

Audit Report

June 2, 2021

Fleet Replacement Fund Short Millions



BERKELEY CITY AUDITOR



Fleet Replacement Fund Short Millions



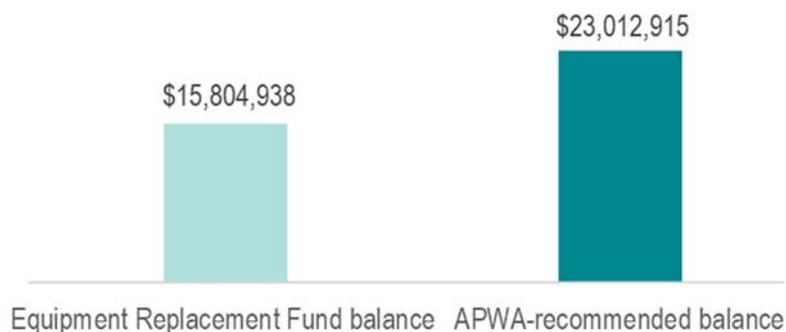
Report Highlights

June 2, 2021



Findings

The Equipment Replacement Fund fell \$7.2 million short of American Public Works Association's recommended level in FY 2020.



Source: Auditor's analysis of the City of Berkeley's vehicle and equipment data as of the end of FY 2020

The City's fleet replacement funding model is not working to ensure sufficient funding for timely replacement. The \$13.2 million needed to replace vehicles and equipment overdue for replacement would use most of the \$15.8 million fund balance, and the remaining funds would not be enough for future replacement needs. The funding shortage may have contributed to the threefold increase in backlogged fleet units that surpassed their replacement date between FY 2010 and FY 2020. This shortfall may also prevent the City from adhering to its plan to transition to an electric fleet by 2030. The fund also has a balance \$18.6 million lower than what departments have contributed, which is the result of paying for the following without contributions:

- Personnel costs
- Reallocation of funds to cover budget shortfalls
- Customization and specialized fleet gear
- Replacement of fleet units that have not been funded

It is difficult to know the exact cost of the City's current fleet replacement funding needs because Public Works' data about the number of vehicles and units of equipment that need to be replaced is not always accurate. Public Works cannot show that decisions to keep vehicles and equipment past their replacement date are beneficial or cost effective.

Objectives

1. Is the City's fund to replace its fleet of vehicles and equipment sufficient?
2. Does Public Works have key information about the City's fleet replacement and funding needs?

Why This Audit Is Important

The City of Berkeley maintains a Replacement Fund for 486 vehicles and units of equipment to provide citywide services from public safety to park maintenance. If the Replacement Fund is not sufficient to replace vehicles and equipment on time, it can cost the City more in the long run due to the excess maintenance and repair costs to keep an aging fleet running. It could also jeopardize the City's goal to transition to an electric fleet by 2030.

Recommendations

We recommend that Public Works work with the City Manager's Office to adjust the fleet funding model to ensure appropriate funding for fleet replacements and account for the true costs of managing the fleet. Public Works should also update its electric vehicle transition plan to take into consideration available funding. We also recommend that Public Works ensure the new fleet and equipment management system has the accurate data needed to manage the Replacement Fund. Public Works management agreed with our recommendations.



BERKELEY CITY AUDITOR

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<http://www.cityofberkeley.info/auditor>

CONSENT CALENDAR
June 29, 2021

To: Honorable Mayor and Members of the City Council
From: Jenny Wong, City Auditor *zw*
Subject: Berkeley’s Fleet Replacement: Fund Short by Millions

RECOMMENDATION

We recommend City Council request that the City Manager report back by December 14, 2021, and every six months thereafter, regarding the status of our audit recommendations until reported fully implemented by the Public Works Department.

FISCAL IMPACTS OF RECOMMENDATION

Upon adjusting the fleet funding model, Public Works may request a higher or lower contribution from departments to account for their fleet replacement and management needs.

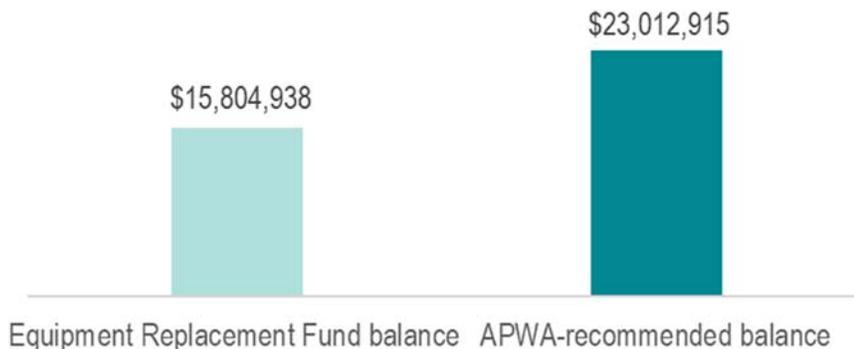
CURRENT SITUATION AND ITS EFFECTS

The Equipment Replacement Fund (Replacement Fund), an internal service fund made up of contributions from City departments to replace their fleet of vehicles and equipment, is underfunded. Its funding model is not working and may delay the City in accomplishing its goal to transition to an electric fleet. Additionally, Public Works lacks accurate information for replacing fleet units.

Replacement Fund Is Insufficient and Underfunded

The current funding level is not sufficient to address replacement needs. According to guidance from the American Public Works Association (APWA), the Replacement Fund is short by about \$7.2 million. Berkeley’s Public Works Department is accredited by APWA, which recommends a local municipal fleet replacement fund have a reserve of 15 percent of the total fleet replacement value. Based on that guidance, in FY 2020, the City’s Replacement Fund should have had a balance of approximately \$23 million including the funds collected towards the replacement of backlogged vehicles. However, the Fund only had \$15.8 million.

The Equipment Replacement Fund fell \$7.2 million short of American Public Works Association’s recommended level in FY 2020.



Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data, end of FY 2020

In addition, the backlog of fleet units that surpassed their replacement date between FY 2010 and 2020 has grown from 54 to 174 fleet units, or 36 percent of the fleet funded through the Replacement Fund. The estimated replacement cost for these 174 backlogged vehicles is \$13.2 million.

The Replacement Fund is underfunded because it was used for items beyond the direct cost of fleet replacement including personnel, reallocation of replacement funds, customization of vehicles, and purchase of replacement fleet without funding. There is gap of \$18.6 million between what was collected towards replacing fleet units and the existing balance in the fund. The Public Works Department did not have an accounting for how the \$18.6 million was spent, but the report highlighted a few ways that the City has spent fleet funds for other purposes that accounts for a large part of the discrepancy:

- The City charged a total of \$7.2 million in personnel costs to the fleet replacement fund in 2006-2020. In the past 15 years, personnel costs averaged about \$477,000 annually. According to Public Works, the department is now working with a consultant to conduct a rate study that would clarify what its services should cost, including positions assigned to fleet management and replacement.
- In FY 2006, the City reallocated \$2 million from the Replacement Fund but did not replenish those funds. More recently, in FY 2021 the City budgeted to use over \$1 million from the Replacement Fund to lease fire vehicles. The City usually pays for these leases from the General Fund, but reallocated the \$1 million when it suffered low revenues caused by the COVID-19 pandemic.
- Public Works stated that historically, some fleet customization costs were paid for with Replacement Fund. Public Works does not have data on fleet customization costs, but staff reported that, in some cases, customization can cost about 40 percent or more of the purchase cost.
- According to its own data, Public Works may have used up to \$3 million from the Replacement Fund over the past 22 years to replace vehicles that departments had not funded.

The City's fleet replacement funding model is not aligned with how funding decisions are made. Any funding that departments contribute to the Replacement Fund goes into one account and may be spent on fleet throughout the City. The Budget Office may approve funding for proposed fleet replacements based on whether funds are available overall and does not have information about how much each department has contributed. We recommend that Public Works adjust the fleet funding model to ensure appropriate funding for fleet replacements and an accounting of the true costs of managing the fleet.

