

FISCAL YEARS 2024-2028
Climate Action Plan Implementation Cost Analysis
A Preliminary Estimate of Known Costs and Staffing Impacts

February 2023

Prepared for the City of San Diego



Prepared by the Energy Policy Initiatives Center



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EXECUTIVE SUMMARY

This report summarizes the findings of the City of San Diego Climate Action Plan (CAP) Implementation Cost Analysis conducted by the Energy Policy Initiatives Center (EPIC) at the University of San Diego. The analysis estimates known costs and staffing needs to implement the activities outlined in the 2022 CAP. The goals of this analysis are to estimate the following over the first five fiscal years of CAP implementation (FY24-FY28):

- total known costs to the City to implement CAP actions;
- incremental costs to the City that would not have occurred without CAP adoption; and,
- staffing impacts in full-time equivalent (FTE) to implement CAP actions.

While this report evaluates costs for the first five fiscal years, the City could incur related costs beyond this time frame since the CAP identifies activities to reduce greenhouse gas (GHG) emissions through 2035. This report does not include costs and benefits borne by San Diego residents and businesses. Costs and staffing needs estimated in this report represent those anticipated to be incurred by the City to implement activities related to CAP measures, including costs to develop and execute projects and programs, develop and adopt ordinances, and conduct education and outreach activities. Costs associated with CAP coordination and reporting, including those to assess the performance of CAP measures, complete regular GHG inventory updates, coordinate implementation and performance-tracking activities among departments, and prepare CAP updates, are also included here.

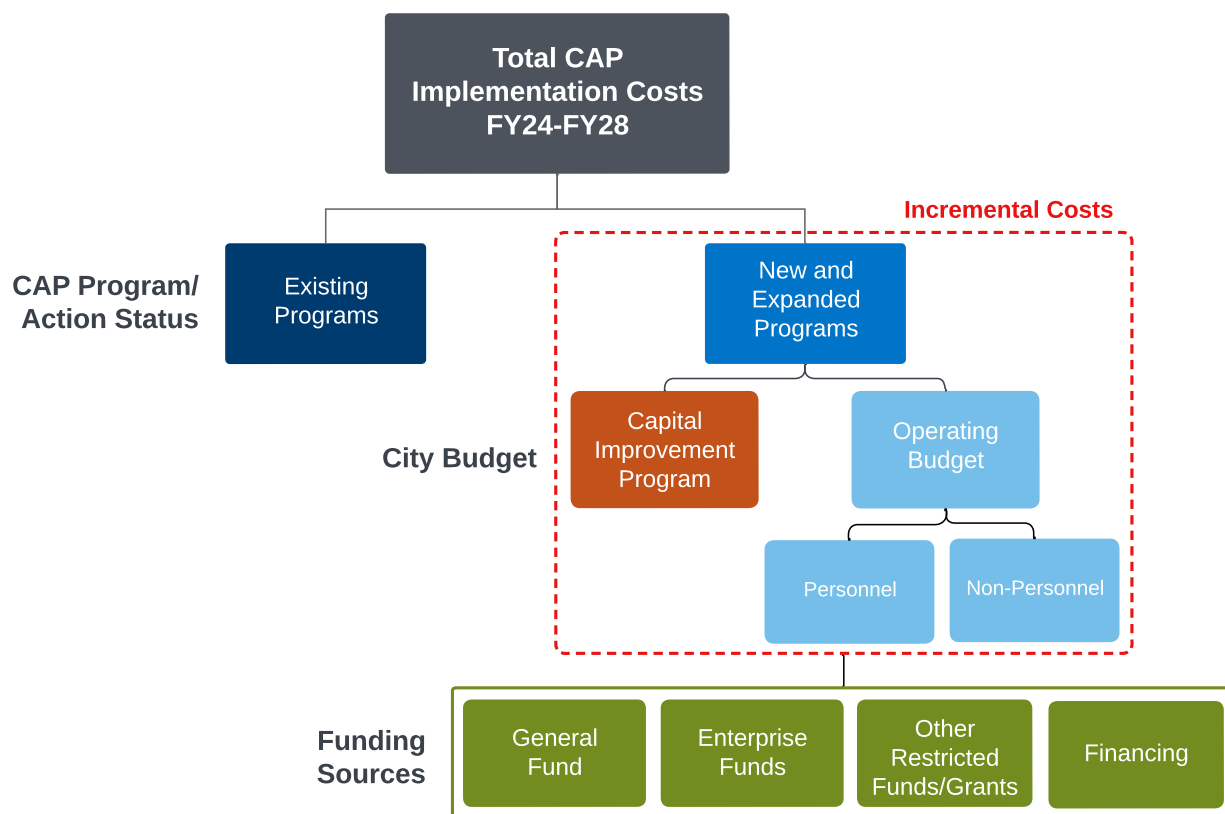
The intent of this analysis is to present estimated known costs and staffing impacts to the City to implement CAP actions over the first five fiscal years. It is not an estimate of how much it would cost to reach GHG targets included in the CAP. Also it does not include the impact of cost savings and GHG reductions achieved over time due to implementation of CAP measures. This document does not serve as a mechanism for funding allocation. All funds needed to implement CAP actions will be allocated through the City's regular budget process and require City Council approval. The cost and staffing estimates presented in this report are a snapshot in time based on best available information and assumptions of the staffing effort and other costs needed to implement CAP actions. If the CAP measures or implementation approaches change over time, implementation costs could be different from those reported here and would need to be adjusted.

