Surveillance Technology Usage Review: Seattle City Light Current Diversion Technologies

October 31, 2022

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Report Highlights

Background

The diversion of electrical energy results in inaccurate registration or no registration on Seattle City Light owned meters of the full amount of electrical energy supplied to a customer's premises. Current diversion can be the result of intentional tampering with the meter or the service wiring for the purpose of reducing the electricity measured by the meter or bypassing the meter all together.

City Light owns three current diversion technologies to detect and/or measure the amount of a customer's suspected current diversion. Two of the technologies measure the volume of electrical energy received at a customer's service line connection at the utility pole, which is compared to the volume of electrical energy registered by the customer's meter. Any difference in the two measurements is used to calculate the amount of diverted electricity. City Light also owns binoculars that they can use in their investigations of suspected current diversion. Each of the three technologies are used in ways that classifies them as surveillance technologies because they can gather information on individuals without their knowledge.

City Light's Current Diversion Team (CDT) consists of two supervisors, a coordinator, and four meter electricians who are responsible for investigating current diversion activities. The three surveillance technologies the CDT has used to assist in detecting current diversion are:

- The SensorLink Ampstik, also known as an Ampfork.
- The SensorLink Transformer Meter System (TMS), also known as a Check Meter Device.
- Standard, commercial-grade, unpowered binoculars, and a spotting scope.

These technologies can create risks to civil liberties related to privacy, freedom of speech or association, or disparate impact on groups through over-surveillance. When using binoculars, the observations documented by meter electricians may contain personal identifiable information (PII) and may pose a privacy risk if used inappropriately. During the City of Seattle's

WHY WE DID THIS AUDIT

Seattle Municipal Code (SMC) 14.18.060 requires the City Auditor to annually review City departments' use of City Council-approved surveillance technologies. Council approval of City Light's use of current diversion technologies triggered this review of compliance with SMC 14.18 and the technologies' Surveillance Impact Reports.

HOW WE DID THIS AUDIT

To accomplish the audit's objectives, we:

- Reviewed Ordinance 126294 and the attached three current diversion technologies' Surveillance Impact Reports (SIRs),
- Interviewed City Light and Seattle Information Technology Department officials who manage, operate, and oversee current diversion technologies,
- Reviewed 2020 and 2021 current diversion investigation case files, and
- Obtained documents to verify compliance with Ordinance 126294.

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(City) surveillance technology public engagement process, members of the public raised concerns about the use of the technologies and City Light acknowledged the importance of the methods and procedures surrounding their use. According to City Light, they mitigate these risks by ensuring that CDT workers drive standard City Light-marked vehicles and can be identified by their City Light ID badges and hard hats. The TMS and Ampstik do not in and of themselves collect PII. The data these devices collect is strictly related to current flow at the point where the service line meets the distribution system. However, when this data is combined with customer information from the billing system, this results in PII.

Our review of City Light's investigation files showed that the only current diversion technology used in investigations in both 2020 and 2021 was the Ampstik, which was used in only one investigation. Our review of this investigation revealed that the customer was involved in a cannabis growing operation that resulted in $34,290 owed to the City.

What We Found

We concluded that, City Light's use of the current diversion technologies complies with the stated uses the City Council approved in the Surveillance Impact Reports (SIRs). However, we make 11 recommendations (see Appendix B) to improve City Light's compliance with the Surveillance Ordinance, which is codified in Seattle Municipal Code 14.18 (Ordinance 125376), and Ordinance 126294, which authorized City Light's continued use of surveillance technologies to assist in current diversion investigations. Our recommendations to City Light include:

- Documenting existing protocols relating to current diversion technologies and ensuring the protocols specify how surveillance data and the technologies themselves are shared outside of City Light's Current Diversion Team, including with non-City entities.
- Updating City Light's policies and procedures to require periodic audits of access rights to the secured electronic drives containing current diversion documentation.
- Updating City Light's policies and procedures to align the records retention requirements to those of the City for current diversion investigation records.
- Updating the SIRs to explain why City Light did not perform an equity analysis of past enforcement locations as it agreed to do in the SIRs.

We also make two recommendations for other issues not directly related to SMC 14.18.

Department Response

In their formal, written response to our report, City Light officials stated that they concur with all the recommendations. We include City Light's response memo in Appendix A.

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EXECUTIVE SUMMARY

We reviewed the use of the City of Seattle's (City) current diversion technologies for compliance with Seattle Municipal Code (SMC) 14.18 (Ordinance 125376). SMC 14.18.060 directs the City Auditor to conduct annual reviews of the City's use of surveillance technologies and the extent to which departments comply with the requirements of the SMC and with the terms of the approved Surveillance Impact Reports (SIRs). This ordinance resulted from concerns about privacy, the lack of a process for the City's acquisition of surveillance technologies, and the risks that such technologies could pose to civil liberties related to privacy, freedom of speech or association, or have a disparate impact on specific demographic groups through over-surveillance.

This audit focused on Seattle City Light's (City Light) compliance in its use of three surveillance technologies with SMC 14.18, specifically SMC 14.18.040 through 14.18.070. The Executive Summary below (Exhibit 1) highlights our major findings and recommendations pertaining to SMC 14.18.060 A through E. The Executive Summary cross references SMC 14.18.060 with SMC 14.18.040 when there are substantial similarities. We found that City Light could help ensure compliance with the SMC for these technologies by implementing our recommendations in this report. Many of our recommendations noted in Exhibit 1 below concern updates of City Light's policies and procedures so that they are aligned with statements made in the SIRs and with SMC requirements.