The underfunding may prevent the City from accomplishing its goal of transitioning its fleet to electric vehicles by 2030 in an effort to reduce greenhouse gas emissions. In July 2020, Public Works presented the City's Municipal Fleet Electrification Assessment (assessment), prepared by East Bay Community Energy, on the timeline and cost of transitioning to an electric fleet by 2030. The assessment estimated that it would cost about \$1.2 million to buy electric vehicles to replace 32 gas-powered and hybrid light-duty vehicles due for replacement in FY 2021, 29 of which are funded by the Replacement Fund. According to the City's fleet data, Public Works has only collected \$747,000 to replace those 29 vehicles with electric ones in FY 2021. Even if Public Works had collected enough funding, there is no guarantee that the City would have used those funds to purchase the specified electric vehicles due to the current funding model. Eight of the 174 fleet units overdue for

replacement are scheduled to be replaced with new electric vehicles but there have been no contributions for their replacement. We recommend Public Works update its electric vehicle transition plan to take into consideration available funding.

Public Works Lacks Adequate Data and Information for Decision Making

Public Works has incomplete and sometimes erroneous information in the current data system including fleet unit original and revised replacement dates, rationale for deferring or prioritizing replacement, estimated replacement costs, and how much a specific department has contributed towards and spent on replacing its fleet. Public Works stated that they started a contract with AssetWorks, a vehicle and equipment management system, which is expected to be capable of tracking accurate information once it is configured.

It will be important for staff to have policies and procedures in place to manage the data to ensure accuracy, transparency and accountability in the City's vehicle replacement process. Among our recommendations is that Public Works should conduct a needs assessment of vehicles overdue for replacement and create a plan that documents a timeline and cost for replacement in order to provide a more accurate estimate of funding needs to Council. Public Works should also fix errors and update the information in the current database prior to migrating it to the new one from AssetWorks. Additional recommendations are detailed in the report.

BACKGROUND

The City maintains a Replacement Fund that Public Works' Equipment Maintenance Division manages to replace the City's fleet. Departments make monthly payments into the Replacement Fund that are proportional to the estimated cost to replace their current fleet, and 75 percent of the City's fleet is funded through it. The Replacement Fund is an internal service fund. Internal service funds are used to account for the financing of goods or services provided by one department or program to other departments or programs on a cost-reimbursement basis.

ENVIRONMENTAL SUSTAINABILITY

The underfunding may prevent the City from accomplishing its goal of transitioning its fleet to electric vehicles by 2030 in an effort to reduce greenhouse gas emissions.

RATIONALE FOR RECOMMENDATION

Implementing our recommendations will ensure appropriate funding for fleet replacements and accurate information to enable decision makers to make efficient and effective replacement decisions.

CONTACT PERSON

Jenny Wong, City Auditor, City Auditor's Office, 510-981-6750

Attachments:

1: Audit Report: Fleet Replacement Fund Short Millions

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Introduction

The City of Berkeley used a fleet of 730 vehicles and units of equipment (e.g., trailers, generators, grass mowers) in FY 2020 to provide services from public safety to park maintenance. The City maintains an Equipment Replacement Fund (Replacement Fund) to replace some of these units as needed. In FY 2020, the City had 486 units that were originally purchased through the Replacement Fund. If the Replacement Fund is not sufficient to replace fleet as scheduled, it can cost the City more in the long run due to the excess maintenance and repair costs needed to keep an aging fleet running. Without sufficient funds, the City may not adhere to its plan to replace fossil-fuel vehicles with electric by 2030. To secure sufficient funding, the City needs accurate information about replacement costs. It is also important that the City takes care of and invests in its capital assets. Neglecting investments in capital assets such as fleet may increase maintenance and repairs costs for the City in the long run.

The City Auditor audited the Replacement Fund in 2010 and found that it was not sustainable to meet the City's future fleet replacement needs. The audit recommended that the City develop a plan to increase its fund and reduce its backlog. In this current audit, we revisited the Replacement Fund and found that it is still not sufficient. We also found that Public Works lacked key information about the City's fleet replacement funding needs.

To ensure that the City has sufficient funds to replace its fleet of vehicles and equipment on time and adhere to the plan of fleet electrification by 2030, we recommend that Public Works addresses ongoing funding shortages and improves its data management.

Objectives, Scope, and Methodology

Our objectives were:

1. Is the City's fund to replace its fleet of vehicles and equipment sufficient?
2. Does Public Works have key information about the City's fleet replacement and funding needs?

The scope of our analysis included fleet units purchased through the Equipment Replacement Fund, and did not include those purchased through other funding sources except to describe the total fleet size. We analyzed the City's fleet database using a point-in-time dataset from May 29, 2020. We analyzed fleet funding and expenditures in FY 2020 and FY 2021. We examined the data for selected fleet units recorded in the database, reviewed documents for selected units, interviewed Public Works staff, and checked inventory for selected units. For more information about our methodology, see p. 33.

Background

Equipment Replacement Fund

The City has a fleet of vehicles and equipment units used to provide city services. Public Works' Equipment Maintenance Division manages an Equipment Replacement Fund (Replacement Fund) to replace vehicles and equipment as needed.

The Replacement Fund is an internal service fund. Internal service funds are used to account for the financing of goods or services provided by one department or program to another on a cost-reimbursement basis. Departments make monthly payments into the Replacement Fund based on the estimated cost to replace their current units.¹ Public Works determines departments' monthly fleet replacement charges based on purchase cost, estimated economic life, and an inflation factor. It is important to note that the City's Budget Office considers that these funds are not necessarily tied to any specific unit or department even though the fleet management data shows that the money is allocated to a specific fleet unit.

Economic life, sometimes referred to as useful life, is an estimate of the average number of years a unit is considered useable before its value is fully depreciated. By determining when units become less effective and uneconomic, agencies can effectively plan to replace such units with new ones at appropriate intervals and reduce maintenance and overall costs.

Public Works manages the Replacement Fund and buys new or replacement vehicles. The current Public Works' fleet replacement policy lists the economic life for vehicles that range from as low as four years to as high as 15 years. Public Works provides maintenance and repair services and bills departments directly for such services. These services are not funded through the Replacement Fund.

Public Works currently uses FUND\$, the City's financial and accounting system, to record information about fleet units including the estimated replacement cost and the total fees paid towards replacement per unit. The FUND\$ database tracks general information including the fleet unit's description, registration, purchase cost, estimated economic life, and replacement date. Public Works also enters billing information including account number and departments' monthly replacement fees.

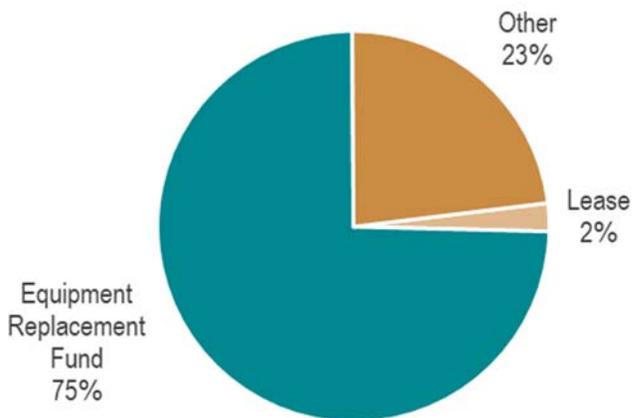
When a fleet unit approaches its estimated replacement date, Public Works' replacement policy states that staff assess it based on operating costs such as maintenance and repair costs, labor, part, fuel, and supply costs. Public Works stated that, based on their assessment, they inform departments about whether the fleet

¹ Public Works calculates the monthly payments based on the estimated cost of an equivalent fleet unit multiplied by an inflation factor, depending on the number of years in its economic life.

is in good enough condition to defer replacement or whether it should be replaced. We did not verify the communication between Public Works and departments about this because it was beyond the scope of this audit. The decision to replace fleet units is ultimately up to the departments.