This report serves as a long-range planning resource to inform the process to allocate and prioritize future funding. Results of this analysis will be included in the Climate Action Implementation Plan to help the City Council prioritize actions and to help guide staff activities.

Cost Analysis Framework

The main goals of the CAP Implementation Cost Analysis are to develop a preliminary estimate of the total and incremental costs, and staffing impacts to the City to implement GHG reductions measures over the first five fiscal years. Figure 1 illustrates this cost analysis framework and the following provides some background information on its component parts.

Figure 1 Framework for Evaluating CAP Implementation Costs



- CAP Program or Action Status** – CAP actions and programs can be categorized based on implementation status. For purposes of this analysis, existing programs are those that are already being implemented and would have occurred regardless of CAPs requirements. These programs may have been developed for another purpose originally, but they support GHG reduction goals and have been integrated into the CAP. The expanded portion of existing programs and new programs that would not have occurred without CAP adoption and represent the incremental costs to implement CAP measures. We assume these costs would not have occurred but for the adoption of the CAP. While we present summary information about the total cost to implement CAP activities, this report focuses on the incremental (new and expanded) costs that result from CAP adoption.
- City Budget** – For new and expanded programs, we separate out costs associated with the Capital Improvement Program (CIP) Budget and the Operating Budget. “A capital improvement is generally a large construction project such as the development of park land, the construction of an overpass, the installation of a traffic signal, the acquisition of land, or the construction or remodeling of a City building.”¹ The City’s Operating Budget comprises two broad categories of expenditures: personnel and non-personnel. Personnel expenditures are salary and fringe benefits. Non-Personnel expenditures include a range of subcategories, including capital expenditures (e.g., equipment), contracts, debt, energy and

¹ City of San Diego, Fiscal Year 2023 Adopted Budget.

utilities, information technology, and supplies. A more detailed discussion of the City's expenditure categories is provided in Section 3.4.

- **Funding Sources** – City staff identified potential sources to fund implementation costs. Funds for capital improvements are “derived largely from the issuance of bonds, water and sewer fees, and a one-half cent local sales tax for transportation improvements (i.e., TransNet), grants, and developer impact fees.”² Potential funding options associated with the Operating Budget include the General Fund, enterprise funds, and other restricted funds. The General Fund is the “City’s main operating fund that pays for basic City services that use most of the City’s tax revenue, such as public safety, parks, and library services. The General Fund is also supported by fees from licenses and permits, fines, and investment earnings.”³ Enterprise funds are “established to account for specific services funded directly by fees and charges to users such as water and sewer services. These funds are intended to be self-supporting” and are restricted for certain uses.⁴ Other sources of restricted funding, including the Energy Conservation Program Fund and the Development Services Fund, and certain grant funding, were also identified as potential sources.

Key Findings

The following key findings summarize the results of the CAP Implementation Cost Analysis. Not all costs associated with decarbonizing buildings over the first five fiscal years are included in this analysis. The City has commissioned a study to estimate the cost of electrifying the municipal fleet and buildings. This project is expected to be complete by the end of calendar year 2023. Also, no costs are included for Strategy 6 (Emerging Climate Action) given the focus at this time on GHG reductions, state and regional policy uncertainty, and the early stage of carbon dioxide removal and related technology and markets.

New and expanded programs will cost about \$30 million per year during FY24–FY28

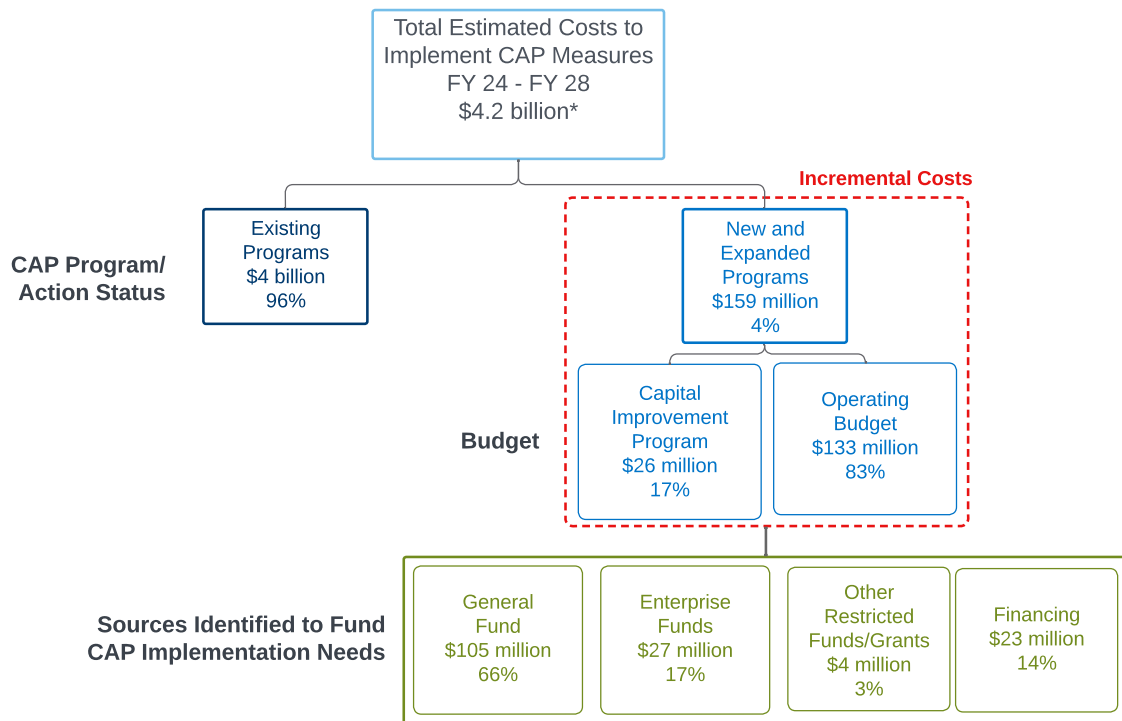
Based on data provided by City staff, the total estimated cost to implement CAP actions over the first five fiscal years (FY24–FY28) is approximately \$4.2 billion (Figure 2). The vast majority of these costs, about \$4 billion (96%), are associated with existing programs that would have happened regardless of 2022 CAP adoption, including Pure Water led by the Department of Public Utilities, stormwater-related projects led by the Stormwater Department, and the advanced undergrounding utilities project led by the Department of Transportation. The remaining \$159 million (4%), about \$30 million annually, would be the incremental cost for new and expanded programs that are needed to implement 2022 CAP measures (Figure 3). Of this amount, most of the costs, between about \$20 and \$24 million annually, are associated with the expanded portion of existing programs. New programs account for approximately \$8.6 million to \$9.5 million per year over this same period. For context, the City’s adopted budget for FY23 is over \$5 billion, most of which includes expenditures associated with the Operating Budget. Estimated annual CAP implementation costs during FY24–FY28 represent less than 1% of the City’s FY23 adopted budget.