Exhibit 1: Summary of Assessments and Recommendations Related to SMC 14.18.060

14.18.060 Provision	Compliance Determination	Auditor's Assessment	Recommendations
A. How the surveillance technology has been used, how frequently, and whether usage patterns are changing over time. **Related SMC Sections** 14.18.040 B1 14.18.040 B2 14.18.040 B3(g)	**No** 	According to a City Light official, City Light has not used the SensorLink TMS in an investigation in the last six years and the device will not be used in the future due to lack of software support. Unless this technology is retired from service, it will remain as an asset in City Light's books and records and will be unnecessarily subject to future evaluation as a surveillance technology. City Light's policies and procedures (DPP's) are not aligned with statements made in the Surveillance Impact Reports and SMC 14.18.	**Recommendation 1** City Light should formally retire from service the SensorLink Transformer Meter System surveillance technology. **Recommendation 2** City Light should update its policies and procedures to align them with statements made in the Surveillance Impact Reports and with Seattle Municipal Code 14.18.

14.18.060 Provision	Compliance Determination	Auditor's Assessment	Recommendations
B. How often the surveillance technology or its data are being shared with other entities, including other governments in particular. **Related SMC Sections** 14.18.040.C 14.18.040.B3 (f) 14.18.040.D	**No** 	DPP V-3, Section 5.1, states "The Current Diversion Coordinator shall maintain a protocol for current diversion response that provides guidance for coordination between law enforcement agencies and the Department for making premises safe and investigating current diversion cases." According to a City Light official, the protocol is not documented, posing the risk of non-compliance. The DPPs do not address City Light's sharing of surveillance technologies or data outside of City Light's Current Diversion Team, including sharing with non-City entities.	**Recommendation 3** City Light should document the existing protocols for its surveillance technologies and ensure they include how surveillance technologies and data are shared outside of City Light's Technical Metering Operation, including with non-City entities. **Recommendation 4** City Light should include in documented protocols how they ensure compliance from anyone outside of the Technical Metering Operation who City Light shares either surveillance technology or its data with. If current diversion technologies are not shared, that should be specified in the protocols.
C. How well data management protocols are safeguarding individual information **Related SMC Sections** 14.18.040.B3 (C) 14.18.040.B3 (D) 14.18.040.B3 (E)	**No** 	The Seattle Information Technology Department (SITD) has not performed any audits of access rights as stated in the Surveillance Impact Reports and we found no requirement to do so in City Light's DPP's. Audits will ensure the timely removal of individuals from access to the secure drive who have left the City and should no longer have access to it. City Light's data retention policy does not align with the City's data retention requirements, which may result in City Light over or under retaining documentation under City policy. There is no documentation in the DPPs of the process to transfer data captured by the TMS and Ampstik devices to the City Light secure drive.	**Recommendation 5** City Light should update its policies and procedures to require periodic audits of access rights to the secure drive containing current diversion documentation and perform such audits as required by the policy. **Recommendation 6** City Light should update its policies and procedures to align their records retention requirements with the City's retention requirements for current diversion investigation records. **Recommendation 7** City Light should document in its policies and procedures the process for transferring data captured and recorded from the surveillance technology devices to the secure drive including the requirement to document the timing of transfers.

14.18.060 Provision	Compliance Determination	Auditor's Assessment	Recommendations
D. How deployment of the surveillance technology impacted or could impact civil liberties or have disproportionate effects on disadvantaged populations, and how those impacts are being mitigated. **Related SMC Sections** 14.18.040 B5	**No** 	City Light did not and will not perform an equity analysis of past enforcement locations as stated in the Surveillance Impact Reports.	**Recommendation 8** City Light should update the Surveillance Impact Reports for its current diversion technologies to explain why it will not perform an equity analysis of past enforcement locations.
E. A summary of any complaints or concerns received by or known by departments about the surveillance technology and the results of any internal audits or other assessments of code compliance. **Related SMC Sections** 14.18.040 B4	**Yes** 	City Light addressed questions and concerns raised through the public engagement process as documented in the Surveillance Impact Reports and throughout this audit.	None
F. Total annual costs for use of the surveillance technology, including personnel and other ongoing costs. **Related SMC Sections** 14.18.040 B6	**Needs Work** 	The Surveillance Impact Report for the binoculars and the spotting scope technologies does not list their acquisition costs.	**Recommendation 9** On the next update of the Surveillance Impact Reports for its current diversion technologies, City Light should report the acquisition cost of the binoculars and the spotting scope.

INTRODUCTION

Audit Overview

Seattle Municipal Code (SMC) 14.18 resulted from concerns about privacy, the lack of a process for the City's acquisition of surveillance technologies, and the risks that such technologies could pose to civil liberties related to privacy, freedom of speech or association, or have a disparate impact on specific groups through over-surveillance. SMC 14.18 requires the City Auditor to annually review the City's use of surveillance technology and the extent to which departments comply with the requirements of SMC 14.18 and with the terms of the approved Surveillance Impact Reports (SIRs). Our review focused on the current diversion technologies that City Light's Current Diversion Team[1] (CDT) uses in their investigations.

SMC 14.18 requires City departments to obtain Seattle City Council approval of their surveillance technologies acquisition by submitting SIRs for *each technology*. The City Council approved City Light's SIRs for its three surveillance technologies for current diversion investigations on March 25, 2021, in Ordinance 126294. Exhibit 2 below shows the steps for the Seattle City Council's (Council) approval of surveillance technologies.

Exhibit 2: Surveillance Technology Approval Process

Upcoming for Review	Initial Draft	Open Comment Period	Final Draft	Working Group	Council Review
The technology is upcoming for review, but the department has not begun drafting the surveillance impact report (SIR).	Work on the initial draft of the SIR is currently underway.	The initial draft of the SIR and supporting materials have been released for public review and comment. During this time, one or more public meetings will take place to solicit feedback.	During this stage the SIR, including collection of all public comments related to the specific technology, is being compiled and finalized.	The surveillance advisory working group will review each SIR's final draft and complete a civil liberties and privacy assessment, which will then be included with the SIR and submitted to Council.	City Council will decide on the use of the surveillance technology, by full Council vote.