The Replacement Fund does not pay for all fleet units (Figure 1). For some units such as trailers, mowers, generators, departments pay directly from their budgets or other funding sources such as grants. For leased fleet, the City transfers money from other funds into the Replacement Fund, from which Public Works makes lease payments. For example, the City transfers money from the General Fund to the Replacement Fund to make lease payments for fire engines.

Figure 1. Most of the City’s fleet is funded through the Equipment Replacement Fund.²



Note: “Other” includes funding sources such as department budgets or grants.
 Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data as of end of FY 2020.



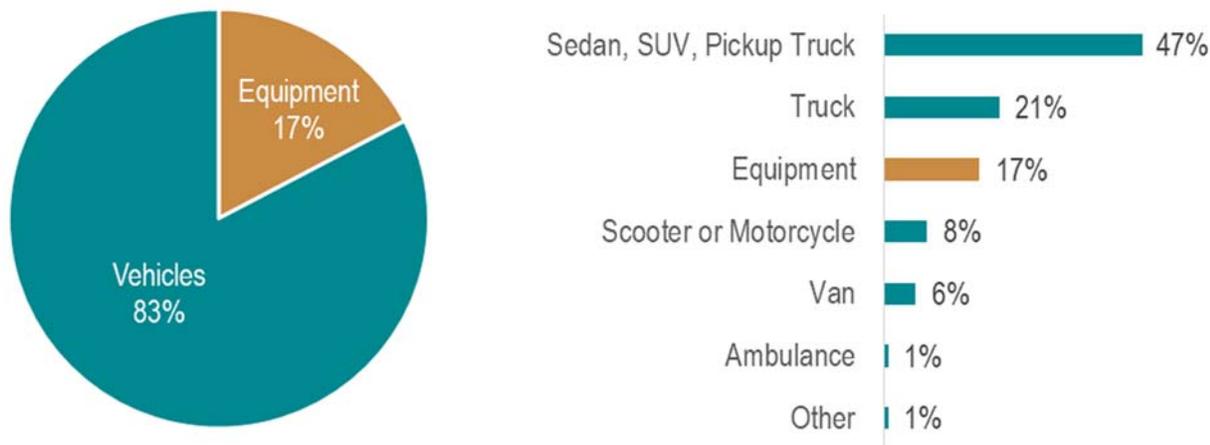
² These values do not include units kept as backups that are replaced with other retired units and not paid for through the Replacement Fund.

Fleet Funded by the Equipment Replacement Fund

Berkeley’s entire fleet of city of vehicles and equipment can be funded through the leases or other funding, but most of the fleet, 486 units, is replaced through the Replacement Fund. About 83 percent of units funded through the fleet replacement fund are vehicles and include police sedans and SUVs, fire engines, refuse trucks, and pickup trucks (Figure 2). In this report, equipment units include construction and maintenance tools such as trailers, stump grinders, aerators, large grass mowers, generators, and high-pressure washers.

For the purposes of this report “fleet” refers to both vehicles and equipment. The City’s equipment Replacement Fund pays for the replacement of vehicles and equipment. Vehicles make up the majority of these units.

Figure 2. In FY 2020, the majority of the City’s Equipment Replacement Fund units were vehicles.



Source: Auditor’s analysis of the City of Berkeley’s fleet data at the end of FY 2020.

According to the fleet database, the departments that had the highest all time spending in the Replacement Fund were Public Works, Police, and Fire (Figure 3).

Figure 3. Public Works’ share of the fleet has the greatest estimated replacement cost.



Note: “Other” includes the City Manager’s Office, Library, Finance, and Information Technology. The Fire Department total does not include 17 leased fire trucks that are reimbursed through the General Fund. The total replacement cost for these fire trucks was estimated to be \$11.1 million as of May 2020.

Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data at the end of FY 2020

Finding 1: The Replacement Fund is underfunded by millions of dollars.

The City’s Replacement Fund is short by \$7.2 million based on guidance from the American Public Works Association. The fleet replacement funding model is not working to ensure sufficient funding for timely replacement. The Replacement Fund also cannot cover the cost to replace the growing number of vehicles that have surpassed their estimated replacement date. The funding shortfall is in part due to the use of the Replacement Fund for other purposes. This lack of funding may increase delays in replacement leading to excessive maintenance and repair costs. It may also prevent the City from achieving its goal to transition from fossil fuel vehicles to an electric fleet by 2030.

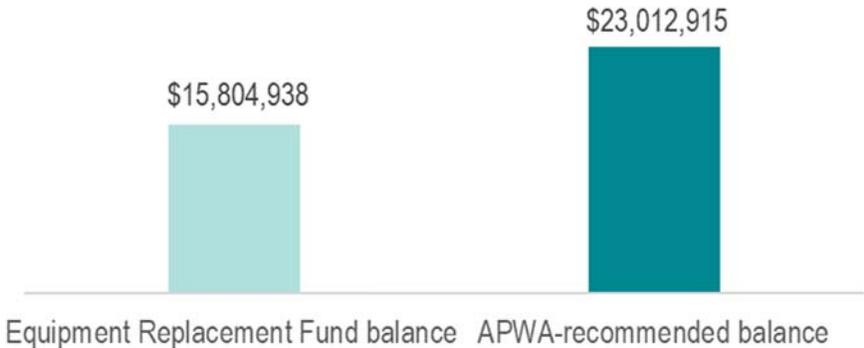
The Replacement Fund is underfunded by \$7.2 million.

According to guidance from the American Public Works Association (APWA), the Replacement Fund is short by \$7.2 million. This estimate was used given that Public Works does not track the total fleet replacement needs and some data may be inaccurate, as we will discuss in the next finding (page 21). Public Works also does not have information about the total dollar value of the City’s fleet replacement needs, so it is not possible to easily determine the exact amount of underfunding. However, the fund appears insufficient by a large margin based on APWA guidelines and the total fund balance compared to what was collected.

Public Works is accredited by the APWA, which recommends that local municipalities maintain a reserve of 15 percent of the total fleet replacement value for timely replacement and unexpected or changing needs. Based on Berkeley’s fleet data, for 2020, that would require a total fund balance of \$23 million which would consist of a reserve of \$7.5 million plus the \$15.5 million that departments already contributed toward the replacement of 174 vehicles past due for replacement. However, the total fund balance of \$15.8 million falls below the level recommended by APWA, yielding a shortfall of \$7.2 million (Figure 4).

The American Public Works Association (APWA) is a professional accreditation organization for public works agencies. APWA provides varied educational and networking opportunities that help public works personnel grow in their professionalism and improve the quality of life in the communities they serve. Berkeley’s Public Works department is an APWA-accredited agency.

Figure 4. The Equipment Replacement Fund fell \$7.2 million short of American Public Works Association’s recommended level in FY 2020.



Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data as of the end of FY 2020

The current funding model is not working.

The City’s fleet replacement funding model is not aligned with how funding decisions are made. Public Works, which manages the fund, bases decisions to replace fleet units in part on whether departments have paid enough towards the replacement of a specific vehicle. However, the City’s Budget Office makes decisions about whether to approve funding for proposed fleet replacements based on whether funds are available overall. Public Works does not provide the Budget Office with information about whether departments have paid enough per unit into the fund to cover the replacement costs or what the overall fleet funding needs are for the year. In the Capital Improvement Program biennial budget, the City lists the vehicles that need to be replaced over the next five years, but the list does not match the vehicles that are purchased. Without information about the City’s overall fleet replacement funding needs, it is difficult to determine how best to prioritize fleet replacement needs to avoid impacts such as delays in replacement.

Although it may be reasonable for the City to use the Replacement Fund as a central funding source rather than tying it to specific vehicles and departments, this use of the Replacement Fund does not line up with how it is funded, which is by specific vehicles. As an internal service fund, contributions to the Replacement Fund from departments are to fund specific vehicles. However, any funding that departments contribute goes into one central account, the Replacement Fund, which in practice may not be dedicated to any specific department’s vehicles, and has been spent on other fleet throughout the City. It is also difficult to determine how best to prioritize fleet replacement needs to avoid impacts such as delays in replacement without information about the City’s overall fleet replacement funding needs.

