



# AGENDA REPORT


**TO:** Jestin D. Johnson  
City Administrator

**FROM:** G. Harold Duffey  
Director, Oakland Public  
Works Department

**SUBJECT:** Illegal Dumping Surveillance Camera  
Program – Annual Surveillance  
Report & Amended Use Policy

**DATE:** June 12, 2023

City Administrator Approval

  
Jestin Johnson (Jun 29, 2023 23:21 PDT)

Date: Jun 29, 2023

## RECOMMENDATION

**Staff Recommends That The City Council Adopt A Resolution: (1) Receiving The Annual Surveillance Report On The Oakland Public Works (OPW) Illegal Dumping Surveillance Camera Program (Camera Program); And (2) Approving Proposed Amendments To The Camera Program Use Policy (Use Policy) As Recommended By The Privacy Advisory Commission (PAC).**

## EXECUTIVE SUMMARY

The Illegal Dumping Camera Program (Camera Program) was launched in response to the growing impacts of illegal dumping and the need for more enforcement tools to catch illegal dumpers. City Council approved Oakland Public Works (OPW) to implement the Camera Program on January 18, 2022 per [Resolution No. 89000 C.M.S.](#), and OPW began administering the program in March 2022. For the reporting period of March 2022 through February 2023, the camera program resulted in nearly 100 citations. To make the camera program significantly more effective, OPW staff is recommending the following changes to the Use Policy:

- Approve the addition of License Plate Reader (LPR) cameras, Satellite Portable Observation Devices (PODs) to the surveillance system
- Modify the provision for sharing and preserving video data with City Attorney's Office (OCA)

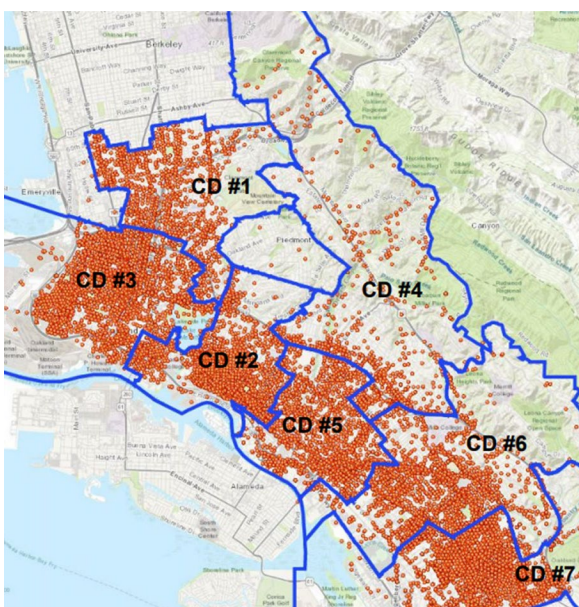
On June 8, 2023, OPW staff returned to the Privacy Advisory Commission (PAC) to report on the Camera Program's first year of operation and to recommend the aforementioned changes. The PAC received and accepted the Annual Surveillance Report (**Attachment A**) and supported the recommended changes to the Use Policy (**Attachment B**), conditioned on formally amending the Use Policy Section H (Third Party Data Sharing) and selecting an LPR camera product that complies with Surveillance Technology Ordinance.

Staff will conduct further research to identify the appropriate LPR camera that meets all conditions in the Oakland Municipal Code (OMC) Chapter 9.64. Staff will return to City Council in the fall to request use of the specific products identified.

## **BACKGROUND / LEGISLATIVE HISTORY**

Illegal dumping is a complex and multi-faceted problem that has affected the City for a number of years. See **Figure 1** showing the large numbers of illegal dumping related work orders received in Fiscal Year (FY) 2021-22. City leaders have been working to develop a variety of strategies and programs to combat the rise of debris on city streets and public lands. This type of activity reduces the health and safety of Oakland's neighborhoods and disproportionately affects economically disadvantaged communities of color.

**Figure 1. FY 21-22 Illegal Dumping Work Orders**



FY21-22 Illegal Dumping Work Orders Completed by KOCB

On January 18, 2022, the City Council approved OPW's Illegal Dumping Camera Program after the proposed Use Policy and Surveillance Impact Report were unanimously approved by the PAC ([Resolution No. 89000 C.M.S.](#)).

