



INTER OFFICE MEMORANDUM

TO: Privacy Advisory Commission

FROM: G. Harold Duffey,
Director, OPW

SUBJECT: Illegal Dumping Surveillance Camera
Annual Surveillance Report

DATE: June 1, 2023

Background

On Tuesday, January 18, 2022, the City Council approved the *Oakland Public Works (OPW) Illegal Dumping Surveillance Camera Program's Use Policy and Impact Statement Report* and authorized OPW to procure and deploy the Portable Observation Device (POD) Surveillance System to amplify illegal dumping enforcement efforts.

According to Oakland Municipal Code (OMC) 9.64.040: Surveillance Technology Oversight, following City Council approval requires that, for each approved surveillance technology item, City staff must present a written annual surveillance report to the Privacy Advisory Commission (PAC). After the PAC's review, City staff shall submit the annual surveillance report to the City Council. This informational report aims to fulfill this annual requirement.

Illegal Dumping Surveillance Camera Program

A. System Use – A description of how the surveillance technology was used, including the type and quantity of data gathered or analyzed by the technology.

OPW deployed illegal dumping cameras beginning March 2022 in public rights of way near known dumping hotspots, based on data from OPW's work productivity and service request tracking system, Cityworks. The cameras, called PODs, use multiple pan/tilt/zoom (PTZ) cameras and stationary cameras to record videos locally to a digital video recorder (DVR) inside each POD unit.

Environmental Enforcement Unit's (EEU's) personnel – Environmental Enforcement Officers, Clean Community Supervisor, and EEU Analyst – review video footage up to two times a day, Mondays through Fridays, looking for dumped material and related footage to identify the dumper and the dumper's vehicle. If sufficient evidence is present for enforcement, information such as:

- location and specifics of dumped material
- date and time of dumping
- physical description of dumper(s)
- description of vehicle used and license plate information

are manually input into Cityworks, along with a copy of the citation issued and a screenshot photo of the dumper and vehicle taken from the video recording. From March 2022 to

February 2023, EEU staff strictly captured screenshot photos from POD videos when issuing citations.

Neither the POD units nor the video viewing software applications (NETUS Pro and SmartEyes Pro) have functionalities to analyze video data captured by the surveillance system other than motion tracking.

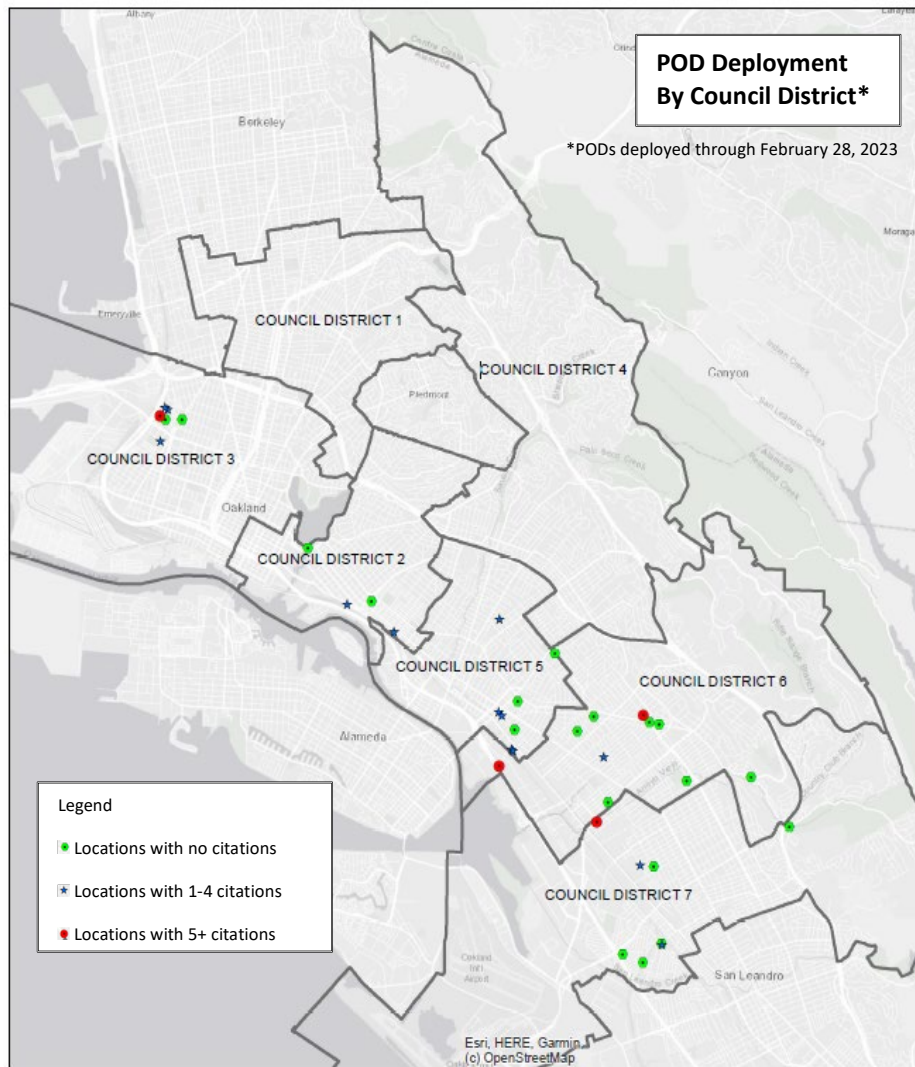
- B. Data Sharing* – Whether and how often data acquired through the use of the surveillance technology was shared with outside entities, the name of any recipient entity, the type(s) of data disclosed, under what legal standard(s) the information was disclosed, and the justification for the disclosure(s).