² Ibid.

³ Ibid.

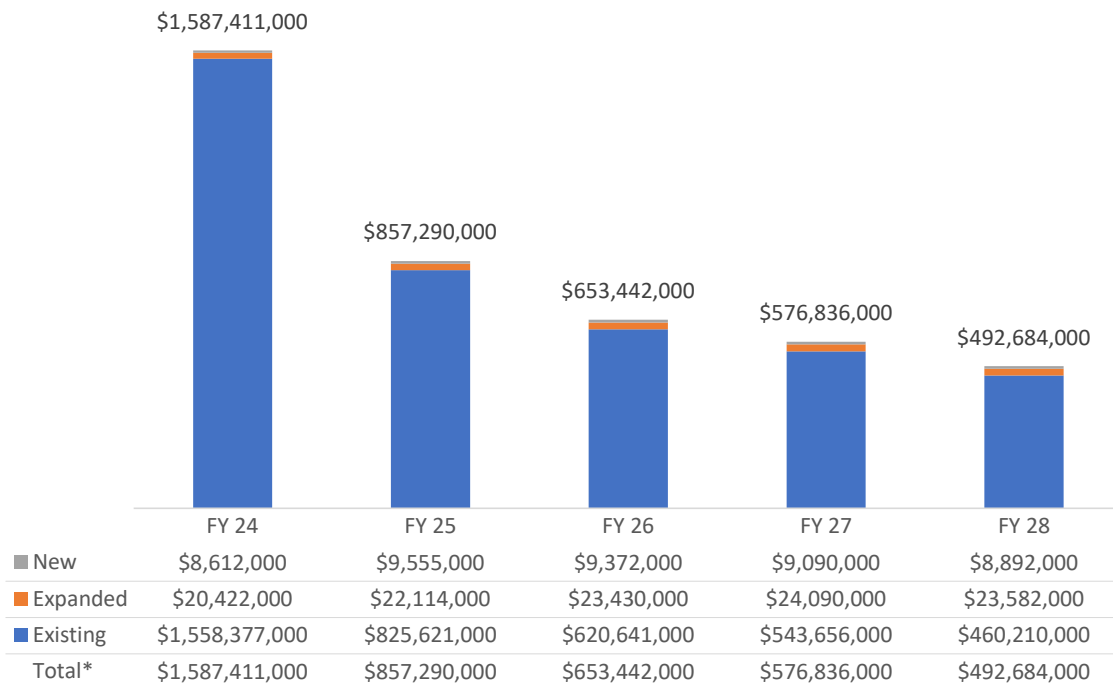
⁴ Ibid.

Figure 2 CAP Implementation Costs FY24–FY28



*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Figure 3 Annual CAP Implementation Costs FY24–28



*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

The General Fund was identified as a source to fund two-thirds of incremental costs

City staff identified the General Fund as a potential source to fund approximately \$105 million, or 66% of new and expanded CAP program costs during FY24–FY28 (Table 1), about \$21 million annually. Of this amount, nearly all is for a combination of salary and fringe (53%) and contract costs (45%). Financing was identified as the main source of funding for projects related to the CIP Budget, totaling about \$23 million, or 15% of new and expanded programs. Two restricted funds were identified as the main sources to fund the majority of the remaining new and expanded program costs — the Energy Conservation Program Fund (\$14 million, 9%) and the Development Services Fund (\$12 million, 7%).