Source: Check Meter Device SIR, Page 7

The City Auditor produces an *initial* audit report for each City Council approved surveillance technology to determine whether it has been used in compliance with applicable provisions of the SMC. After the initial audit report, the City Auditor conducts *annual* reviews of City surveillance technologies in a single Annual Surveillance Usage Review report. This report is the initial audit of City Light's surveillance technologies used in current diversion investigations.

[1] The Current Diversion Team is composed of four meter electricians, two supervisors, and the Current Diversion Team Coordinator.

The objective of this audit is to determine the extent to which City Light complies with the requirements of SMC 14.18 and with the terms of the Council approved SIRs for its surveillance technologies as specified in SMC 14.18.060 A through F as follows:

A. How the surveillance technology has been used, how frequently, and whether usage patterns are changing over time.

B. How often the surveillance technology or its data are being shared with other entities, including other governments in particular.

C. How well data management protocols are safeguarding individual information.

D. How deployment of the surveillance technology impacted or could impact civil liberties or have disproportionate effects on disadvantaged populations, and how those impacts are being mitigated.

E. A summary of any complaints or concerns received by or known by departments about the surveillance technology and the results of any internal audits or other assessments of code compliance.

F. Total annual costs for use of the surveillance technology, including personnel and other ongoing costs.

This audit covers the years 2020 and 2021.

Our assessment of City Light's current diversion surveillance technologies per SMC 14.18.060 is found in the Executive Summary of this report (Exhibit 1 above).

Legislative Background

The Surveillance Ordinance is intended to provide greater transparency to the City Council and the public when a City department acquires or uses surveillance technology that raises concerns about privacy or other civil liberties and involves new or legacy technologies that require City Council review and approval for their use. The City Council approved the use of City Light's current diversion technologies on March 25, 2021, about five years after the technologies were acquired.

Audit Criteria

We used SMC 14.18, the SIR for each of the three surveillance technologies City Light uses for current diversion investigations, and City Light's policies and procedures (DPP's) to assess the evidence we gathered to determine compliance with legislative requirements.

A. SURVEILLANCE TECHNOLOGY USE AND TRENDS

SMC 14.18.060 A

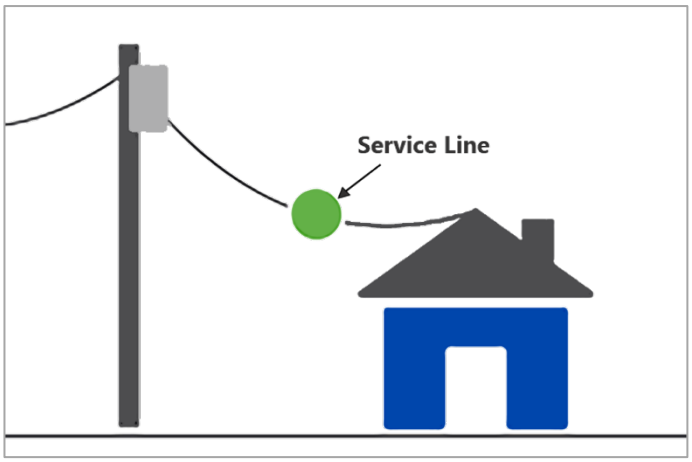
City Light's Current Diversion Technologies

Related SMC Sections 14.18.040 B1, 14.18.040 B2, 14.18.040 B3(g)

These SMC sections address how surveillance technologies have been used, how frequently, and whether usage patterns are changing over time. We discuss these issues for each of the three City Light surveillance technologies it uses in current diversion investigations.

Two of the current diversion technologies measure the difference in current between the service line at the utility pole and the meter. As shown in Exhibit 3 below, a service line wire is an overhead electrical wire running from a utility pole to the customer's residence or other premises to provide electric energy from the distribution system.

Exhibit 3: Service Line Diagram



Source: Seattle Office of City Auditor adapted from https://www.seattle.gov/city-light/about-us/what-we-do

The ***SensorLink Transformer Meter System (TMS), also known as a Check Meter Device,*** is a device that measures the amount of electrical energy flowing through a service line wire over time. We visited City Light's Technical Metering Operations (TMO) building in North Seattle and counted six TMS transmitter and receiver devices in a locking storage cabinet. The TMS digitally captures energy flow data for later retrieval by the CDT via a secure wireless protocol. City Light uses the information in the calculation of diverted energy. TMS devices are typically installed on an electric pole adjacent to the transformer for one week to one month. The amount of time the device is left on the pole depends on the specific measurement needed and crew availability. The TMS device is housed in a black, weatherproofed box that is about four-square inches, with a City

Light inventory control number on the outside for identification by City Light line crews. Exhibit 4 below shows the components of a TMS device.

Exhibit 4: TMS Transmitter (left) Transmitter on Pole (center) and TMS Receiver (right)

Source: Seattle Office of City Auditor and Seattle City Light, 2022

The ***SensorLink Ampstik (also known as an Ampfork)*** is a device used to detect instantaneous current flow in amperage (AMPS) through a service line. During our visit to the TMO facility, we counted three SensorLink Ampstik transmitter devices, stored in the same metal locking cabinet as the TMS devices, each with a separate handheld device that functions as a receiver. The transmitter is an electrical device mounted on a telescoping pole (up to 40' to 50') that allows the fork shaped device to be placed around a service line wire near the distribution pole. The handheld receiver displays instantaneous readings of current flow reported in AMPS. A meter electrician uses the readings together with meter reads to determine if current is being diverted. Exhibit 5 below shows the Ampstik transmitter, receiver, and telescoping pole.