The EEU logged one incident during this reporting period where staff initiated contact and shared video data with an entity outside of OPW. Video footage of a homicide on 64th Avenue & Brann Street was captured by a POD on 06/09/2022. The Clean Community Supervisor contacted OPD on 06/13/2022, and provided the footage to OPD Homicide Unit's Police Service Technician on 06/17/2022.

- C. Installation & Application – Where applicable, a breakdown of what physical objects the surveillance technology hardware was installed upon; using general descriptive terms so as not to reveal the specific location of such hardware; for surveillance technology software, a breakdown of what data sources the surveillance technology was applied to.

For the period of March 2022 - February 2023, all PODs were mounted on City-owned light poles located in the public right of way. The two surveillance technology software programs – NETUS Pro and SmartEyes Pro – were used to view and download POD video footage only. There are no other functionalities for the two software products.

- D. Deployment Breakdown* – Where applicable, a breakdown of where the surveillance technology was deployed geographically, by each Police Area in the relevant year.



- E. Community Complaints – A summary of community complaints or concerns about the surveillance technology, and an analysis of the technology’s adopted use policy and whether it is adequate in protecting civil rights and civil liberties.

EEU staff did not receive any privacy-related complaints for the period of March 2022 - February 2023. All community complaints received for the surveillance cameras were that the PODs are *not* being deployed sooner and closer to the neighborhoods and locations constituents desired. The technology’s adopted Use Policy appears adequate in protecting civil rights and civil liberties in so far as the video data has been downloaded for illegal dumping enforcement purposes or in compliance with the Use Policy’s protocol to forward video recordings of “violent forceable crimes”. All routine video data is overwritten after 14-days.

- F. Internal Audits & Compliance – The results of any internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in

response unless the release of such information is prohibited by law, including but not limited to confidential personnel file information.

The masking feature was not used; no written waivers from property owners or current residents were collected. Because the POD units are non-Cloud-based, the masking feature required manual configuration in the field. This consists of opening the POD housing unit to connect physically to the DVR inside to set up the masking feature. Because the EEO job classification does not allow EEOs to perform this type of technical work, and OPW lacks the technical staffing to perform the task on an ongoing basis, the masking feature was not used. The work limitation was not known to the vendor at the time the masking feature was proposed to the PAC Ad Hoc Committee.

- G. Data Breaches or Other Unauthorized Access – Information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.

Enforcement data such as citation information and surveillance screenshots that were uploaded to Cityworks from March 1, 2021 to February 8, 2023, may have been accessed by unauthorized parties from the February 8 ransomware attack.

- H. Efficacy – Information, including crime statistics, that helps the community assess whether the surveillance technology has been effective at achieving its identified purposes.

From the inception of the Illegal Dumping Surveillance Camera Program, the aim of the PODs was to amplify enforcement activities by providing the EEOs a targeted tool to help cite dumpers and deter illegal dumping. The data supports the tool’s effectiveness and limitations.

NOTE: Due to the February 8, 2023, ransomware attack, some enforcement data from November 15, 2022 – February 28, 2023, was permanently lost. Wherever this is the case, the data will be clearly identified as such; however, the EEU manually tracks many metrics that cover the period of this Annual Report, as reflected below.