Table 1 Sources Identified to Fund New and Expanded CAP Programs FY24–FY28

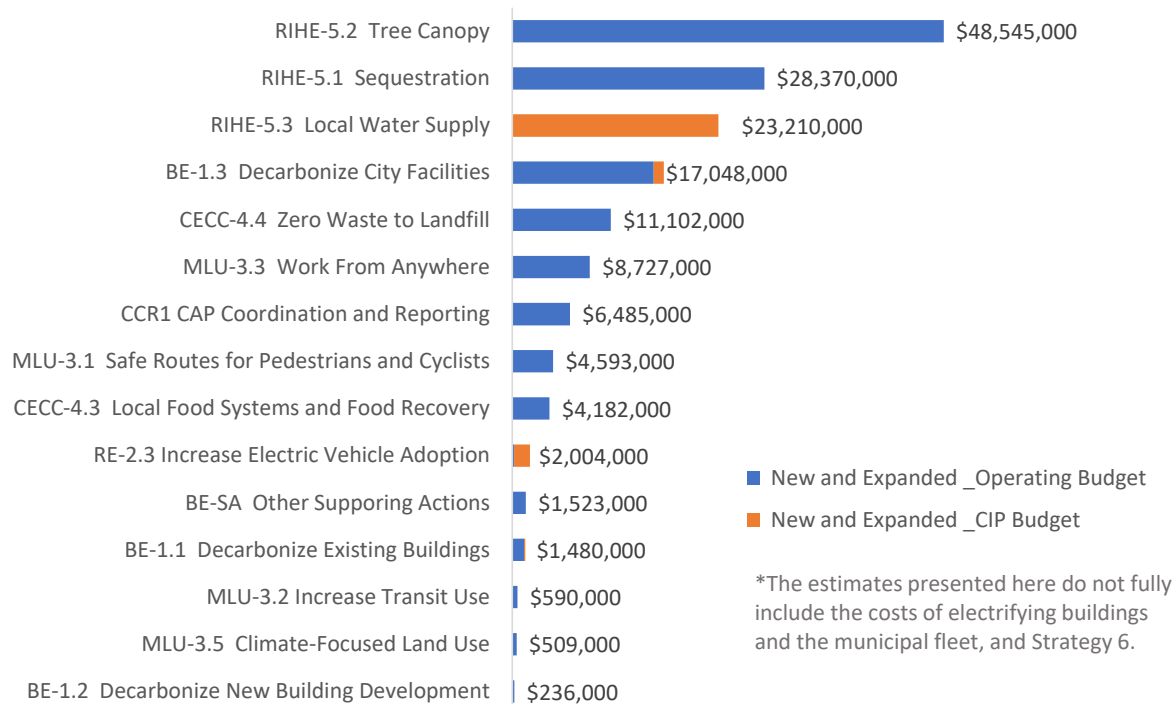
Potential Funding Source	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Operating Budget	\$26,184,000	\$26,395,000	\$26,761,000	\$26,865,000	\$26,685,000	\$132,889,000	83%
General Fund	\$20,793,000	\$20,897,000	\$21,030,000	\$21,101,000	\$20,886,000	\$104,707,000	66%
Energy Conservation Program Fund	\$2,354,000	\$2,476,000	\$2,698,000	\$2,721,000	\$2,744,000	\$12,993,000	8%
Development Services Fund	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
Information Technology Fund	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Airports Fund	\$260,000	\$307,000	\$316,000	\$325,000	\$334,000	\$1,542,000	1%
Recycling Fund	\$56,000	\$43,000	\$45,000	\$46,000	\$47,000	\$237,000	0%
CalRecycle City/County Grant Payment Program	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
Infrastructure Fund	\$50,000	0	0	0	0	\$50,000	0%
Capital Improvement Program (CIP) Budget	\$2,850,000	\$5,274,000	\$6,041,000	\$6,315,000	\$5,789,000	\$26,269,000	17%
Other-Debt Financing/ Grants/ SRF Loans	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Developer Funding	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
Energy Conservation Program Fund	\$500,000	\$250,000	\$125,000	\$125,000	\$125,000	\$1,125,000	1%
General Fund	\$150,000	0	0	0	0	\$150,000	0%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

One CAP strategy and three related measures account for about two-thirds of incremental costs

The three CAP measures in Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) have the highest estimated implementation cost for new and expanded programs (Figure 4). RIHE-5.2 (Tree Canopy) has an estimated cost of \$49 million over the first five fiscal years (FY24–FY28), about \$9.8 million annually. This measure alone represents about 31% of new and expanded program costs. RIHE-5.1 (Sequestration) has the second highest cost of about \$28 million (18%), or about \$5.6 million annually. The third highest is for RIHE-5.3 (Local Water Supply), which is estimated to cost \$23 million (15%) over five years and consists entirely of CIP costs. One measure related to decarbonize City facilities (BE-1.3) has estimated costs of \$17 million (11%).