Public Works is generally responsible for the ultimate decision about when to replace a fleet unit. According to Public Works, there are some cases when departments make a different decision, such as replacing a unit but keeping it as a backup or replacing with a different type of unit. The current fleet replacement policy does not clarify Public Works' authority and responsibilities in making decisions about fleet replacement.

Timely fleet replacement: The fleet replacement funding shortage may have contributed to the more than threefold increase in the number of backlogged fleet units that surpassed their replacement date between FY 2010 and FY 2020.³ According to Public Works' data, the number has grown to 174 fleet units. This represents 36 percent of the fleet funded through the Replacement Fund. The estimated replacement cost for these 174 vehicles is \$13.2 million. Replacing the backlog would take up most of the Replacement Fund's balance of \$15.8 million, leaving only \$2.6 million for the rest of the City's fleet replacement. This would fall short of the \$4.2 million spent to replace vehicles in FY 2020 and \$9 million planned for replacements in FY 2021. The \$13.2 million backlog replacement cost also represents a nearly \$10 million increase in the cost reported in the 2010 audit.

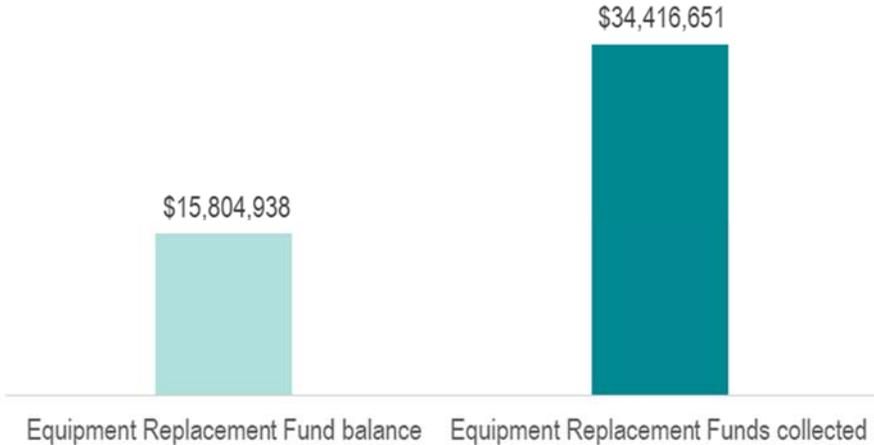
It should be noted that the actual number of overdue fleet may be higher or lower due to inaccuracies in the data which we will discuss in more detail in the our second finding (page 21). According to Public Works, one reason for delays in fleet replacement is that they are not expecting to receive new police vehicles until early 2021 as the Ford Motor Company was retooling its plants in the fall of 2019. However, police vehicles make up only 51 vehicles, or 29 percent, of the total 174 vehicles. Public Works also stated that they did not replace the fleet right away because they were waiting for the results of the City's fleet electrification assessment which took eight months to complete and was issued in May of 2020. Nevertheless, even if Public Works did not face these setbacks, the current funding level is not sufficient to address all overdue vehicles and equipment.

³ These figures only refer to the backlogged vehicles to be replaced with the Replacement Fund. The total fleet backlog is greater.

This underfunding also poses a risk that the Replacement Fund cannot cover the City’s fleet needs in the coming years without other funding sources to cover the funding shortages. Such reallocations have already occurred. For example, in November of 2019, the City requested that City Council allow the use of \$48,000 from the Zero Waste Fund to cover a funding shortage for the total replacement cost for seven refuse vehicles. According to the Budget Office staff, they usually consider such requests based on funding availability.

Total fund balance compared to what was collected: The Replacement Fund has a balance significantly lower than what departments have contributed for the replacement of their fleet. As of the end of FY 2020, departments had contributed over \$34.4 million toward the replacement of 486 units,⁴ but the Replacement Fund had a balance of only \$15.8 million, which is \$18.6 million less than what was collected (Figure 5). The \$34.4 million collected is higher than the estimated APWA-recommended balance of \$23 million and may be more than is needed for vehicle replacement only. Based on the current funding model, the \$34.4 million does not include the total cost of fleet management, including personnel, as we will discuss in the following section.

Figure 5. The Equipment Replacement Fund was short of what was collected by \$18.6 million at the end of FY 2020.



Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data as of the end of FY 2020

The gap between the Replacement Fund balance and the total funding collected may be due in large part to the City’s use of the Replacement Fund

⁴ Though the entire fleet is comprised of 730 units, only 486 of them are funded through the City’s Replacement Fund. This number excludes vehicles that are replaced but kept as backups and are not funded, but does include 10 such vehicles planned to be replaced with new electric vehicles in FY 2021 using Replacement Fund dollars.

for other purposes. According to Public Works, it is difficult to determine from the current data and historical records exactly what happened to the \$18.6 million. We estimate that several categories of spending could explain most of the gap, which we will discuss in more detail in the next section.

The Replacement Fund has been used for other purposes.

The Replacement Fund is underfunded in large part because the City uses the Replacement Fund to pay for expenses other than the direct cost of fleet replacements, but does not factor those costs into charging departments for fleet units and fleet management services. Departments make monthly payments towards the eventual replacement of their fleet.⁵ However, the formula does not factor in the following significant expenditures made with the Replacement Fund. Without a funding model that accounts for how the fund is used, it is difficult to ensure funding sufficiency, transparency and accountability.

Personnel costs: The City charged a total of \$7.2 million in personnel costs to the Replacement Fund in 2006-2020. While it may make sense to use the Replacement Fund for this purpose, Public Works does not factor personnel costs into the calculation of departments' contributions to the Replacement Fund. Each year, the City has used the Replacement Fund to pay for personnel costs related to managing fleet replacement. However, it is not accounted for as a regular expense from the Replacement Fund. In the past 15 years, personnel costs averaged about \$477,000 annually. Without revenue to cover these expenses, they add up to a significant amount of funds that cannot be used for fleet replacement over time.



Additionally, some of these personnel costs may not be related to fleet replacement. For example, the City currently pays 100 percent of a senior buyer's salary from the Replacement Fund though fleet purchasing responsibilities make up less than 100 percent of their time. In FY 2020, the Finance Department also erroneously charged \$133,207 to the Replacement Fund for the salary and benefits of an employee who worked as an interim General Services Manager in Finance for six months, a position that is normally not charged to the Replacement Fund. This error went unnoticed until this audit.

According to the Public Works director, the department is working with a consultant to conduct a rate study that would clarify what its services should cost, including positions assigned to fleet management and replacement. The Public Works director stated that the rate study is intended to make costs associated with fleet management more transparent by providing a breakdown of the costs charged to departments. The outcomes of the rate study could provide information about how much fleet-related personnel time should be accounted for and charged to departments.

It is important to note that this personnel cost issue is not new. The earliest records available show that the City has paid an average of \$477,000 in personnel costs each year since 2006. The 2010 audit found that from FY 2008 to FY 2010, the City paid over \$1.3 million for personnel costs from the Replacement Fund and recommended that the City consider establishing administrative fees to cover personnel costs. The City decided not to establish a fee but did not provide a rationale for its decision, and continued paying personnel costs from the Replacement Fund.

Funding reallocation: In FY 2006, the City reallocated \$2 million from the Replacement Fund, but did not replenish those funds. The Budget Office stated that the City repays inter-fund loans but generally does not replenish funds that are reallocated from one internal service fund to another to support City operations. To cover a budget shortfall in FY 2021 due to the impact of COVID-19 on City revenues, the City budgeted to use over \$1 million from the Replacement Fund to pay for a lease of fire vehicles, which the City usually pays from the General Fund. The City also budgeted to defer the Police Department's payments into the Replacement Fund in the amount of \$412,483. The Public Works' vehicle and equipment replacement policy does not provide any guidance on managing the fund to ensure that it is sufficient to meet the City's needs.