Table 1: DUMPING CAUGHT ON CAMERA
March 2022 - February 2023

	TOTAL	Percentage
Citations (Mar 1 - Nov 14 2022)	72	15%
No License Plate (LP)	48	10%
LP not visible / legible	271	55%
Homeless	101	20%
<i>Source: EEU Log</i> TOTAL	492	100%

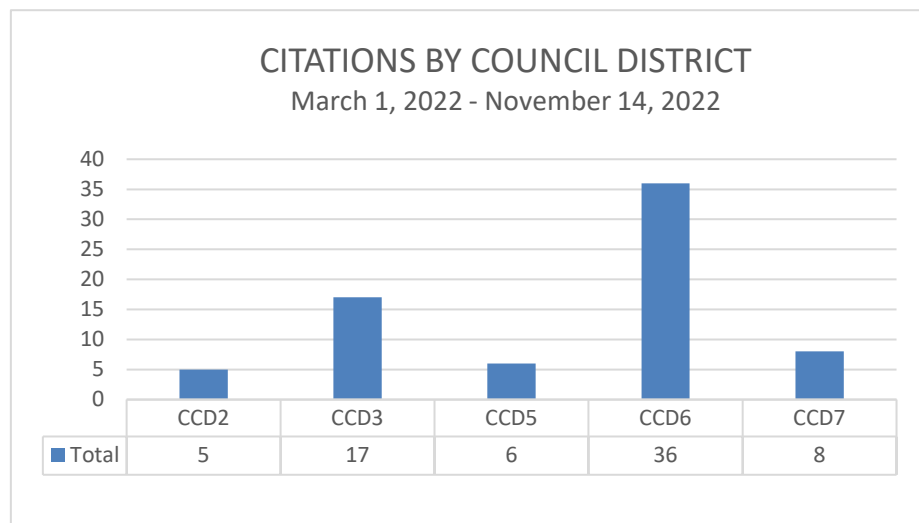
From March 2022 to February 2023, the PODs captured nearly 500 incidents of illegal dumping from known hotspots. A total of 72 citations were written in the nine-month period ending November 14, 2022. A conservative projection of the total number of citations that

would have been generated from surveillance cameras had the ransomware attack not interrupted operations, is approximately 90 – 100 citations for the 12-month period ending February 2023.

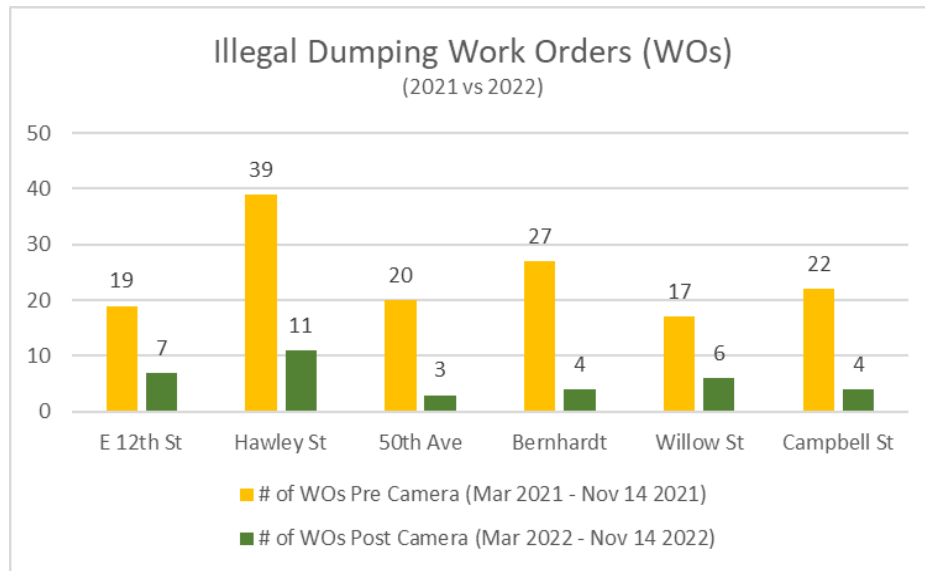
The citation rate was greatly impacted by the EEO’s inability to ascertain definitive license plate information from over half of all that were captured on camera. As reflected in *Table I’s* data, 55% of the illegal dumping incidents captured by the surveillance cameras were unenforceable because EEU staff could not discern license plate information.