The Camera Program was launched in response to the need for more enforcement tools to catch illegal dumpers. Video evidence from the cameras help enhance the investigative work performed by OPW's Environmental Enforcement Unit (EEU). The EEU is comprised of a Clean Community Supervisor, an Administrative Analyst, and eight (8) Environmental Enforcement Officers (EEOs)<sup>1</sup>. The EEOs are primarily tasked with enforcing illegal dumping using various methods to identify illegal dumpers including

forensic investigations involving thorough inspections of illegally dumped debris, and as of March 2022, monitoring video footage captured by cameras installed at illegal dumping hotspots throughout the city. Presently, EEU personnel review video recordings up to two times a day, Monday through Friday, looking for dumped material and related footage to identify dumpers and their vehicles.

The surveillance system selected for the Camera Program is the *Portable Observation Devices* (POD) from Security Lines, U.S. Based on EEO feedback and enforcement results, staff seeks City Council approval to add two technologies, the Satellite PODs and License Plate Reader (LPR) cameras, to the Camera Program to increase the efficacy of the Camera Program. The

<sup>1</sup> Of the eight (8) budgeted full-time EEO positions, three (3) positions are currently vacant and are anticipated to be filled over the next six to nine months.

Satellite PODs allow EEOs to increase viewing angles and viewable range to a dumping site by linking wirelessly one or more PODs to the main POD. Satellite PODs' additional point/tilt/zoom (PTZ) cameras are particularly useful when surveilling locations with multiple ingress and egress points or large stretches of roadway.

The LPR Camera is a video camera with infrared lighting and filters that specializes in enhancing a license plate's readability. Surveillance data from March 2022 through February 2023 reveal that, of the 492 illegal dumping incidents captured by the PODs, 55% or 271 incidents were cases where citations could not be issued because EEOs were unable to see or read the license plate information clearly. Most often, the difficulty reading license plates was a result of poor camera angles or poor video imaging. Adding Satellite PODs and LPR cameras to the current POD surveillance system will maximize the EEOs' ability to identify dumpers and to issue more citations.

At the June 8, 2023 PAC Meeting, OPW staff presented the Annual Surveillance Report which was received and accepted. The PAC also approved the recommended changes to the Use Policy but added the following amendments:

- a) Replace policy language in *Section H. Third Party Data Sharing* with the following:

Data may only be shared with the following departments or non-city entities in compliance with this policy: 1) City Attorney staff handling illegal dumping investigations; 2) City Attorney staff responding to a lawful court order or public record request; 3) Administrative Hearing Officer adjudicating illegal dumping cases; 4) Oakland Police Department and/or Alameda County District Attorney for illegal dumping investigations; 5) Vendor, solely to perform its contractual obligations; 6) At the discretion of the OPW Director, video data and license plate information may be shared with the City Administrator's Office and City Councilmembers. However, prior to the release of any information to a surveillance-related data request, staff will consult with the City Attorney's Office for review and guidance.

In the event POD cameras capture general illegal activity that reasonably appears to constitute "violent forcible crimes" as defined by OPD's Departmental General Order J-04 – Pursuit Driving Appendix A, Paragraph H: "Violent Forcible Crime," Environmental Enforcement Unit (EEU) staff shall promptly download the relevant video footage, forward said recording to OPD for possible investigatory and enforcement action, and log the incident. This log shall be incorporated into the annual report required by O.M.C. [Oakland Municipal Code] 9.64.040.

Within 72 hours of any Oakland Police Department (OPD) request for video recordings, OPW shall notify the Chief Privacy Officer and Privacy Advisory Commission (PAC) Chair of the request. OPD's request will describe the nature of the investigation for which the video data is being requested. This information will be reported to the PAC at its next regularly scheduled meeting.

- b) Select a LPR camera product that complies with Surveillance Technology Ordinance and return to the PAC for review and approval.

**ANALYSIS AND POLICY ALTERNATIVES**

In accordance with the City’s adopted Budget, City activities are structured to support the following priorities: 1) **Holistic community safety**; 2) **Housing, economic, and cultural security**; 3) **Vibrant, sustainable infrastructure**; and 4) **Responsive, trustworthy government**. The proposed OPW Illegal Dumping Surveillance Camera Program advances each of these City priorities.