According to Budget Office staff, the City makes decisions to reallocate the money from the Replacement Fund for other, non-fleet purposes with input from Public Works based on the available Replacement Fund balance. They also reported that Public Works does not provide any analysis of the impact of using Replacement Funds for non-fleet purposes, such as delays in fleet replacement or increased maintenance and repair costs as the fleet ages. This can lead the Budget Office to approve expenditures from this fund based on if there are available funds to cover the expenditure. However, available funds are a misleading indicator of the fund's sufficiency if they do not also have information about what the annual fleet funding needs are citywide.

Fleet customization costs: According to Public Works, some of the funding gap could be due to substantial vehicle customization costs charged to the Replacement Fund. Over the years, this could account for millions of dollars in the gap, particularly for public safety vehicles. However, Public Works does not have data on these costs.

Customization can include installing specialized detailing and gear needed to provide services, such as painting the exterior or installing radios, safety features, and light bars. These costs are not included in the payments that Public Works collects from departments, but they can be significant. Public Works staff reported that in some cases, customization can cost about 40 percent or more of the purchase cost. After this audit was initiated, Public Works stated that they have begun including customization costs in the estimated replacement costs for all fleet purchased in FY 2020 and later, but have not adjusted costs for all other fleet and did not include it in the past.

Purchase of replacement fleet without funding: According to its own data, Public Works may have used up to \$3 million from the Replacement Fund over the past 22 years to replace 50 vehicles that departments had not funded. Of the \$3 million, over \$1.7 million, or 58 percent, was spent on vehicles for Public Works.

For context, Public Works' share of the fleet makes up 65 percent of the total fleet replacement value. Nearly one third was spent on vehicles for the Police Department. Given the insufficiency of the fund, it is likely that using



the Replacement Fund to replace unfunded vehicles contributed significantly to the funding gap we identified. According to Budget Office staff, the money that departments contribute may fund any City fleet replacement depending on priority, and funding of their own replacements is not guaranteed. In practice, Public Works considers funds contributed towards the replacement of a specific vehicle to be dedicated to that vehicle. It is important to note that Public Works cannot verify the \$3 million because it does not track Replacement Fund use by department as we discuss in more detail on page 25. However, this is another example of the misalignment between the funding model and use of the fund that may contribute to a funding shortfall.

Using the Replacement Fund to replace unfunded vehicles with new ones can increase the size of fleet, along with the cost to maintain and replace those added vehicles. According to the fleet data, there are 68 vehicles initially purchased with the Replacement Fund that have been replaced but are still in use. Currently, Public Works does not have a documented optimal fleet size that can ensure efficient and effective service at a reasonable cost. The City also does not have a policy that specifies how to manage vehicles that are replaced but kept as backups or require that departments secure new funding to cover the cost to replace those backup vehicles with new ones.⁵

Lack of funds may delay the transition to an electric fleet.

The underfunding may prevent the City from accomplishing its goal of transitioning its fleet to electric vehicles by 2030 in an effort to reduce greenhouse gas emissions. Transportation is responsible for 60 percent of Berkeley's greenhouse gas emissions. In 2006, Berkeley voters endorsed a ballot measure to reduce the community's greenhouse gas emissions by 80 percent by 2050. In 2018, City Council passed a resolution endorsing the declaration of a climate emergency to mobilize efforts to reduce greenhouse gas emissions. In response, the City adopted a Climate Action Plan in 2009, which focused on actions to help the City reach this goal. Understanding that it cannot reach the 80 percent goal by 2050 without transitioning to electric transportation options, in 2019, the City adopted a Berkeley Electric Mobility Roadmap that set goals and strategies to do so. The roadmap included a goal of transitioning the City's fleet to electric vehicles by 2030.

The City's funding need for electric vehicles is more clearly defined than the City's overall fleet funding needs. Recognizing the urgency in reducing the City fleet's greenhouse gas emissions, the City Council also directed the City to

⁵ These vehicles are sometimes referred to as reserve, backup, or pool vehicles.

create a plan to “aggressively accelerate” electrification of the City’s fleet and phase out fossil fuel vehicles by 2030. In July 2020, Public Works presented the City’s Municipal Fleet Electrification Assessment (assessment) prepared by East Bay Community Energy on the timeline and cost to transition to an electric fleet by 2030. The assessment estimated that it would cost about \$1,156,200 to buy electric vehicles to replace 32 gas-powered and hybrid light-duty vehicles in FY 2021. Some of the City’s 174 backlogged vehicles are medium-, heavy-duty, or emergency vehicles that the City cannot currently replace with electric vehicles because the current market does not offer practical electric alternatives.

The City of Berkeley Municipal Fleet Electrification Assessment (assessment) evaluates the short- and long-term cost savings associated with the transition to electric vehicles, determines impacts and benefits to the City, and outlines steps to efficiently integrate electric vehicles and charging infrastructure at municipal facilities in a fiscally responsible manner.

According to the City’s fleet data, Public Works has only collected \$747,000 to replace 29 vehicles scheduled to be replaced with electric ones in 2021.⁶ Even if Public Works had collected enough funding, there is no guarantee that the City would have used those funds to purchase the specified electric vehicles. According to Budget Office staff, the money departments contribute into the Replacement Fund may not necessarily be used for replacement of their vehicles. As discussed earlier, the Replacement Fund’s current balance is not sufficient to cover the cost to replace 174 vehicles that have surpassed their estimated replacement date. Eight of those 174 are scheduled to be replaced with new electric vehicles but do not have any funding for replacement. One vehicle that has been decommissioned and auctioned is also scheduled to be replaced with an electric vehicle.

Given the City’s use of the Replacement Fund for purposes other than fleet replacement, there is a risk that the City may not have all the funds collected for electric vehicles when it is time to replace them. Additionally, Public Works stated that competing fleet needs and an effort to reduce the vehicle backlog may mean that there are not enough funds overall to buy all the electric vehicles due for purchase in FY 2021 even though some of those vehicles appear to be funded. If these delays continue, it is possible that the City will fall behind its goal of transitioning to an electric fleet by 2030.

Light-duty vehicles include all sedans, sport utility vehicles (SUVs), and parking enforcement scooters. Medium-duty vehicles include pickup trucks, cargo vans, and passenger buses. Heavy-duty vehicles include refuse collection vehicles and dump trucks.

⁶ East Bay Community Energy’s plan estimated the cost to buy electric vehicles to replace 32 gas-powered vehicles in FY 2021, but only 29 of those vehicles are funded through the Replacement Fund.

Further, how Public Works prioritizes vehicle replacements may further delay the City in reaching its fleet electrification goal. Public Works does not have a consistent, documented method for prioritizing which vehicles to replace with the limited funding. While it is reasonable that priorities need to be flexible to adapt to the City's changing fleet needs, it is difficult to ensure that funding will be available for high-priority initiatives like fleet electrification without a transparent method for prioritizing the use of replacement funds.

Another barrier to meeting the City's fleet electrification goal is that the City is short by about \$1.42 million in funds needed to install the charging infrastructure to provide power to electric vehicles. This is a capital expense that would not normally be paid for through the equipment Replacement Fund. In FY 2021, Public Works requested a budget allocation to pay for electric vehicle charging infrastructure.

Recommendations

To address the challenges identified, we recommend that Public Works:

- 1.1 Calculate the dollar value of the City's replacement needs. Use results from the recent rate study to adjust departments' replacement fees to cover their share of the costs associated with vehicle replacement, including customization and personnel.
- 1.2 Conduct an analysis of the City's current fleet and determine the optimal fleet size to provide services efficiently and effectively. This analysis should include fleet units identified as reserve, backup, and "pool" vehicles. The outcome of the analysis should be a plan to achieve and provide funding for the optimal fleet size.
- 1.3 Work with the City Manager's Office to adjust the funding model of the Equipment Replacement Fund or adopt a new one to ensure appropriate funding for timely fleet replacement, such as annually transferring money from the General Fund based on an assessment of the City's overall fleet needs and priorities. Expand the current vehicle and equipment replacement policy to ensure transparency of key provisions of the new or updated model.
- 1.4 Revise the vehicle and equipment replacement policy to include that Public Works should regularly assess the personnel expenditures related to vehicle and equipment replacement and ensure that they are appropriate and proportional to their duties.
- 1.5 Revise the vehicle and equipment replacement policy to prevent replacing unfunded vehicles by ensuring that contributed funds are available for the purchase.