In the first months of deployment, EEU staff sought to address the license plate reading issue, leveraging solutions that do not involve license plate reading (LPR) technology as referenced in the *Public Works Department Surveillance Impact Report for Illegal Dumping Surveillance Camera*. Dedicated, high resolution “bullet” cameras were deployed to capture license plate information, but they were unable to produce clear license plate images due to excessive glare from the vehicles’ headlights/ taillights. Infrared floodlights were installed to enhance video image, but they also failed to improve the visibility of the plates in low or poor lighting conditions.

Based on the various efforts made to improve license plate images during the pilot period, staff conclude LPR technology is necessary to boost the Surveillance Camera Program’s citation rate. Conceivably, the EEU may increase the citation rate from the current 15% to upwards of 70% with the addition of the LPR technology.

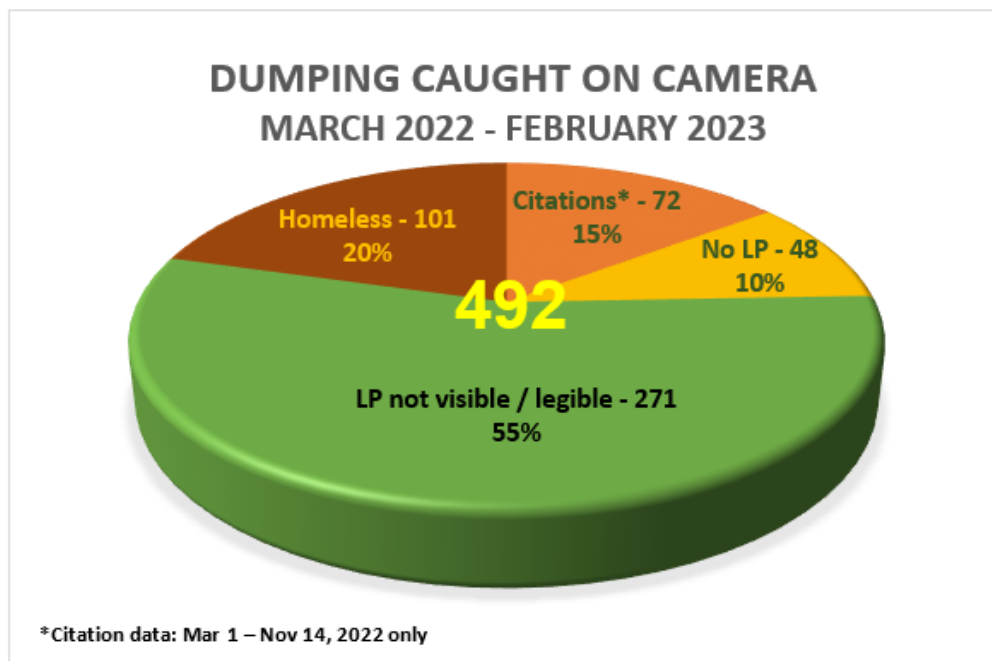


A majority of surveillance camera citations came from just a few hotspots that attract opportunistic dumpers. Enforcement efforts are moderately effective at deterring this type of opportunistic dumping. More data is needed to confirm the PODs’ effectiveness as visual deterrents that prevent dumpers from dumping in the first place, but preliminary numbers and EEO field intelligence suggest approximately six (6) hotspots have cooled from surveillance combined with subsequent enforcement action taken using POD video data. Illegal dumping data for the same 9-month period between 2021 and 2022 shows the number of illegal dumping work orders dropped by an average of 75% at the six locations monitored/previously monitored by PODs.



Surveillance data also revealed some illegal dumping cases are unenforceable all together. Video footages show 30% of dumpers are individuals who:

- 1) are homeless,
- 2) dispose unwanted debris by foot, by grocery carts, bicycles, etc., or
- 3) operate vehicles without license plates.



Surveillance cameras prove ineffective at curbing repeat dumpers and commercial dumpers that operate vehicles without license plates when dumping. The PODs are also not effective against dumping from the homeless population. As the above chart shows, up to 20% of the dumping is done by individuals at homeless encampments. The EEOs have no enforcement protocol for such dumpers.

One year into the Illegal Dumping Surveillance Camera Program, the PODs have given EEU staff a more comprehensive understanding of the nature of dumping at some of the City’s most active dumping hotspots. Consistent with EEU expectations, surveillance cameras prove to be an effective enforcement tool for only a subset of dumping and should not be viewed as the sole or principal tool in the fight against illegal dumping.

