads for billing and allows us to alert customers for potential leaks at their property. Below is an example of our STAR AMR software and the data collected:



2. Has any Surveillance Technology data been shared with a third-party?

- No

3. **What complaints (if any) has your department received about Surveillance Technology?**
 - None
4. **Were any violations of the Surveillance Use Policy found in the last year?**
 - N/A
5. **Has Surveillance Technology been effective in achieving its identified purpose?**
 - Yes
6. **Did the department receive any public records requests concerning Surveillance Technology?**
 - No
7. **How much did it cost to acquire and operate Surveillance Technology?**
 - **Automated Meter Reading (AMR) System:**
 - **Initial costs** – The original implementation cost (2004-2006) was approximately \$4,000,000.
 - We are now nearing completion of an upgrade of the AMR system to replace all the MTUs because the batteries reached their life expectancy. The MTU cost was \$1,545,600 and the full value of the installation contract is \$1,102,500.
 - We also have a contract to upgrade the DCUs and software for \$48,380.
 - **Ongoing maintenance** – The Water Department has an annual maintenance agreement for approximately \$15,000.
 - **Personnel costs** – personnel costs have gone down related to AMR.
 - **Source of funds** – Capital Water Funds for upgrade, Operating Water Funds for the annual maintenance agreement
8. **Are any communities disproportionately impacted by Surveillance Technology?**
 - No