Preliminary enforcement data suggests the Camera Program is enhancing the City’s ability to catch and prosecute dumpers. As fewer bad actors dump in response to sustained enforcement actions, OPW will be able to maintain cleaner City streets, thereby contributing to community safety and economic security as well as promoting more vibrant, sustainable streets and public spaces throughout Oakland. Working through the PAC also promotes responsive and trustworthy government.

Approval of the proposed resolution would accept the Annual Surveillance Report on the Camera Program and authorize staff to 1) add the satellite PODs and LPR cameras to the Camera Program and 2) approve the updated Use Policy. OPW proposes the acquisition of the Satellite PODs available from the current vendor, and seeks to, upon further research and vetting, return to the PAC and the City Council for approval to acquire LPR cameras that meet the technical requirements set forth in the Surveillance Technology Ordinance.

From the inception of the Camera Program, the aim of the PODs was to increase enforcement by providing EEOs video evidence to cite more dumpers and deter illegal dumping. The data in **Table 1** illustrates the tool’s effectiveness and limitations.

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

	<b>TOTAL</b>	<b>Percentage</b>
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>	<b>TOTAL</b>	<b>492</b>
		<b>100%</b>

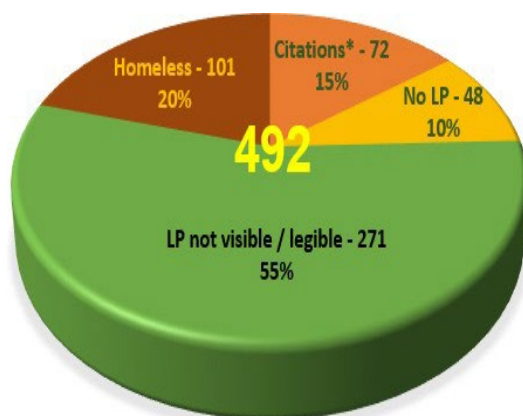
**NOTE:** Due to the February 8, 2023, ransomware attack, some enforcement data from November 15, 2022 – February 28, 2023, was permanently lost. Wherever this is the case, the data will be clearly identified as such; however, the EEU manually tracks many metrics that cover the period of this Annual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

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 pull clear license plate information from over half of all dumping captured on camera.

As shown in **Table 1** and **Figure 2**, 55% of the illegal dumping incidents captured by the cameras were unenforceable because EEU staff could not discern license plate information.

**Figure 2. Dumping Caught on Camera  
March 2022- February 2023**



\*Citation data: Mar 1 – Nov 14, 2022 only

In the first months of deployment, EEU staff sought to address the license plate reading issue by leveraging other solutions that do not involve LPR technology as detailed 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 efforts made to improve license plate images during the pilot period, staff conclude LPR technology is necessary to boost the Camera Program’s citation rate.

Alternatives to not approving the addition of Satellite PODs, LPR Cameras, etc., to the POD Surveillance System are:

- **Status Quo – Maintain current Camera Program.** There will be a cost savings as no additional financial outlay is required for the Camera Program beyond occasional replacement parts. However, illegal dumping abatement costs will likely continue to rise precipitously if the City does not invest more resources into illegal dumping enforcement. The Camera Program will be limited in its effectiveness at catching dumpers without the Satellite PODs and LPR cameras.
- **Hire More EEOs** – Bring on more EEOs to patrol hot spots and catch dumpers. While the EEU will have eight (8) full-time EEOs when fully staffed, the City would need to hire substantially more EEOs to cite as many dumpers as can potentially be caught with the cameras. This is not a viable long-term solution because: 1) it will be cost prohibitive to hire enough EEOs to provide adequate coverage of areas prone to chronic dumping; and 2) more EEOs does not necessarily translate to greater success in catching dumpers if there is insufficient evidence to prosecute. Without accurate license plate information as supporting