- I. Public Records Requests – Statistics and information about public records act requests regarding the relevant subject surveillance technology, including response rates.

There were no public records requests for the period of March 2022 to February 2023.

- J. Total Annual Costs – Total annual costs for the surveillance technology, including personnel and other ongoing costs, and what source of funding will fund the technology in the coming year.

Funding will be sourced from KOCB’s O&M budget in Illegal Dumping (ORG 30674) and Environmental Enforcement (ORG 30676) Units. Staff will request City Council’s approval for additional funding during future Budget Development processes. Total Annual Costs for Fiscal Year 2023 to 2024 are projected as follows:

ILLEGAL DUMPING SURVEILLANCE PROGRAM ANNUAL COSTS (FY2023-2024)				
Equipment-Related Costs	Quantity	Cost	One-Time	Ongoing
Additional PODs*	4	10,000	\$ 40,000.00	
Cellular Boosters*	18	1,000	\$ 18,000.00	
LPR Cameras*	20	2,800	\$ 56,000.00	
Miscellaneous Replacement Parts	-	-		\$ 5,000.00
Monthly Technical Support	12	3,500		\$ 42,000.00
SUBTOTAL			\$ 114,000.00	\$ 47,000.00
Personnel Costs	Quantity	Annual Personnel Cost (Fully Burdened)	Percentage of Surveillance Work	Surveillance Personnel Cost
Analyst II	1	200,259	15%	\$ 30,038.85
EEO (Salary I)	3	195,927	20%	\$ 117,556.20
EEO (Salary II)**	2	171,446	20%	\$ 68,578.40
Painter	1	216,118	5%	\$ 10,805.90
SUBTOTAL				\$ 216,173.45
TOTAL ANNUAL COSTS (FY23-24)			One-Time	Ongoing
			\$ 114,000.00	\$ 263,173.45
*Equipment purchased may be prorated based on available funds				
**EEO staff may increase by three (3) FTEs for a total of 8 EEOs if current vacancies are filled				

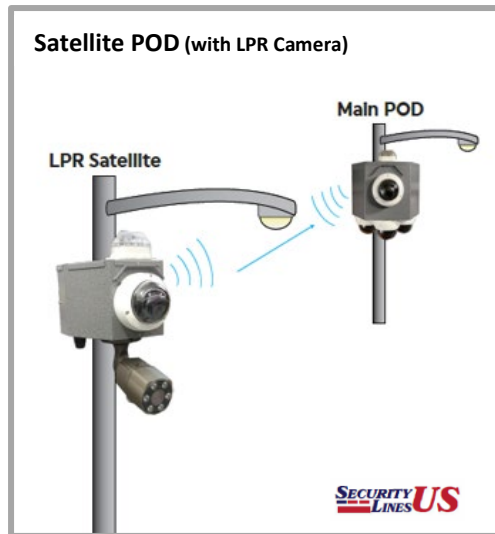
- K. Requested Use Policy Amendments - Any requested modifications to the Surveillance Use Policy and a detailed basis for the request.

Staff requests the following modifications to the Illegal Dumping Surveillance Camera Use Policy:

- 1) To address the cases where EEOs are unable to see license plate information on dumpers' vehicles, staff seeks approval to deploy the following technologies to aid enforcement:

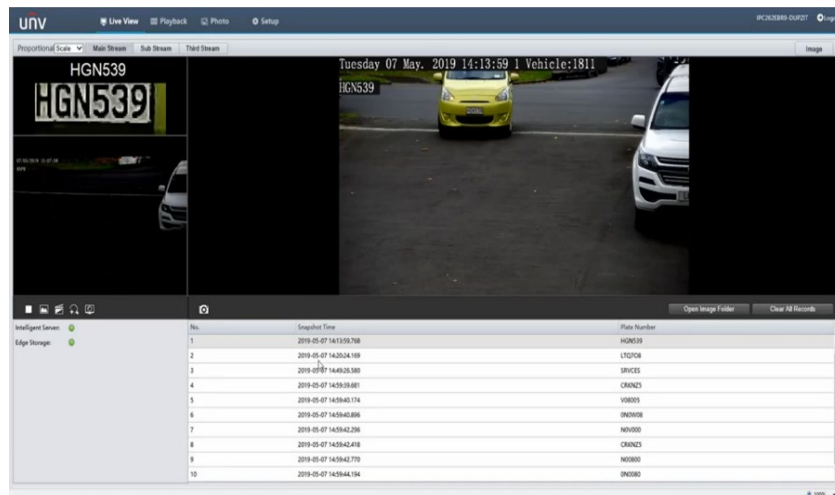
- a. Satellite PODs – Satellite PODs are secondary POD(s) that are deployed to increase the number of viewable angles into an area when surveilling a location with multiple ingress and egress points or a wide area that requires additional PTZ cameras to properly cover the area.