Exhibit 5: Ampstik Transmitter (left), Receiver (middle) and Pole (right)

Source: Seattle Office of City Auditor, 2022

Once the Ampstik is removed from the service line, the measurement on the receiver goes back to zero. If the hold function on the receiver is used, the measurement value is displayed until the unit is turned

off. The unit is turned off after readings are recorded by hand. If the device is not turned off, then an automatic shutdown function will turn it off within a few minutes of inactivity.

According to City Light, meter electricians typically investigate more than one site while in the field. In this situation, data recorded by the Ampstik and TMS travel with meter electricians in company vehicles until they are returned to the TMO facility. A meter crew chief we interviewed estimated that any such data would not be outside of a City Light facility over six hours before the current diversion measurement devices are returned to the TMO building where the data is transferred to a secure electronic drive.

Binoculars/ Spotting Scope

We counted one spotting scope (Exhibit 6 below) and eight binoculars in the same locking storage cabinet as the other devices. Both are used interchangeably, depending on City Light staff preference. When distance is a barrier to close physical inspection, meter electricians may use binoculars or the spotting scope to examine meters in assessing if current diversion is taking place. These devices may also be used to determine if potentially dangerous alterations to City Light's electrical infrastructure exist. The binoculars and spotting scope themselves do not collect data and contain no special enhancements requiring power such as night vision or video-recording capabilities.

Exhibit 6: Spotting Scope

Source: Seattle Office of City Auditor, 2022

Data and observations from all current diversion technologies are retained per City Light records retention schedules. The CDT Coordinator has the responsibility for ensuring compliance with data retention requirements.

Usage Frequency

CDT members are the only City Light staff who use the current diversion technologies. The technologies are used when current diversion is suspected, such as when neighbors observe an upside-down meter and report this to City Light, when the Seattle Police Department (SPD) wants to investigate a suspected diversion, or

when meter electricians during the normal course of their field work suspect current diversion. Reasons supporting their suspicion could include the observation of meter tampering or tampering-with electrical wiring entering the meter. Two of the current diversion technologies, the TMS and the Ampstik, are used only when the cost of City Light resources for investigation and remediation of the metering system are expected to exceed $500. When the cost of such resources is $500 or less, the customer is billed a $500 penalty.

We found in our review of current diversion investigation files for 2020 and 2021, that only the SensorLink Ampstik was used, and it was used only once on an investigation for which the customer was back billed $34,290. We found no documented use of binoculars, the spotting scope or the TMS.

According to the Current Diversion Team Coordinator, City Light has not used the SensorLink TMS in an investigation in the last six years and the device will not be used in the future due to a lack of software support. Unless this technology is retired from service, it will remain as an asset on City Light's books and records and will be subject to future evaluation as a surveillance technology.

Recommendation 1

City Light should formally retire from service the SensorLink Transformer Meter System surveillance technology.

Data Collection

SensorLink TMS data is captured by a transmitter installed on the pole near the transformer. The data is immediately sent to a receiver which is plugged into a laptop computer carried by the meter electrician. Data is not stored on the transmitter but rather is digitally entered by a meter electrician onto a field activity report stored in the investigation file. The data acquired by the TMS device includes *accumulated* consumption (in kilowatt-hours) of quantitative data. Meter electricians access the data remotely using a secure radio protocol and it is stored using a password protected software program on the laptop. The Ampstik, on the other hand, displays *instantaneous* readings of electrical energy measured in AMPS. Meter electricians document their observations in writing when using the binoculars that include meter reads and sightings of potentially dangerous alterations to City Light's electrical infrastructure. The observations are digitally stored on City Light's secure network drive. Binoculars may also be used when there are meter access issues, such as locked gates, unsafe premises, or threatening dogs. The

binoculars enable CDT staff to evaluate if a meter has been tampered with to substantiate suspicions of current diversion.[2]

The SIRs state that, to the extent permitted by the Washington State Public Disclosure Law, any improperly collected data will be deleted from City Light's digital file locations, and hard-copy documents will be destroyed. We did not find instances of improperly collected data during our review of the investigation files.

Benefits of Current Diversion Technologies

Using current diversion technologies provides City Light with the potential to recover lost revenue from diverted electricity. When electricity is diverted, the cost of providing electricity to customers is left to the remaining rate payers. City Light states that one of their core missions as an electric utility is to recoup the costs of the energy it provides to its customers as part of its operations, as required in SMC 21.49.100. As previously mentioned, this is done through the billing process to recapture the costs of investigation and remediation.

In addition to lost revenue that resulted from diverted electricity, City Light bills customers, to the extent permitted by applicable law, for damages caused by current diversion to recover costs incurred in investigating and correcting current diversion conditions. DPP III-416 allows City Light to bill a customer for field calls, lab tests and office work involved in detecting, reporting, record keeping, storage costs, and costs of investigating and correcting cases of current diversion. The total back billing recovered from current diversion for years 2020 and 2021 was about $101,000. For the one investigation when a surveillance technology was used (Ampstik), the back billing amounted to $34,290.

Training

City Light stated in the SIRs that CDT members are trained on how to store information from the current diversion technologies in private folders on City Light's digital storage locations. In addition, CDT members receive general privacy and security training required by the Seattle Information Technology Department (SITD). However, City Light does not provide specific training on SMC 14.18 requirements.

[2] SIR for Check Meter Device, Appendix F, page 116.

Findings

We reviewed City Light SIRs and its policies and procedures (DPP's) for the three surveillance technologies to determine if they met the requirements of SMC 14.18.060 A, 14.18.040 B1, 14.18.040 B2, 14.18.040 B3(d) and 14.18.040 B3(g). We found that the SIRs and the DPPs do not adequately address these requirements and recommend (Recommendation 2) alignment of the DPPs and SIRs with the SMC requirements.