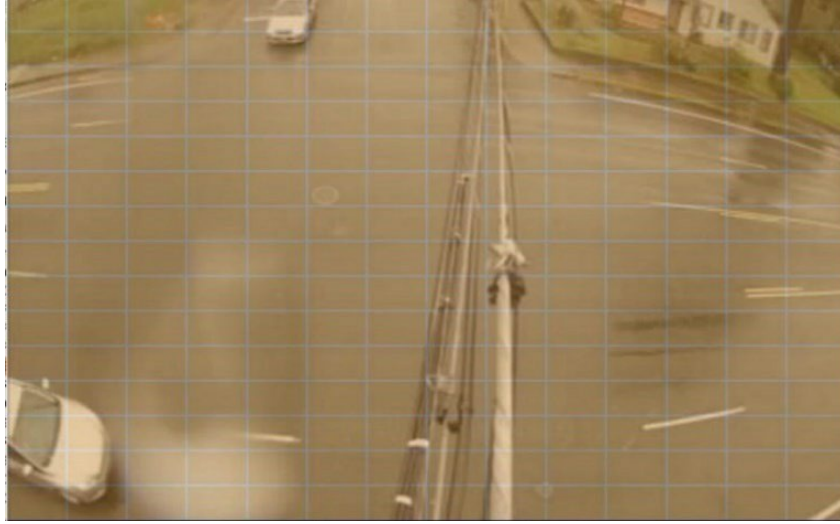
evidence, the only way an EEOs can catch a dumping violator is to witness the individual in the act of dumping.

Staff also considered the following race and equity questions when administering the Camera Program:

- 1) ***Who will benefit from the program?*** Oaklanders living and working in underserved, disadvantaged communities below Interstate-580, where illegal dumping is often concentrated, will benefit most from the OPW Illegal Dumping Camera Program. Based on the prevalence of dumping, most POD deployments were in this region. As more PODs are deployed, and as hot spots in underserved communities cool, other Oakland communities experiencing sporadic dumping will also benefit from the Camera Program.
- 2) ***Where will OPW/EEO install these cameras? How do you choose hot spots? Will I be told where the cameras will be deployed in my neighborhood?*** The EEO relied on Cityworks data to identify the most chronic hot spots to deploy the POD units. A data-driven approach is the best way to ensure cameras are not deployed in a discriminatory, viewpoint-based, or biased manner. Every two to three months, staff generates a hotspot report to identify and prioritize the hottest dumping locations for PODs to be deployed. Once dumping activity diminishes significantly or ceases altogether at a given hotspot, the POD unit will be moved to the next hotspot dumping location on the data-driven list. Since the goal is to catch dumpers dumping, for practical enforcement purposes, the City will not provide public notice of surveillance locations prior to installing the PODs but this information may be made available via public records request (<https://oaklandca.nextrequest.com/>). The EEO staff will endeavor to safeguard the public's privacy rights as per the PAC-approved Use Policy (***Attachment B***). Lastly, EEOs, through their ongoing community engagement, are available to discuss a constituent's specific privacy concerns and will incorporate feedback as appropriate to improve the Camera Program's effectiveness.
- 3) ***As an immigrant/ person of color/ person of a particular religious belief/ justice system-involved individual, etc., I'm concerned about my privacy. How will the City ensure my rights are respected?*** OPW recognizes that all people have an inalienable right to privacy and are committed to protecting and safeguarding this right. OPW staff conducted an in-depth review process with the PAC Ad Hoc Committee, taking the privacy concerns of under-represented groups in account when crafting the original Use Policy. Specific policies put in place to mitigate concerns around cameras include:
  - Surveillance systems will be deployed to capture illegal dumping activities only. POD units will be installed in public rights of way (and potentially at local businesses and private properties through local business/ private resident partnerships) at or near known hotspots where chronic dumping occurs.
  - The POD system (both cameras and software) does not contain analytics that track the movement of individuals. To minimize the public being unnecessarily recorded, the POD's digital video recorder (DVR) may be set to record based on motion

detection via pixel changes to specified areas of a camera's field of view (see **Image 1** below). The POD system may also mask or block out sections of a video image that fall outside of the targeted dumping areas so that images such as houses, sidewalks, schools, places of worship, etc., can be made unviewable to all authorized users.