Figure 4 New and Expanded Program Costs for CAP Measures FY24–FY28



Five departments account for about 86% of incremental costs

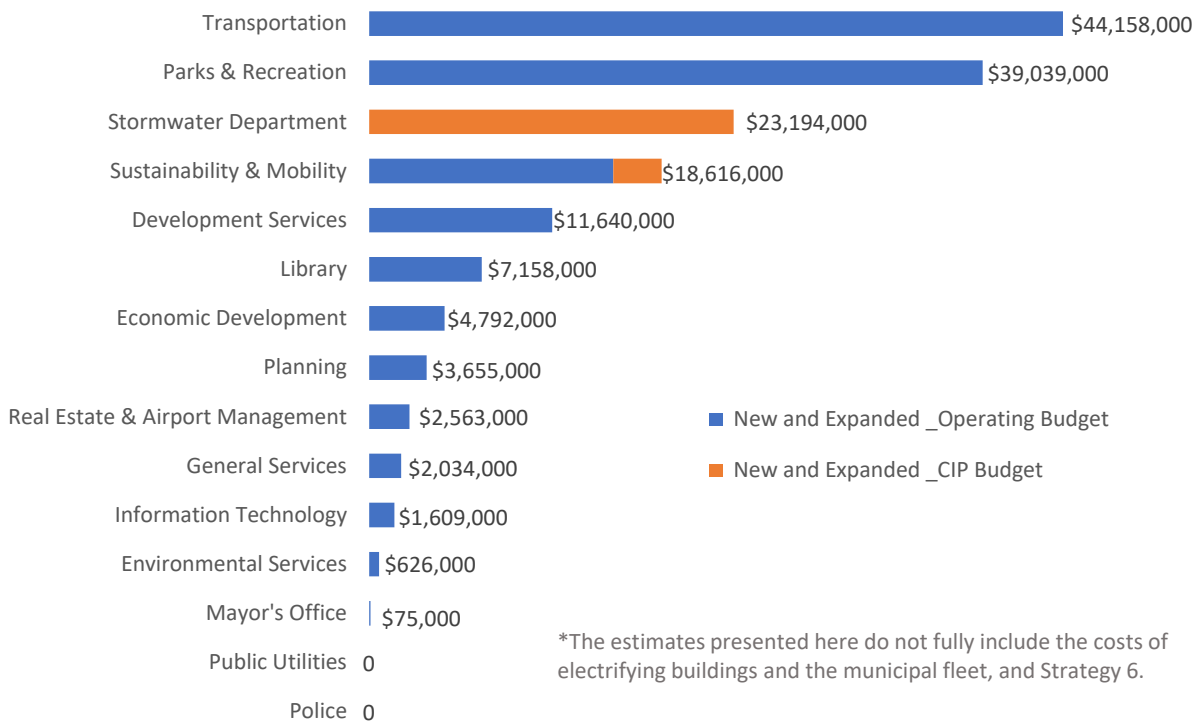
Two departments that implement measures and actions associated with Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) account for more than half of new and expanded CAP implementation costs (Table 2 and Figure 5). Note the table colors represent the range of costs. Higher costs are in darker blue, lower costs are in lighter blue. The Transportation Department has the highest level of new and expanded CAP implementation costs during the first five years with a total of about \$44 million (28% of new and expanded costs). These represent personnel and non-personnel costs associated with CAP measures RIHE-5.2 (Tree Canopy). The Parks and Recreation Department has estimated costs of about \$39 million (25% of new and expanded costs) over the first five years with an annual cost of between \$7.5 million and \$8.1 million. The Parks and Recreation Department will implement CAP measures RIHE-5.1 (Sequestration) and RIHE-5.2 (Tree Canopy). The Stormwater Department (\$23 million), Sustainability and Mobility Department (\$18 million), and Development Services (\$12 million) have the next highest costs to implement CAP actions.

Table 2 Annual New and Expanded Program Costs by Department FY24–FY28

Department	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Development Services	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
Economic Development	\$921,000	\$939,000	\$958,000	\$977,000	\$997,000	\$4,792,000	3%
Environmental Services	\$124,000	\$141,000	\$117,000	\$120,000	\$124,000	\$626,000	0%
General Services	\$125,000	\$603,000	\$719,000	\$293,000	\$293,000	\$2,034,000	1%
Information Technology	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Library	\$2,193,000	\$1,241,000	\$1,241,000	\$1,241,000	\$1,242,000	\$7,158,000	4%
Mayor's Office	\$13,000	\$20,000	\$18,000	\$14,000	\$10,000	\$75,000	0%
Parks & Recreation	\$7,533,000	\$7,742,000	\$7,916,000	\$8,096,000	\$7,752,000	\$39,039,000	25%
Planning	\$829,000	\$774,000	\$572,000	\$600,000	\$880,000	\$3,655,000	2%
Real Estate & Airport Management	\$453,000	\$506,000	\$520,000	\$534,000	\$550,000	\$2,563,000	2%
Stormwater	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Sustainability & Mobility	\$3,631,000	\$3,667,000	\$3,792,000	\$3,789,000	\$3,737,000	\$18,616,000	12%
Transportation	\$8,563,000	\$8,762,000	\$8,783,000	\$9,075,000	\$8,976,000	\$44,158,000	28%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Figure 5 New and Expanded Program Costs by Departments FY24–FY28



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A total of about 112 FTE is needed each year to implement new and expanded programs

The estimated level of staffing to implement new and expanded CAP programs is an average of 112 full-time equivalents (FTE) annually over the first five years (Table 3). Note all FTE values

presented here are the total for a given year and are not additive across years. Also, values in Table 3 do not include the significant level of staffing required to implement existing programs; rather they represent the level of effort to implement new and expanded programs resulting from the 2022 CAP adoption. The level of effort needed to implement new and expanded programs could be supported by a combination of new positions and reassigning and reprioritizing existing positions.

The Parks and Recreation Department has an estimated need of 65 FTE per fiscal year over FY24–FY28 to support the new and expanded program, the highest of any department. These positions would mainly support CAP measure RIHE-5.1 (Sequestration). The Department of Transportation has an anticipated staffing need of 13 to 19 FTE per fiscal year over five years to support CAP Strategy 3 (Mobility & Land Use) and Strategy 5 (Resilient Infrastructure and Healthy Ecosystems), including improving routes for pedestrians and cyclists, increasing tree canopy and transit use, and increasing local water supply. The Department of Sustainability and Mobility estimated its staffing to be an average of 10 FTE per fiscal year over the first five years to implement Strategy 1 (Decarbonization of the Built Environment) and Strategy 4 (Circular Economy & Clean Communities).