- 1.6 Develop an Administrative Regulation that clarifies Public Works' responsibilities to manage the fleet and maintain sufficient fleet replacement funding. Include the following provisions:
- Public Works should provide an analysis of the impact on fleet replacement and overall costs when the City considers reallocating replacement funds or stopping payments into the Fund.
 - The City Manager should provide documented justification when deciding to use the Equipment Replacement Fund for non-replacement needs. The decision must be supported with a documented cost analysis from Public Works showing potential impact of insufficient funds on fleet replacement.
 - Public Works should report to Council annually on fleet funding needs and Replacement Fund sufficiency.
 - Public Works has the ultimate authority to make decisions about fleet replacement in consultation with departments and with consideration for departments' fleet needs. Departments can appeal decisions to the City Manager if they disagree with the decision.
 - The Replacement Fund is an internal service fund. Internal service funds are used to account for goods or services provided by one department or program to another on a cost-reimbursement basis. Any funding departments contribute to the Replacement Fund is not dedicated to any specific department, but can be spent on fleet units throughout the City.
- 1.7 To help secure the funding needed for transitioning to electric vehicles by 2030, work with the City Manager's Office to develop a budgetary plan to purchase electric vehicles. The plan should align with the City's fleet electrification goals and take into consideration the current economic downturn, funding availability, available infrastructure, and electric vehicle availability.



Finding 2: Public Works lacks information on vehicle and equipment replacement and funding.

Public Works cannot accurately determine the City’s current Replacement Funding needs because its data is sometimes inaccurate or incomplete. Public Works also cannot show that decisions to keep vehicles and equipment units past their replacement date are beneficial or cost effective. There is also a lack of information about whether funds are distributed based on priority or department needs. Some of the information issues may stem from the fact that Public Works’ fleet replacement policy does not provide guidance on managing the fleet data to ensure accuracy and transparency.

Public Works lacks accurate information about the City’s vehicle and equipment replacement needs.

Public Works cannot accurately determine the City’s current replacement funding needs because data about when vehicles and equipment should be replaced is often inaccurate. All City vehicles have an estimated replacement date based on vehicle type, which is automatically recorded when staff enter a new vehicle into the database (Table 1).

Table 1. Vehicles’ estimated economic life varies by type.⁷

Vehicle Type	Estimated Economic Life
Police Cars	4 years or 100,000 miles
Ambulances	5 years or 100,000 miles
Fire Trucks	10 years or 100,000 miles
Refuse Trucks	10 years or 25,000 hours
Dump Trucks	15 years or 75,000 miles
Light Duty Trucks	10 years or 100,000 miles
Sedans	4 years or 100,000 miles ⁷

Source: Public Works Equipment Maintenance Management Practices/Replacement Policy

When a vehicle nears its replacement date, Public Works stated that its staff examine the vehicle based on the estimated economic life (years, miles, or

⁷ The policy states that the estimated economic life of sedans is four years, but the Director of Public Works informed us that this has been updated to 10 years.

hours of use), operating costs, user needs, and current condition to decide whether it can remain in service or needs to be replaced. Public Works stated that departments may decide to defer replacement if they have limited funding or would prefer to continue using a vehicle. However, Public Works does not provide departments with total maintenance and repair costs of a vehicle to determine whether it is cost-effective to keep it or replace it.

It is unclear from the data how many vehicles have been intentionally deferred and how many would be more cost-effective or practical to replace. If a decision is made to defer replacement for any reason, Public Works staff does not update the estimated replacement date in the database. According to Public Works, the database does not easily allow such a change.

Incorrect replacement dates mean that Public Works cannot determine exactly when vehicles should be replaced and what level of funding is needed in a fiscal year. According to the data, the number of vehicle and equipment units that have met or exceeded their estimated replacement date has increased (Figure



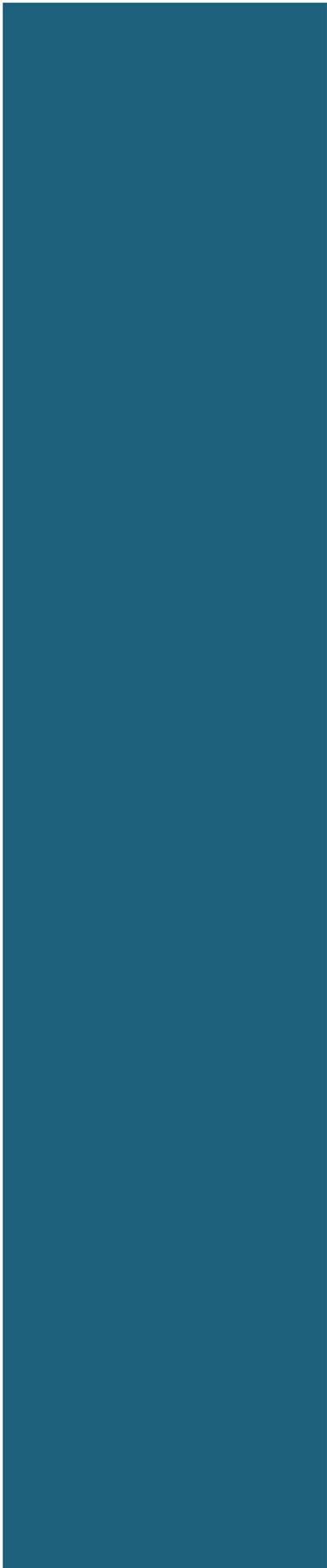
6). In December 2009, 54 vehicles had surpassed their replacement date with a total replacement value of \$3.6 million. By the end of FY 2020, the number had grown by more than 222 percent to 174 units at an estimated replacement cost of \$13.2 million. In the 2010 audit, the City Auditor recommended that Public Works identify all fleet units due and past due for replacement at least annually. Today, Public Works lists the vehicles that it plans to replace in its Capital Improvement Program budget, but does not report the total number of vehicles due and past due for replacement. As a result, though the fund appears to be underfunded overall, it is not clear what the City’s actual vehicle and equipment funding needs are.

Figure 6. The cost of vehicles past their estimated replacement date has substantially increased since FY 2010.



Source: Auditor’s analysis of the City of Berkeley’s vehicle and equipment data as of the end of FY2017 and FY 2020. Data for FY 2010 comes from the 2010 audit report.

Public Works cannot show that decisions to keep vehicles past their replacement date are beneficial or cost-effective because it does not document why such decisions are made. According to APWA guidance, it may be reasonable for some vehicles to still be in service if they do not incur excessive maintenance and repair costs and are in good condition to maintain operations and service delivery. On the other hand, APWA states that using fleet units beyond their economic useful life is generally a short-term budget fix that invariably will lead to a long-term increase in cost and a degradation of the unit’s overall effectiveness and efficiency. For example, by June 2020, the City spent nearly \$1.5 million in maintenance and repair costs on seven refuse trucks and a wheel-loader after they surpassed their replacement dates between fiscal years 2014 and 2019. For some deferred replacements, the cost of avoidable maintenance and repair in the long run may exceed any short term savings.



According to APWA, retaining units after they surpass their replacement time leads to the following adverse conditions:

- Increase in total operating cost and fleet budget
- Increase in turnaround time as the complexity of repairs increase and parts availability decreases
- Decrease in overall unit availability
- Increase in fleet failure—the older the fleet, the greater the opportunity a catastrophic failure will occur
- Decrease in salvage (residual) value as a unit ages
- Customer satisfaction with the fleet will dissipate and it may become underutilized
- Diminished public perception of the entity as a whole
- Operator safety is compromised as vehicle and equipment components are subject to increased wear and tear; safety enhancements available on new units are bypassed when fleet units are not replaced
- Fleet creep occurs as customers seek to have more backup units to fill the void created when fleet units are in for service more often and for longer periods of time
- Potential non-compliance with new regulatory requirements (i.e. emissions)
- Defer implementation of “green” sustainability initiatives for fuel economy and greenhouse gas emissions reductions

Source: Adapted from the American Public Works Association

It is not clear that the City is appropriately prioritizing vehicle replacements to reduce overall costs or ensure effective operations and service delivery. Given that the City has a funding shortage and a growing number of vehicles seemingly past due for replacement, it is important that the City make the best use of limited resources by prioritizing replacements to meet the City’s operational and service goals. Public Works states that staff assess vehicles to decide whether they should be replaced based on the estimated economic life, operating costs, user needs, and current conditions. However, it is not clear how that information leads to replacement priorities because Public Works does not have documentation supporting its decisions for replacement prioritization. Without a transparent method for prioritization, it is not clear that the City is appropriately prioritizing vehicle replacements to ensure effective operations and service delivery.