**Image 1:** Example of the grid showing available quadrants for activating motion-based recording



- The LPR cameras will be used to capture license plate images. EEU personnel will capture all license plate information manually (visually) and contact the Office of the City Attorney for Department of Motor Vehicle (DMV) records. NOTE: The City's OMC permits EEOs to cite both the dumper and the vehicle's owner used in a dumping incident. A robust appeal process is in place for individuals to appeal a citation if they feel they were cited in error.
- OPW will retain and use license plate information and video footage strictly to enforce illegal dumping and will only forward footage with illegal dumping activities to the Office of the City Attorney, assigned Hearing Officer, OPD and/or Alameda County's District Attorney's Office for prosecution.
- OPW will report within 72 hours any OPD request for video recordings captured by POD units to the Chief Privacy Officer and PAC Chair. OPD's request will describe the nature of the investigation for which the video data is being requested. This information will be reported to the PAC at its next regularly scheduled meeting.
- Downloaded video recordings and license plate information will be purged once filed claims, pending litigations, and/or criminal investigations conclude. OPW will conduct annual audits of license plate information and video footage to ensure compliance with the destruction schedule and to verify that authorized users and administrators are following the Use Policy.

**FISCAL IMPACT**

In FY 2021-22, the City spent over \$13M on illegal dumping abatement. Even a slight reduction in illegal dumping activities translates to thousands of taxpayers’ dollars saved and better health and vitality for Oakland residents, visitors, and neighborhood businesses alike. Although POD cameras are not the cure-all to Oakland’s dumping problem, they play a role in enhancing EEOs’ investigative/ enforcement efforts and enable the City to cite more dumpers successfully. The OMC allows the City to fine dumpers up to \$1000 per day and recover City abatement and prosecution costs.

The one-time cost to expand the Camera Program is \$250,000 which includes the estimated costs of LPR cameras, Satellite PODs, Cellular Boosters, DVR Upgrades, and additional PODs. Exact costs for the LPR cameras will be presented in a subsequent report after the specific LPR camera technology is identified for the Camera Program.

The ongoing annual cost is approximately \$50,000 and consists of monthly cellular service, miscellaneous replacement parts such as support straps, dome camera covers, etc., and a service agreement with the vendor, Security Lines, U.S., to provide 10-hours per month technical support estimated at \$45,000 per year (see **Table 2** below).

**Table 2: Camera Program Amendment Projected Cost Summary**

Equipment-Related Costs	Quantity	Cost	Ongoing Total	One-Time Total	Notes
<b>New POD Equipment</b>					
LPR cameras	30	2,800.00		84,000.00	Priority purchase; additional funds needed to buy more in FY23-25
Satellite PODs	30	2,495.00		74,850.00	Priority purchase; additional funds needed to buy more in FY23-25
DVR Upgrade	20	660.00		13,200.00	
<b>Existing POD Equipment</b>					
Additional PODs	4	10,000.00		40,000.00	Purchase of 4 PODs will bring total POD count to 20 Units
Cellular Boosters	18	1,000.00		18,000.00	Priority purchase; additional funds needed to buy more in FY23-25
Miscellaneous Replacement Parts			5,000.00		
Monthly Technical Support	12	3,500.00	42,000.00		Priority professional services contract until Info Systems Specialist hire; 10 hrs/mo tech support



Contingencies (8%)				18,404.00	
	TOTAL		<b>47,000.00</b>	<b>248,454.00</b>	

Approval of the proposed the Amended Use Policy will authorize OPW staff to purchase Satellite PODs and Cellular Boosters for the current surveillance units immediately, plus extra units for locations with multiple ingress/ egress points. It will also provide approval for the technical support contract with the vendor. Installation of the new equipment will be performed by OPW staff but can also be installed by the vendor for a one-time fee or through the proposed monthly technical support contract. There are no mandatory annual maintenance service fees or initial per-camera licensing fees.

Funding to purchase the proposed equipment and to establish the technical support services contract is available in the approved FY 2022-23 Mid-Cycle Budget in FUND 2244 Measure Q – Parks & Recreation Preservation, Litter Reduction, and Homelessness Support Act, ORG 30674 Illegal Dumping, PROJECT #1004120 PW Encampment Abatement2 (see **Table 3**). Monitoring will be performed by existing staff.