Table 3 Annual Staffing Need to Implement New and Expanded Programs FY24–FY28

Department	FY 24	FY 25	FY 26	FY 27	FY 28
Development Services	1.0	1.0	1.0	1.0	1.0
Economic Development	6.0	6.0	6.0	6.0	6.0
Environmental Services	1.4	1.5	1.3	1.3	1.3
General Services	0.6	4.4	4.4	1.4	1.4
Information Technology	2.0	2.0	2.0	2.0	2.0
Library	0	0.1	0.1	0.1	0.1
Mayor's Office	0.1	0.1	0.1	0.1	0.1
Parks & Recreation	66.2	66.6	66.6	66.6	60.6
Planning	5.2	4.4	3.2	3.4	4.9
Police	0	0	0	0	0
Public Utilities	0	0	0	0	0
Real Estate & Airport Management	2.5	2.7	2.7	2.7	2.7
Stormwater	0	0	0	0	0
Sustainability & Mobility	9.5	10.1	9.7	9.6	9.1
Transportation	13.3	17.3	18.5	19.3	19.3
Total FTE for New/ Expanded Programs*	108	116	115	113	108

*FTE values represent the estimated effort needed in a given year and are not additive across years. The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6. Public Utilities - Pure Water Baseline Budget does not include the breakdown of FTE; only personnel costs of Pure Water Baseline Budget are included.

1 INTRODUCTION

This report summarizes the findings of the City of San Diego Climate Action Plan (CAP) Implementation Cost Analysis conducted by the Energy Policy Initiatives Center (EPIC) at the University of San Diego. The analysis estimates known costs and staffing needs to implement the activities outlined in the 2022 CAP. The goals of this analysis are to estimate the following over the first five fiscal years of CAP implementation (FY24-FY28):

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This report serves as a long-range planning resource to inform the process to allocate and prioritize future funding. Results of this analysis will be included in the Climate Action Implementation Plan to help the City Council prioritize actions and to help guide staff activities.

1.1 Organization of Report

The overall process used to estimate Implementation Costs is presented in Section 2. Section 3 summarizes the results of the CAP Implementation Cost Analysis. Section 4 summarizes the staffing impacts from implementing CAP measures. Section 5 briefly discusses the limitations of the analysis.

2 CAP IMPLEMENTATION COST ANALYSIS OVERVIEW

This report estimates the known cost and staffing impacts (FTE) anticipated to be incurred by the City during the first five fiscal years of CAP implementation (FY24–FY28). The costs and staffing impacts presented are estimates based on input and discussions with City staff that would participate in implementation actions included in the CAP. The preliminary estimates presented here represent a snapshot in time and would need to be adjusted over time to account for changes in City’s priorities and staff workload as the City begins implementing CAP activities. This could happen in concert with CAP monitoring and updating efforts. This would provide sufficient time to better understand how implementation activities may actually occur and allow for better synchronization with the City budget process.

The following sections summarize the process used to estimate CAP implementation costs and the overall framework used to identify and evaluate costs.

2.1 Process to Estimate CAP Implementation Costs

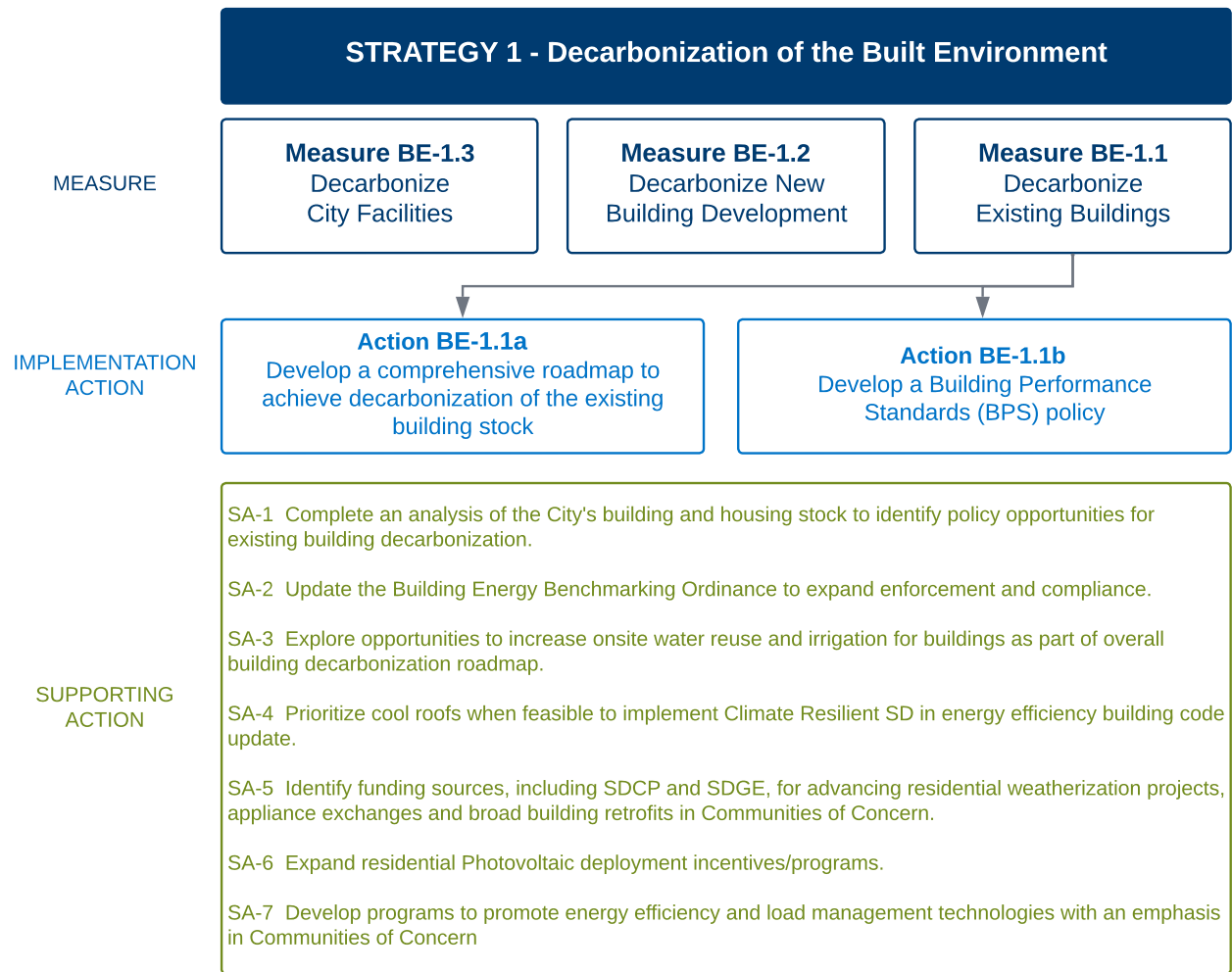
The general steps to estimate CAP implementations costs were to: (1) determine the tasks required to implement CAP actions; (2) define workload associated with these tasks; (3) estimate staffing levels and associated costs; and, (4) estimate all other non-staffing costs to implement CAP actions. This section briefly describes the process used to conduct analysis for this report.