Recommendation 2

City Light should update its policies and procedures to align them with statements made in the Surveillance Impact Reports and with Seattle Municipal Code 14.18 as follows:

- A description of each surveillance technology.
- The data each technology is reasonably likely to generate. For binoculars and the spotting scope, this would be the observations Current Diversion Team (CDT) members are expected to note.
- The functionality of each technology.
- A description of the purpose and the proposed use of each technology that is aligned with the descriptions in the SIRs.
- The requirement to document which technologies are used in each current diversion investigation and how each was used.
- The requirement to retire surveillance technologies from service when it becomes known that the technology will no longer be used.
- The requirement to train the CDT regarding the requirements of SMC 14.18 and the restrictions on each technology as to what data and observations can and cannot be recorded.
- Statements in the policies and procedures that address how any improperly collected data will be disposed of.

B. TECHNOLOGY AND DATA SHARING

SMC 14.18.060 B

Technology and Data Sharing Discussion

Related SMC Sections 14.18.040 C, 14.18.040 B3(f), 14.18.040 D

These SMC sections address how often City Light shares surveillance technologies or their data with other entities, including other governments, the reason for sharing, and how City Light ensures the entities it shares data with comply with SMC 14.18 requirements. SMC 14.18 also requires City Light to have written procedures in place for determining how it will ensure that any non-City entity receiving the technology and/or data will comply with restrictions identified in the SIRs.

According to statements made in the SIRs, current diversion *technologies* are not shared. However, City Light may share the data CDT collects from the three technologies outside of the unit in the following circumstances:

- When the CDT determined that current diversion has taken place, it shares a valuation of the diverted energy with City Light's billing division so that the utility can back bill and recover the diverted energy revenues from the responsible customer.
- When the Seattle Police Department investigators and/or Seattle City Attorney's Office prosecutors are pursuing legal action in aggravated cases of meter tampering. Information may need to be shared with police investigators to protect public safety, since unauthorized alterations to the electrical system can pose a serious, and at times, lethal danger to the public. During 2020 and 2021, the CDT shared current diversion data from investigations once with the Seattle Police Department.
- When consulting with the Seattle City Attorney's Office as to whether to pursue criminal and/or civil legal action against a customer or other individuals suspected of diverting current.
- When conducting follow-up investigations for law enforcement purposes of completed current diversion cases, with assistance from and in cooperation with law enforcement jurisdictions, including the King County Sheriff, Port of Seattle Police, and other city, county, state, and federal agencies, such as the Federal Bureau of Investigation, the Drug Enforcement Administration, and the U.S. Department of Homeland Security.

Findings

We reviewed the SIRs for all three technologies and the applicable provisions in the DPP's and identified the following concerns:

- DPP V-3, Section 5.1, states "The Current Diversion Coordinator shall maintain a protocol for current diversion response that provides guidance for coordination between law enforcement agencies and the Department for making premises safe and investigating current diversion cases." According to the CDT Coordinator, the protocol is not documented, posing the risk of non-compliance.
- The DPPs do not address City Light's policies regarding the sharing of surveillance technologies or data *outside* of City Light's Current Diversion Team, including sharing with *non-City entities* as noted in SMC 14.18.

Recommendation 3

City Light should document the existing protocols for its surveillance technologies and ensure they include how surveillance technologies and data are shared outside of City Light's Technical Metering Operation, including with non-City entities.

Recommendation 4

City Light should include in documented protocols how they ensure compliance from anyone outside of the Technical Metering Operation who City Light shares either surveillance technology or its data with. If current diversion technologies are not shared, that should be specified in the protocols.

C. PROTOCOLS FOR DATA MANAGEMENT

SMC 14.18.060 C

Protocols for Data Management Discussion

Related SMC Sections 14.18.040 B3(C), 14.18.040 B3(D), 14.18.040 B3(E)

These sections of SMC 14.18 address how well data management protocols are safeguarding individual information, how surveillance data will be securely stored, how surveillance data will be accessed, and other safeguards against unauthorized data access.

Data captured by the TMS device is transferred from a laptop computer to a secured drive as part of the investigation case file and is then deleted from the laptop. Data captured on the Ampstik receiver are handwritten. The handwritten notes recorded from the Ampstik are digitally entered into the investigation case file on the secure drive. The handwritten notes with the recorded values are then shredded. Observations made from the binoculars are also handwritten, then digitally entered on the secured drive. As with the Ampstik data, the handwritten notes are shredded. According to City Light's Meter Electrician Crew Chief, when there are multiple investigations taking place on the same day, the data recorded from either of the current diversion technologies would remain outside of the City Light facility no longer than six hours before the meter electricians return to the City Light facility to transfer the data to the secure drive.

As documented in the SIRs, to help safeguard current diversion investigation data, the Current Diversion Team Coordinator will request the Seattle Information Technology Department (SITD) to provide it with data from a completed user access audit so that City Light can ensure that access rights to the secure drive containing current diversion investigation information are assigned only to authorized staff.[3]

Data collected from the current diversion devices should be retained per City Light records retention schedules and in compliance with City records retention schedules. DPP V-3 Section 2.15 states that current diversion records are stored for seven years. The Current Diversion Team Coordinator is responsible for ensuring compliance with data retention requirements.

[3] SIR for Check Meter Device, page 6 "Data Sharing".