**Table 3: Proposed Project Funding Sources**

Fund Source	ORG	ACCOUNT	PROJECT	PROGRAM	Amount
Fund 2244 - Measure Q - Parks & Recreation Preservation, Litter Reduction, and Homelessness Support Act	30674	54011	1004120	NB41	\$250,000
		54999	1004120	NB41	\$50,000

**PUBLIC INTEREST**

At various Public Works & Transportation Committee meetings, City Council meetings, and local community meetings, members of the community have consistently expressed support for the use of cameras to catch dumpers and to stop illegal dumping.

The PAC’s Ad Hoc Committee met with OPW staff and the vendor to discuss adding satellite PODs and LPR cameras to the surveillance system prior to its introduction to the full Commission. In two ad hoc working sessions leading up to the June 8, 2023, PAC meeting, OPW staff gathered input and recommendations on the Annual Surveillance Report and modifications to the Use Policy.

**COORDINATION**

Staff worked closely with the PAC Ad Hoc Committee on the Annual Surveillance Report (**Attachment A**) and Use Policy (**Attachment B**) for the Camera Program. The City Attorney’s Office, Budget Bureau and the City Administrator’s Office reviewed and coordinated this agenda report and resolution.

## **SUSTAINABLE OPPORTUNITIES**

***Economic:*** In FY 2021-22 alone, the City spent over \$13M to abate debris dumped on Oakland city streets. Implementation of the Camera Program, especially with the recommended new technologies, will enable the City to capture and cite more illegal dumpers, thus reducing debris on City streets and the significant spending on illegal dumping abatements. The Camera Program enhances the EEOs' investigative/enforcement efforts and enables the City to successfully prosecute more dumpers. Finally, cleaner streets will promote a safer, healthier, pedestrian-friendly environment that encourages shopping and recreating in Oakland, which will benefit neighborhood businesses and the economic vitality of the city.

***Environmental:*** Illegal dumping is a crime against the environment. Chemicals and toxic compounds from unwanted household cleaners, motor oil, materials from broken furniture, mattresses, and appliances, as well as biohazardous and commercial waste, can readily leach into soil or be washed into storm drains, contaminating Oakland's waterways and harming wildlife. Debris can also clog storm drains and culverts, causing flooding. Large garbage piles increase the likelihood of fires. At a minimum, dump piles serve as an ideal breeding ground for mosquitoes, flies, rats, and other disease-carrying vermin. With the passage of this resolution, EEOs will leverage video recordings to investigate individuals who continue to dump on City streets and hold them accountable for their crimes against the environment.

***Race & Equity:*** Clean streets – free of used household goods and clothing, broken furniture, appliances, biohazardous and/or commercial waste – will have a measurably positive effect on the health and safety of Oaklanders, especially for those living and working in historically underserved and disadvantaged communities below Interstate-580 where illegal dumping is concentrated and chronic hot spots are most prevalent. With the passage of this resolution, the City Council will continue its commitment to invest City resources into historically underserved and racially marginalized neighborhoods. Through the use of cameras at illegal dumping hotspots, the City will increase enforcement to keep underprivileged communities clean.

**ACTION REQUESTED OF THE CITY COUNCIL**

Staff Recommends That The City Council Adopt A Resolution: (1) Receiving The Annual Surveillance Report On The Oakland Public Works (OPW) Illegal Dumping Surveillance Camera Program (Camera Program); And (2) Approving Proposed Amendments To The Camera Program Use Policy (Use Policy) As Recommended By The Privacy Advisory Commission (PAC).

For questions regarding this report, please contact Victoria Chak, Administrative Services Manager at (510) 615-5446.

Respectfully submitted,



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G. HAROLD DUFFEY  
Director, Oakland Public Works

Reviewed by:  
Kristin Hathaway, Assistant Director  
Oakland Public Works – Bureau of Environment

Prepared by:  
Victoria Chak, Administrative Services Manager  
Oakland Public Works – Bureau of Environment

Attachments (2):

- A: Annual Surveillance Report for Illegal Dumping Surveillance Camera Program
- B: Use Policy for Illegal Dumping Surveillance Cameras