Public Works staff reported that in light of competing fleet needs and limited funding, they have shifted to prioritizing reducing the backlog of old vehicles. The City's FY 2020-2021 Capital Improvement Program budget states that the goal is to replace backlogged equipment as of FY 2024 as funds become available. However, it does not include a specific plan for how Public Works plans to accomplish this. Further, the FY 2024 timeframe suggests there have been delays in addressing the backlog because the FY 2018-2019 Capital Improvement Program budget stated a timeframe of FY 2022. The backlog has also substantially increased since FY 2010 (page 12).

Public Works stated that they have just started a contract with AssetWorks, a vehicle and equipment management system, which is expected to be capable of tracking accurate information about replacement date, cost data to determine whether deferred replacements will be cost effective, and to help prioritize replacements. However, the vendor will need to configure the system to allow Public Works to track and report this information. It will also be important for staff to have procedures in place to manage the data to ensure transparency and accountability in the City's vehicle replacement process.

In addition to the data issues identified, there is a risk that Public Works relies on information from the vehicle and equipment database that contains errors when assessing the City's funding needs. We found that the vehicle and equipment database shows some incorrect replacement fees. For example, from May of 2016, through January of 2017, Public Works contributed \$18.63 instead of \$29.88 in monthly replacement fees for a generator before it corrected the amount. Incorrect amounts may contribute to insufficient or excessive funding.

There is also a risk that Public Works does not have the complete data it needs to make funding and replacement decisions. Our review of the database shows that numerous database fields were empty. For example, as of May 2020, out of 730 records, 100 records did not have a purchase cost and 110 records did not have a replacement cost.

The current system does not track replacement funds by department.

Public Works does not know how much funding each department has paid toward replacement of their fleet because the current system does not allow Public Works to track funding contributed by department. As a result, Public

Works cannot verify how much money departments have contributed towards the replacement of their fleet. However, Public Works bases its decisions to schedule a vehicle replacement based on whether departments have contributed enough funding to cover the cost of the new one. Overall, this fleet funding model in which Public Works assesses sufficiency of replacement funds based on what departments have contributed is at odds with how funding is used. Funding distribution may not be based on need or priority among departments. The fleet funding model also makes it difficult to ensure transparency and accountability in how the fund is used.

Public Works also stated that departments sometimes purchase vehicles that are cheaper than the amount they contributed and used the leftover funds to purchase other vehicles. However, they cannot verify this because the current system does not report total collected funds by department nor does it capture when departments have leftover funds.

Additionally, the current fleet management system does not automatically update when departments use the Replacement Fund to replace a vehicle. This can create the appearance that funding is still available even after a department has replaced a vehicle and exhausted the funds they contributed. Public Works may have used up to \$3 million from departments that had contributed funds to the Replacement Fund for their own vehicle replacements or to replace other departments' underfunded or unfunded vehicles, as we discussed in the first finding. Public Works staff stated that records of these purchases were created by staff who are no longer working with the City. Public Works states that the new AssetWorks fleet management system it plans to implement in FY 2021 is expected to allow the tracking of funding by department.

Public Works has no written policies or procedures for how to manage the data.

Public Works does not have a policy guiding its fleet data management. Without a policy, there is a risk of inconsistency in decisions about vehicle replacements. Additionally, the current database is out-of-date and does not have the functionality for effective replacement. Specifically, the department uses database fields that does not capture key information. For example, under current management, Public Works enters years "1977" or "2077" into a replacement year field to identify a vehicle that does not have sufficient funding. Under previous management, Public Works used those years to identify vehicles that are replaced but kept as backups. According to the

Public Works staff, a new fleet management software should address the shortcomings in the current database if they configure the system to do so.

Recommendations

To ensure that Public Works has key information about the City's vehicle and equipment and funding needs, we recommend Public Works:

- 2.1 Conduct a needs assessment of vehicles overdue for replacement and create a plan that documents a timeline and cost for replacement. Report the findings to City Council.
- 2.2 Update the vehicle and equipment replacement policy to include criteria for prioritizing fleet replacement. The policy should include a requirement to communicate a delay in replacement of their fleet to affected departments. In Administrative Regulation described in recommendation 1.6, specify that the vehicle and equipment replacement policy should include such criteria.
- 2.3 Work with the vendor of the new fleet management system to configure it to address the data issues identified in this report, including:
 - Tracking Replacement Funds collected and leftover funds by department;
 - Zeroing out the balance after a vehicle is replaced;
 - Adjusting the replacement date and reporting the rationale if a replacement is deferred; and
 - Displaying any information needed to prioritize replacements based on specified criteria.
- 2.4 Clean and update the vehicle and equipment database before migrating it to the new fleet management system to ensure accuracy and data integrity.
- 2.5 Update the vehicle and equipment replacement policy or develop a separate policy to require staff manage the City's data appropriately to ensure accurate complete information to support management decisions.

Appendix I. Recommendations and Management Response

Public Works agreed with our findings, conclusions, and recommendations.

To address the challenges identified, we recommend that Public Works:

- 1.1** Calculate the dollar value of the City’s replacement needs. Use results from the recent rate study to adjust departments’ replacement fees to cover their share of the costs associated with vehicle replacement, including customization and personnel.

Management Response: Agree

Proposed Implementation Plan: Accept and share results of recent Equipment Replacement Fund and Equipment Maintenance Fund rate study with City Manager’s Office and customer City Departments. Adjust as necessary amortization values for vehicles to incorporate adjusted rates.

Proposed Implementation Date: July 1, 2022

- 1.2** Conduct an analysis of the City’s current fleet and determine the optimal fleet size to provide services efficiently and effectively. This analysis should include fleet units identified as reserve, backup, and “pool” vehicles. The outcome of the analysis should be a plan to achieve and provide funding for the optimal fleet size.

Management Response: Agree

Proposed Implementation Plan: Issue RFP for a consultant to evaluate fleet size and standardization, develop recommendations. Incorporate recommended changes into FY 23 & 24 Budget Development.

Proposed Implementation Date: December 1, 2022

- 1.3** Work with the City Manager’s Office to adjust the funding model of the Equipment Replacement Fund or adopt a new one to ensure appropriate funding for timely fleet replacement, such as annually transferring money from the General Fund based on an assessment of the City’s overall fleet needs and priorities. Expand the current vehicle and equipment replacement policy to ensure transparency of key provisions of the new or updated model.

Management Response: Agree

Proposed Implementation Plan: Implementation of any proposed changes to Equipment Replacement rates will be part of a budget adoption process. Staff will evaluate replacement schedule and model for vehicle amortization, implement Assetworks fleet management tool and integration with ERMA financial software. Propose changes for adoption in FY 2023 Budget.

Proposed Implementation Date: July 1, 2022

- 1.4** Revise the vehicle and equipment replacement policy to include that Public Works should regularly assess the personnel expenditures related to vehicle and equipment replacement and ensure that they are appropriate and proportional to their duties.

Management Response: Agree

Proposed Implementation Plan: Department will review, revise the current draft policy to incorporate appropriate language, and distribute to the City Manager's Office for complete policy approval.

Proposed Implementation Date: September 1, 2021

- 1.5** Revise the vehicle and equipment replacement policy to prevent replacing unfunded vehicles by ensuring that contributed funds are available for the purchase.