Findings

We reviewed the SIRs and DPPs for data management protocols for the three technologies and identified the following concerns:

1. SITD has not performed any audits of access rights as stated in the SIRs and we found no requirement to do so in City Light's DPP's. We found that one individual, the former Current Diversion Team Manager who left her position several years ago but is still employed at City Light, retained access rights to the current diversion secure drive.
2. City Light's seven-year data retention requirement is not aligned with City data retention requirements for current diversion investigation records. The City's policy for retention of current diversion records is six years from the date a current diversion investigation is closed.[4] The disparity between the two retention periods could result in the destruction of records either *before or after* the appropriate retention period expires. In practice, however, current diversion records are kept longer than either retention requirement. According to the Current Diversion Team Coordinator, current diversion investigation records were retained at the time of our field work as far back as 2013.
3. There is no documentation in the DPPs of the process to transfer data captured by the TMS and Ampstik devices to the City Light secure electronic drive.

Recommendation 5

City Light should update its policies and procedures to require periodic audits of access rights to the secure drive containing current diversion documentation and perform such audits as required by the policy.

Recommendation 6

City Light should update its policies and procedures to align their records retention requirements with the City's retention requirements for current diversion investigation records.

Recommendation 7

City Light should document in its policies and procedures the process for transferring data captured and recorded from the surveillance technology devices to the secure drive including the requirement to document the timing of transfers.

[4] Washington State, Public Utility Districts Retention Schedule, Version 1.4 (February 2019). Disposition Authority number UT55-05G-07.

D. CIVIL LIBERTIES IMPACT

SMC 14.18.060 D

Civil Liberties Impact Discussion

Related SMC Section 14.18.040 B5

SMC 14.18.060 D and 14.18.040 B5 require City departments to provide descriptions in the Surveillance Impact Reports (SIRs) of how the impact or potential impacts of a surveillance technology on civil rights and liberties in communities of color and other marginalized communities have been considered, and a mitigation plan for any impacts. We address the risks of each technology and the mitigations that City Light has adopted.

Binoculars/Spotting Scope
During the public engagement process, members of the public raised concerns about the use of the binoculars and City Light acknowledged the importance of the methods and procedures surrounding the use of this technology. City Light stated that binoculars are used to make determinations only about whether current diversion is *likely* taking place, and, in certain instances, to view potentially dangerous electrical equipment.

The binoculars and spotting scopes do not collect data and have no enhancements such as night vision or video-recording capabilities.[5] However, City Light meter electricians may document observations containing personally identifiable information (PII) when using binoculars or the spotting scope, such as an individual's race or ethnicity, and this could pose a privacy risk if the collected information is used inappropriately.

TMS and Ampstik
The TMS and the Ampstik do not collect PII; however, when combined with customer information data from City Light's billing system, the data collected without the customer's knowledge or consent by these devices is considered PII.

Equitable Enforcement

City Light said they mitigate risks to privacy and civil liberties by ensuring that CDT workers drive standard City Light-marked vehicles and that they can be identified by their City Light ID badges and hard hats.

City Light states in the SIRs that they are committed to "equitable enforcement of all its legal mandates, in the same way that it is committed to equity in its provision of clean, affordable, and

[5] SIR for Check Meter Device, section titled "Background on the Three Current Diversion Technologies", page 38.

reliable power for its customers."[6] They also state that they ensure enforcement mechanisms are similarly equitable, in that "they should be not only be unbiased but also equitably enforced". [7]

Because City Light does not select the sites to investigate, but rather investigates only when suspected diversion is reported to the CDT by others, such as from neighbors or meter operations personnel working in the field, this helps reduce the risk of racial disparity in the selection of those customers who City Light investigates.

City Light stated in several sections of the current diversion technologies' SIRs that they are undertaking an "equity analysis" of past enforcement locations to ensure that their existing policies and procedures are as "equitable as possible".[8] City Light officials, however, informed us that an equity analysis was unnecessary, given that 1) they conduct investigations only in response to reports of suspected current diversions, and 2) the infrequent use of the technologies reduces the risks to privacy and civil liberties posed by the technologies. Considering that we identified only one investigation was conducted in two years that used one of the technologies, we agree that an equity analysis of enforcement locations was not necessary.

Section 4.0 of the SIRs requires metrics on current diversion activities for the year to be reported to the City's Chief Technology Officer (CTO) relating to annual equity assessments. City Light stated in the SIRs that they were working to finalize these metrics; however, we verified that City Light did not submit metrics to the CTO. The CTO informed us, given the limited use of the current diversion technologies, that not receiving the metrics from City Light posed little risk to his ability to assess the overall equity impacts of the program of surveillance technologies that are in use in the City. Further, the CTO stated that City Light provided a formal memo to the City Council explaining their reasoning behind not reporting equity metrics as required by the SMC by September 2021.

Findings

The current diversion technologies' SIRs have not been updated to inform the public about City Light not performing an equity analysis of past enforcement locations.

[6] SIR for Check Meter Device, Section 1.1; page 23.
[7] SIR for Check Meter Device, Section 1.3; page 23.
[8] SIR for Check Meter, Section 1.3, page 23.

Recommendation 8

City Light should update the Surveillance Impact Reports for its current diversion technologies to explain why it will not perform an equity analysis of past enforcement locations.

SMC 14.18 Equity Impact Assessment

As required by SMC 14.18.050, we verified that in September 2021, the CTO submitted the 2021 Surveillance Technology Community Equity Impact Assessment Report to the City Council.

E. COMPLAINTS, CONCERNS, AND OTHER ASSESSMENTS

SMC 14.18.040 E

Discussion of Complaints, Concerns, and Other Assessments

Related SMC Section 14.18.040 B4

These SMC sections require City Light to identify a summary of any complaints or concerns received by or known by departments about a surveillance technology and the results of any internal audits or other assessments of code compliance.