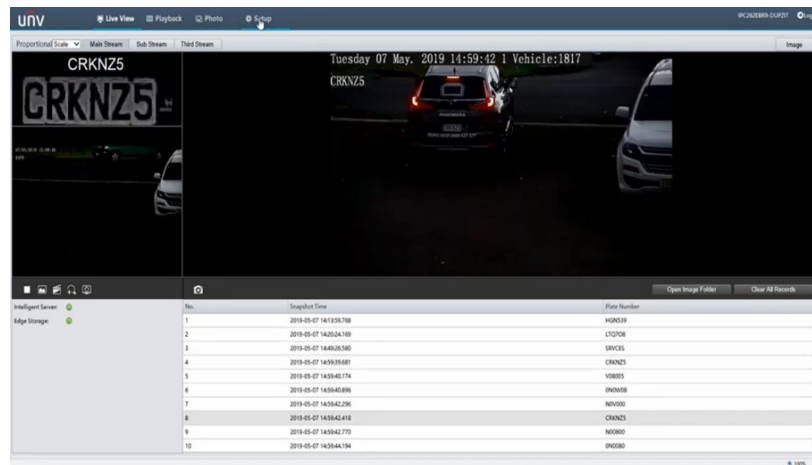
Satellite PODs are connected to the primary POD via wireless transmitters and can be located up to half a mile away from the primary POD as long as there is a clear line of sight between the wireless transmitters.



- b. LPR cameras – The LPR camera is a video camera with infrared lighting and filters that specializes in enhancing a license plate's readability. The LPR camera's video data will record to the POD's DVR, similar to PTZ cameras on a POD. The LPR camera's license plate data consists of enhanced photos of license plates. These images are stored locally on a SD card inside the LPR camera.

They are separate from the DVR data storage and must be extracted from the LPR camera using a web browser interface (see photos). The LPR camera's 128 GB SD card's storage capacity is significantly less than the POD DVR's hard drive and will automatically overwrite itself when full. The number of days of storage will depend on the number of license plates the LPR camera captures. On average, the SD card can store license plates data for 7-10 days.





- 2) Remove the following provision for the masking feature in **Section B. Authorized Use:**
Absent a specific written waiver from affected property owners or current residents, City staff shall use the masking features to obscure areas not in the public right of way. A record of waivers shall be included in the annual report.

- 3) Modify provision for sharing and preserving video data with OCA in **Section H. Third Party Data Sharing** from:

City Attorney’s Office (OCA) –

- Assigned City Attorney staff in OCA’s Litigation Division will view select video clips 1) to ascertain the viability of the video evidence, and 2) to work up a case to initiate legal actions to prosecute the dumper for violations of the Oakland Municipal Code. Security access to the POD system is not required.

To:

City Attorney’s Office (OCA) –

- Assigned City Attorney staff handling illegal dumping related matters will view select video clips 1) to ascertain the viability of the video evidence, and 2) to work up a case to initiate legal actions to prosecute the dumper for violations of the Oakland Municipal Code. Security access to the POD system is not required.
- Assigned City Attorney staff handling litigation matters and/or the City’s compliance with the Public Records Act and Sunshine Ordinance may request PW staff hold and not destroy video footage that might be relevant to such matters. For the same purposes, assigned City Attorney staff may hold and view video footage when necessary. In the course of pending litigation, video footage may be subject to discovery and disclosed with or without a court order. In these instances, City Attorney staff handling litigation matters will make reasonable efforts to narrowly tailor disclosure to the greatest extent possible to comply with the City’s legal

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obligations but also preserve footage that might normally be withheld under this Policy.

OPW is committed to holding dumpers accountable while remaining transparent in its surveillance protocol and activities. This Annual Report is consistent with the department's continued effort to strengthen trust and collaboration with the Oakland community.



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Reviewed by:
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For questions, please contact Victoria Chak, Administrative Services Manager, at x5446.





ANNUAL REPORT - PAC Illegal Dumping Surveillance Technology - PAC Ready

Final Audit Report

2023-05-26

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