2.1.1 Identify Implementation Actions

To better understand the potential workload and more accurately estimate associated costs, City staff developed a detailed implementation matrix that included all actions and supporting actions included in the CAP. This matrix represents the expected actions to implement CAP activities and helped department managers and staff to consider the tasks and workload that would be needed to implement CAP actions. The CAP comprises measures that include specific programs, policy actions, and associated actions that will be implemented to reduce GHG emissions. Figure 6 illustrates the relationship between the CAP measures, actions, and supporting efforts. The City of San Diego CAP includes six strategies, 20 measures,⁵ 65 implementation actions, and 125 supporting actions.

⁵ BE-SA is not a measure but is included here because it represents the Supporting Actions for the Strategy 1.

Figure 6 Example Structure of CAP Strategies, Measures, Action, and Supporting Efforts



2.1.2 Develop Preliminary Implementation Cost Estimate

Once the implementation actions were identified, City staff estimated staffing effort (in hours) and the cost of non-staffing costs like capital, contracts, and supplies that would be required to implement CAP actions. To standardize the collection of implementation cost data provided by City staff across several departments, EPIC created a data collection template. It was organized using CAP information (e.g., measures and actions), included the City’s Department of Finance 5-year Outlook data collection tool, and collected other needed information like whether a program is existing, expanded, or new. Using the Department of Finance data collection tool helped to align this effort with the City budget process, allowed city staff to use a familiar format, and allowed results to be categorized in terms familiar to city staff and decision makers. City staff conducted meetings with department managers and staff representatives to discuss the cost estimates and cost data collection.

2.1.3 Quality Assurance and Quality Control (QA/QC)

Quality control and data validation occurred at several stages. Primary validation occurred after total estimated costs and staffing data were collected. EPIC and City staff performed an internal quality control check, updated key managers, and reviewed costs with department managers and staff. Based on this initial review, some cost components were updated to create consistency across all departments and to create a complete data set. Staff also reviewed the data to ensure internal cost reporting consistency. EPIC conducted a final review of all costs prior to inclusion in this report.

2.2 CAP Implementation Costs Evaluated

CAP implementation cost estimates presented here include those expected to be incurred by the City to implement programs and activities related to specific CAP measures (including capital projects, education and outreach, and ordinance development, etc.), and those related to overall CAP coordination and reporting (including updating the GHG inventory, the monitoring and reporting progress, and updating the CAP). While the CAP coordination and reporting activities are not specifically included in the CAP as measures, they will require staff time and other costs; therefore, they are included in the estimates presented in this report.

Only costs for the first five fiscal years (FY24–FY28) of CAP implementation are included in this analysis. Future costs associated with CAP measures that will be incurred in FY29 and through the 2035 time horizon are, by design, not included in this analysis and can be estimated in future cost estimates. The 5-year scope of this analysis is consistent with the City's 5-year budget outlook. Also, because this Implementation Cost Analysis estimates costs to implement the 2022 CAP update starting in FY24, some CAP expenditures already may have occurred in previous fiscal years to support the 2015 CAP. Those costs, including FY23 costs, are not included in the results here.

Not all costs associated with decarbonizing buildings over the first five fiscal years are included in this analysis. While some staffing and consultant costs for these activities are captured in this analysis, the City has commissioned a consultant study to estimate the cost of electrifying the municipal fleet and buildings. This project is expected to be complete by the end of the calendar year 2023. At that time, CAP implementation cost estimates can be updated. Also, no costs are included for Strategy 6 (Emerging Climate Action) given the focus at this time on GHG reductions, state and regional policy uncertainty, and the early stage of carbon dioxide removal and related technology and markets.