We reviewed City Light's current diversion technologies' SIRs to determine if they addressed all the complaints and concerns. In addition, we checked the City of Seattle's Department of Facilities and Administrative Services Customer Service Bureau complaint database for the period July 2020 through December 2021 to identify privacy or civil liberties issues, complaints, or concerns about current diversion technologies and found none were recorded. City Light's Current Diversion Team Coordinator also informed us that she was not aware of any complaints regarding current diversion technologies for the same period.

The SIRs' documentation included questions and comments obtained from the public during the City of Seattle public engagement process for the current diversion devices identified as surveillance technologies. Comments and questions regarding these surveillance technologies were obtained from the public through (1) Department of Neighborhood Focus Group Notes (SIR Appendix D),[9] (2) All Comments Received from Members of the Public (SIR Appendix E), and (3) Department Responses to Public Inquiries (SIR Appendix F). See Appendix D in this report for a list of questions asked by members of the public.

Auditor's Conclusion

City Light addressed the questions and concerns raised during the public engagement process in the SIR and throughout this audit.

[9] Appendix D starts on page 75 of the Check Meter SIR, then Appendices E and F immediately follow.

F. TOTAL ANNUAL COSTS

SMC 14.18.040 F

Related Section SMC 14.18.040 B6

Discussion of Surveillance Technology Costs

These SMC sections required City Light to report acquisition costs for surveillance technologies and their total annual costs including personnel and other ongoing costs.

Acquisition costs reported in the SIRs for each of the current diversion technologies were as follows:

- Binoculars/Spotting Scope: Nothing reported (reported as "N/A").
- SensorLink TMS: $4,800
- Ampstik: $4,400

City Light did not report *annual costs* for the three surveillance technologies. However, City Light informed us that the annual costs are expected to be immaterial given that only the Ampstik was used during the two-year period 2020 through 2021.

Findings

City Light did not report the acquisition cost of the binoculars and the spotting scope.

Recommendation 9

On the next update of the Surveillance Impact Reports for its current diversion technologies, City Light should report the acquisition cost of the binoculars and the spotting scope.

OTHER ISSUES

Technology Tracking

Current diversion surveillance technologies are stored in a locking cabinet at City Light's North Service Center. A sign-out sheet is taped to the front of the locking cabinet to track who has possession of each piece of technology when it is removed from the cabinet. However, the sign-out sheet did not have a place to record inventory or serial numbers. Recording an identification number is important to hold individuals accountable for the technologies they remove for use from the cabinet.

Recommendation 10

City Light should require staff to record on the sign-out sheet the inventory and/or serial numbers of surveillance technology equipment they remove for use from the locking cabinet.

Policies and Procedures Update

City Light has two documents outlining policies and procedures relating to current diversion surveillance activities. One of those documents, DPP V-3, Section 1.1, states that policies and procedures should be updated every two years. However, the other document, DPP 500 P III-416, was last approved by City Light management in 2012. Although revisions have been made since then, the updated DPP's remain in draft form.

Recommendation 11

City Light should complete their policies and procedures updates for its current diversion surveillance technologies to align them with Seattle Municipal Code (SMC) 14.18. The requirements of SMC 14.18 should be addressed in the updates and should align with statements made in the current diversion technology Surveillance Impact Reports. City Light management should approve the updated policies and procedures.

OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives

Our audit objectives were to review City Light's use of surveillance technologies used in current diversion investigations for compliance with Seattle Municipal Code (SMC) 14.18. Specifically, we were asked to address the following six elements of 14.18.060 as follows:

A. How surveillance technology has been used, how frequently, and whether usage patterns are changing over time.

B. How often surveillance technology or its data are being shared with other entities, including other governments in particular.

C. How well data management protocols are safeguarding individual information.

D. How deployment of surveillance technologies impacted or could impact civil liberties or have disproportionate effects on disadvantaged populations, and how those impacts are being mitigated.

E. A summary of any complaints or concerns received by or known by departments about their surveillance technology and the results of any internal audits or other assessments of code compliance.

F. Total annual costs for use of the surveillance technology, including personnel and other ongoing costs.

Scope

The scope for this audit included City Light's use of current diversion surveillance technologies for the years 2020 and 2021.

Methodology

To accomplish the audit's objectives, we performed the following:

- Reviewed the usage of current diversion technologies for compliance with Seattle Municipal Code 14.18.040 through 14.18.070.
- Reviewed the SIRs for all three technologies.
- Interviewed City Light and SITD officials.
- Reviewed and analyzed City Light's current diversion investigation file data for 2020 and 2021.
- Reviewed a log of complaints recorded by the City's Customer Service Bureau for the period July 2020 through December 2021 and comments and concerns generated through the City's surveillance technology public engagement process.

- Reviewed City Light's policies and procedures governing the use of the three technologies (DPP P 500 III-416 and DPP V-3) and other applicable state and local laws.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

APPENDIX A

Department Response Memo

Seattle City Light

MEMO

OCTOBER 18, 2022

TO
David Jones, City Auditor

FROM
Michelle Vargo, Chief Operating Officer Michelle Vargo (Oct 18, 2022 14:37 PDT)

SUBJECT
City Light Current Diversion Technologies Audit

Dear Mr. Jones,

I would like to thank the Seattle Office of the City Auditor for their time and effort conducting a compliance audit of Seattle City Light's current diversion technologies, and for concluding that Seattle City Light's use of current diversion technologies complies with the stated uses the City Council approved in the surveillance impact statements.

City Light has no significant disagreements with the recommendations outlined in the audit report. The responses to all recommendations are detailed in the Appendix A attachment "List of Recommendations and Department Response".

Thank you again for the opportunity to review your report and offer a brief response.

CITY LIGHT CURRENT DIVERSION TECHNOLIGIES AUDIT | PAGE 1 OF 1

APPENDIX B

List of Recommendations and Department Responses

Recommendation 1: City Light should formally retire from service the SensorLink Transformer Meter System surveillance technology.