Management Response: Agree

Proposed Implementation Plan: Department will review, revise the current draft policy to incorporate appropriate language, and distribute to the City Manager's Office for complete policy approval.

Proposed Implementation Date: September 1, 2021

- 1.6** Develop an Administrative Regulation that clarifies Public Works' responsibilities to manage the fleet and maintain sufficient fleet replacement funding. Include the following provisions:
- Public Works should provide an analysis of the impact on fleet replacement and overall costs when the City considers reallocating replacement funds or stopping payments into the Fund.
 - The City Manager should provide documented justification when deciding to use the Equipment Replacement Fund for non-replacement needs. The decision must be supported with a documented cost analysis from Public Works showing potential impact of insufficient funds on fleet replacement.
 - Public Works should report to Council annually on fleet funding needs and Replacement Fund sufficiency.
 - Public Works has the ultimate authority to make decisions about fleet replacement in consultation with departments and with consideration for departments' fleet needs. Departments can appeal decisions to the City Manager if they disagree with the decision.
 - The Replacement Fund is an internal service fund. Internal service funds are used to account for goods or services provided by one department or program to another on a cost-reimbursement basis. Any funding departments contribute to the Replacement Fund is not dedicated to any specific department, but can be spent on fleet units throughout the City.

Management Response: Public Works agreed that the items in this recommendation could be addressed by an administrative regulation or a policy as described in the proposed implementation plan.

Proposed Implementation Plan: Evaluate with City Manager's Office the benefits of an AR vs a well communicated Equipment Replacement Policy document. Items recommended in 1.6 could be adopted in either an AR or Policy document.

Proposed Implementation Date: September 1, 2021

1.7 To help secure the funding needed for transitioning to electric vehicles by 2030, work with the City Manager's Office to develop a budgetary plan to purchase electric vehicles. The plan should align with the City's fleet electrification goals and take into consideration the current economic downturn, funding availability, available infrastructure, and electric vehicle availability.

Management Response: Agree

Proposed Implementation Plan: Staff will develop estimates and projections for electrification, beginning with the current fleet and available technology on the market. The cost for installation of infrastructure will be part of the costs estimates. Timing of plan will align with FY 23 & 24 Budget Development. Full fleet electrification as electric options may not be available yet, so budgetary estimates may be very preliminary.

Proposed Implementation Date: March 1, 2022

To ensure that Public Works has key information about the City's vehicle and equipment and funding needs, we recommend Public Works:

2.1 Conduct a needs assessment of vehicles overdue for replacement and create a plan that documents a timeline and cost for replacement. Report the findings to City Council.

Management Response: Agree

Proposed Implementation Plan: Staff will create a fleet inventory report and note vehicles still in the fleet past their scheduled replacement date based on expected life. The reporting will include information on replacement funds collected to date and note any shortfalls that would require additional funds to be budgeted at the time of replacement. Report will include explanation/justification as appropriate for each vehicle it was kept past replacement date.

Proposed Implementation Date: September 1, 2021

2.2 Update the vehicle and equipment replacement policy to include criteria for prioritizing fleet replacement. The policy should include a requirement to communicate a delay in replacement of their fleet to affected departments. In Administrative Regulation described in recommendation 1.6, specify that the vehicle and equipment replacement policy should include such criteria.

Management Response: Agree

Proposed Implementation Plan: Department will revise the current draft policy to incorporate appropriate language, and distribute to the City Manager's Office for complete policy approval. Development of AR vs Policy pending further staff evaluation.

Proposed Implementation Date: September 1, 2021

2.3 Work with the vendor of the new fleet management system to configure it to address the data issues identified in this report, including:

- Tracking Replacement Funds collected and leftover funds by department;
- Zeroing out the balance after a vehicle is replaced;
- Adjusting the replacement date and reporting the rationale if a replacement is deferred; and
- Displaying any information needed to prioritize replacements based on specified criteria.

Management Response: Agree

Proposed Implementation Plan: Assetworks fleet management system project kickoff scheduled for March 2021, project/implementation schedule to be developed soon.

Implementation plan with vendor will include items listed above.

Proposed Implementation Date: January 30, 2022 (tentative)

2.4 Clean and update the vehicle and equipment database before migrating it to the new fleet management system to ensure accuracy and data integrity.

Management Response: Agree

Proposed Implementation Plan: Assetworks fleet management system project kickoff scheduled for March 2021, project/implementation schedule to be developed soon. Equipment information will be reviewed and validated before entry into Assetworks.

Proposed Implementation Date: July 1, 2021 (tentative)

2.5 Update the vehicle and equipment replacement policy or develop a separate policy to require staff manage the City's data appropriately to ensure accurate complete information to support management decisions.

Management Response: Agree

Proposed Implementation Plan: Update the draft replacement policy to include language committing Public Works Fleet staff to track and manage equipment replacement funds, and is trackable per vehicle and by department. Data should be reportable and regularly shared with departments and the City Manager's Office. Finalization of policy language and implementation timing will depend on implementation of Assetworks fleet management system, and department's understanding and development of its tracking and reporting tools.

Proposed Implementation Date: July 1, 2022

Appendix II. Methodology and Statement of Compliance

Methodology

To meet our audit objectives, we reviewed the following:

- The Equipment Replacement Fund (Replacement Fund) audit report issued in 2010
- Six information items the City reported to the Council from 2011 through 2017 on implementation of 2010 audit recommendations
- The Standards for Internal Control in the Federal Government
- FY 2018 – 2019, FY 2020 – 2021 Adopted Biennial Budget Capital Improvement Programs
- FY 2022 Proposed Annual Budget
- City Council resolutions for climate change
- Plans and policies for fighting climate change and fleet electrification
- Policies and procedures Public Works uses for managing vehicle and equipment replacement
- Forms Public Works uses in managing the City’s vehicles and equipment
- Another municipality’s vehicle and equipment management assessment

We also conducted interviews with:

- Staff from departments responsible for monitoring their vehicles and equipment
- Public Works staff responsible for managing the Replacement Fund, purchasing new vehicles and equipment, and disposing of aged vehicles and equipment
- Special advisor from Management Partners, a professional management consulting firm, to gain their perspective on backlog

We analyzed:

- Data for selected City’s vehicles and equipment as of FY 2017 and FY 2020 recorded in the FUND\$ vehicle and equipment management database
- Maintenance and repair costs for seven refuse trucks and one wheel loader
- Data for personnel costs charged to the Replacement Fund
- Physical inventory check for 82 selected vehicles and equipment

We performed a risk assessment of the City’s practices and procedures in managing the Replacement Fund to identify potential internal control weaknesses, including fraud risks, within the context of our audit objectives. We reviewed the action plans the City reported it had put in place to address the recommendations from the Replacement Fund audit issued in 2010 to determine whether these plans are still in use and, if not, why.

Data Reliability

We assessed the reliability of FUND\$ vehicle and equipment management data by reviewing it for accuracy and completeness, interviewing data and data-system owners and managers, gaining an understanding of data access controls, conducting a physical inventory, and tracing to and from source documents. Our review of the data revealed the following errors and system limitations:

- The system does not allow Public Works staff to capture all the relevant information needed to manage the City’s vehicle and equipment, so they work around these limitations by entering information into other fields not designated for it.
- Some fields need to be manually entered, which creates a risk for errors.
- Public Works does not consistently enter information into fields.
- Public Works does not consistently update information to reflect fleet changes.
- The system does not prevent a user from entering a wrong equipment number in the “equipment number replaced” field.
- The system does not allow to easily update replacement dates.
- The system does not allow to track funding by a department.
- The system does allow to zero out amounts used for replacement.
- Some estimated replacement costs are inaccurate because Public Works staff does not update them if replacement costs change.

We assessed the reliability of the data by tracing a selection of the records to the source documents and did not find any significant issues in the context of our audit objectives that would make the data unreliable for our audit purposes. Therefore, we determined that the data was sufficiently reliable for the purposes of this report. Where we could not rely on the data, we clearly identified it in the report.

Statement of Compliance

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.

Mission Statement

Promoting transparency and accountability in Berkeley government.

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