City Light Concurrence: Yes

Estimated Date of Completion (Qtr./Yr.): Q1/2023

City Light Response: City Light's Technical Metering Operation will formally retire the SensorLink TMS from service.

Recommendation 2: City Light should update its policies and procedures to align them with statements made in the Surveillance Impact Reports and with Seattle Municipal Code 14.18 as follows:

- A description of each surveillance technology.
- The data each technology is reasonably likely to generate. For binoculars and the spotting scope, this would be the observations CDT members are expected to note.
- The functionality of each technology.
- A description of the purpose and the proposed use of each technology that is aligned with the descriptions in the SIRs.
- The requirement to document which technologies are used in each current diversion investigation and how each was used.
- The requirement to retire surveillance technologies from service when it becomes known that the technology will no longer be used.
- The requirement to train the Current Diversion Team regarding the requirements of SMC 14.18 and the restrictions on each technology as to what data and observations can and cannot be recorded.
- Statements in the policies and procedures that address how any improperly collected data will be disposed of.

City Light Concurrence: Yes

Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 3: City Light should document the existing protocols for its surveillance technologies and ensure they include how surveillance technologies and data are shared outside of City Light's Technical Metering Operation, including with non-City entities.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 4: City Light should include in documented protocols how they ensure compliance from anyone outside of the Technical Metering Operation who City Light shares either surveillance technology or its data with. If current diversion technologies are not shared, that should be specified in the protocols.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 5: City Light should update its policies and procedures to require periodic audits of access rights to the secure drive containing current diversion documentation and perform such audits as required by the policy.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 6: City Light should update its policies and procedures to align their records retention requirements with the City's retention requirements for current diversion investigation records.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 7: City Light should document in its policies and procedures the process for transferring data captured and recorded from the surveillance technology devices to the secure drive including the requirement to document the timing of transfers.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

Recommendation 8: City Light should update the Surveillance Impact Reports for its current diversion technologies to explain why it will not perform an equity analysis of past enforcement locations.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q2/2023

City Light Response: City Light will comply with the process outlined under Chapter 14.18.020.F. City Light's Technical Metering Operation will contact Seattle IT to determine if changes to the SIRs is required and if those changes constitute "material" or "non-material" changes.

Recommendation 9: On the next update of the Surveillance Impact Reports for its current diversion technologies, City Light should report the acquisition cost of the binoculars and the spotting scope.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): TBD

City Light Response: City Light's Technical Metering Operations will update the SIRs in the event of any future acquisition costs for binoculars/ spotting scopes.

Recommendation 10: City Light should require staff to record on the sign-out sheet the inventory and/or serial numbers of surveillance technology equipment they remove for use from the locking cabinet.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q1/2023

City Light Response: City Light's Technical Metering Operations will add an equipment identifier column to the current sign out sheet.

Recommendation 11: City Light should complete their policies and procedures updates for its current diversion surveillance technologies to align them with Seattle Municipal Code (SMC) 14.18. The requirements of SMC 14.18 should be addressed in the updates and should align with statements made in the current diversion technology Surveillance Impact Reports. City Light management should approve the updated policies and procedures.

City Light Concurrence: Yes Estimated Date of Completion (Qtr./Yr.): Q4/2023

City Light Response: City Light's Technical Metering Operation will develop an operational procedure manual to align with statements made in the Surveillance Impact Reports and with the requirements of SMC 14.18. The procedure manual and any changes thereafter will be approved by the Chief Operating Officer of Seattle City Light. City Light DPP's will be updated to reflect this change.

APPENDIX C

City Light Current Diversion Technologies Public Engagement Questions

SIRs Appendix E: Seattle Information Technology Department Questions to Members of the Public

- What concerns, if any, do you have about the use of this technology?
- What value, if any, do you see in the use of this technology?
- What do you want City leadership to consider about the use of this technology?
- Do you have any other comments?
- Are there any questions you have or areas you would like more clarification?

SIRs Appendix F: Public Questions to City Light

- Do City Light Current Diversion employees wear something visible that shows customers they are from City Light?
- If a City Light customer wants to file a complaint about a City Light employee, how do they do that?
- Has there been a situation where a customer sees a City Light employee looking at someone's house with binoculars and the customer may not have been notified?
- Has there been a situation where the meter was located on the opposite side of where the City Light employee was looking?
- Do City Light employees get background checks?
- If a City Light customer files a complaint against an employee, are complaints being followed up? What is the average time for disciplinary action for a City Light?
- How long is the process for a full investigation?
- What is the purpose of tracking current diversion by using binoculars?

APPENDIX D

Seattle Office of City Auditor Mission, Background, and Quality Assurance

Our Mission:
To help the City of Seattle achieve honest, efficient management and full accountability throughout City government. We serve the public interest by providing the City Council, Mayor and City department heads with accurate information, unbiased analysis, and objective recommendations on how best to use public resources in support of the well-being of Seattle residents.

Background:
Seattle voters established our office by a 1991 amendment to the City Charter. The office is an independent department within the legislative branch of City government. The City Auditor reports to the City Council and has a four-year term to ensure their independence in deciding what work the office should perform and reporting the results of this work. The Office of City Auditor conducts performance audits and non-audit projects covering City of Seattle programs, departments, grants, and contracts. The City Auditor's goal is to ensure that the City of Seattle is run as effectively, efficiently, and equitably as possible in compliance with applicable laws and regulations.

How We Ensure Quality:
The office's work is performed in accordance with the Government Auditing Standards issued by the Comptroller General of the United States. These standards provide guidelines for audit planning, fieldwork, quality control systems, staff training, and reporting of results. In addition, the standards require that external auditors periodically review our office's policies, procedures, and activities to ensure that we adhere to these professional standards.

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