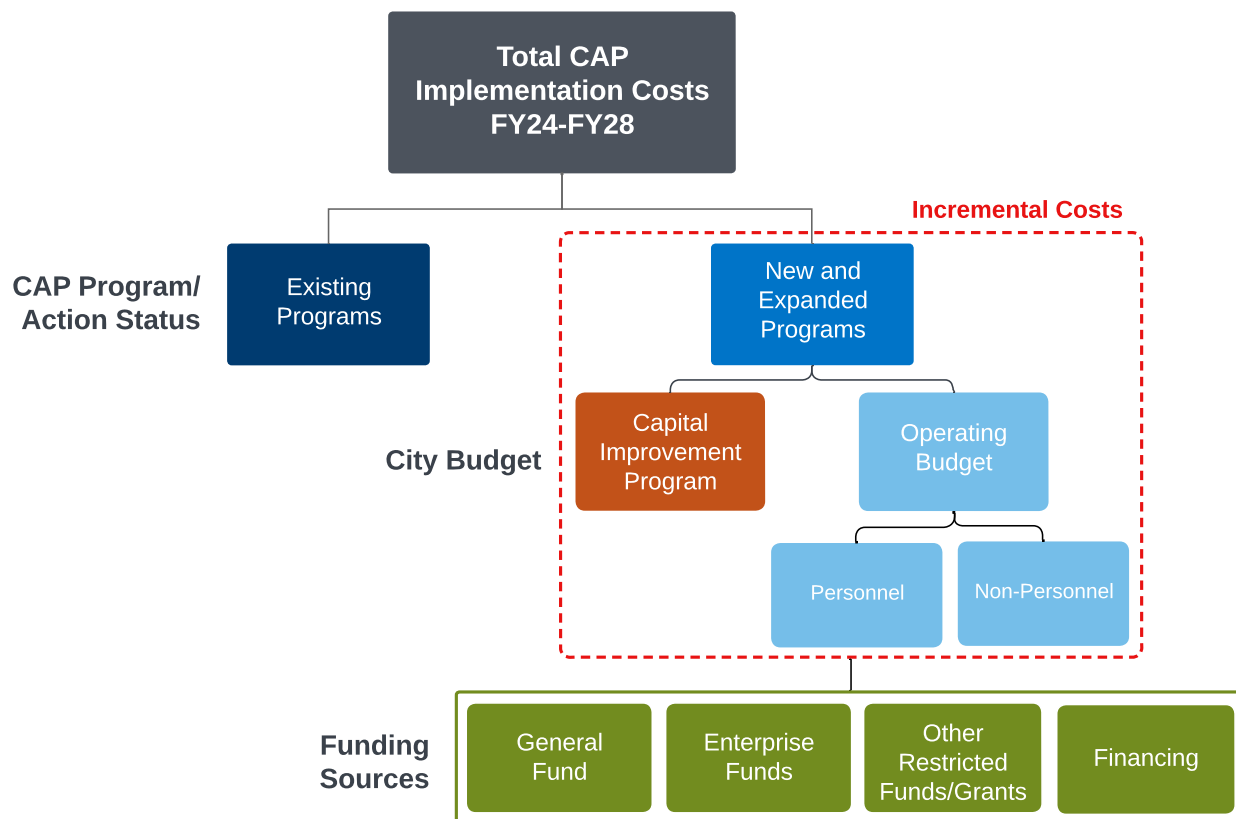
A more detailed discussion of expenditure categories used in the analysis is provided in Section 3.4.

2.2.1 Framework for Evaluating CAP Costs

The goals of the CAP Implementation Cost analysis are to develop a preliminary estimate of the total cost, incremental cost, and staffing needs to the City to implement GHG reductions measures over the first five fiscal years, evaluate costs based on program status (e.g., existing versus new and expanded programs), and determine the estimated incremental costs associated with new and expanded programs that would not have occurred without the CAP. Figure 7 illustrates this cost

analysis framework and the following provides some background information on its component parts.

Figure 7 Framework for Evaluating CAP Implementation Costs



- CAP Program or Action Status** – CAP programs and actions can be divided into two broad categories: (1) existing programs and (2) new and expanded programs. For purposes of this analysis, existing programs are those that are already being implemented and would have occurred regardless of CAPs requirements. These programs may have been developed for another purpose originally, but they support GHG reduction goals and have been included in the CAP. The expanded portion of existing programs and new programs that would not have occurred without CAP adoption and represent the incremental costs to implement CAP measures. We assume these costs would not have occurred but without adoption of the CAP. While we present summary information about the total cost to implement CAP activities, this report focuses on the incremental (new and expanded) costs that result from CAP adoption.
- City Budget** – For new and expanded program costs, we separate out those associated with the Capital Improvement Program (CIP) Budget and the Operating Budget. “A capital improvement is generally a large construction project such as the development of park land, the construction of an overpass, the installation of a traffic signal, the acquisition of land, or the construction or remodeling of a City building.”⁶ The City’s Operating Budget comprises

⁶ City of San Diego, Fiscal Year 2023 Adopted Budget.

two broad categories of expenditures: personnel and non-personnel. Personnel expenditures comprise salary and fringe benefits. Non-Personnel expenditures include a range of subcategories, including capital expenditures (e.g., equipment), contracts, debt, energy and utilities, information technology, and supplies. A more detailed discussion of the City's expenditure categories is presented in Section 3.4.

- **Funding Sources** – City staff identified potential sources to fund implementation costs. Funds for capital improvements are “derived largely from the issuance of bonds, water and sewer fees, and a one-half cent local sales tax for transportation improvements (i.e., TransNet), grants, and developer impact fees.”⁷ Potential funding options associated with the Operating Budget include the General Fund, enterprise funds, other restricted funds. The General Fund is the “City’s main operating fund that pays for basic City services that use most of the City’s tax revenue, such as public safety, parks, and library services. The General Fund is also supported by fees from licenses and permits, fines, and investment earnings.”⁸ Enterprise funds are “established to account for specific services funded directly by fees and charges to users such as water and sewer services. These funds are intended to be self-supporting” and are restricted for certain uses.⁹ There are other sources of restricted funding, including the Energy Conservation Program Fund and the Development Services Fund, and certain grant funding.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

3 RESULTS – CAP IMPLEMENTATION COSTS

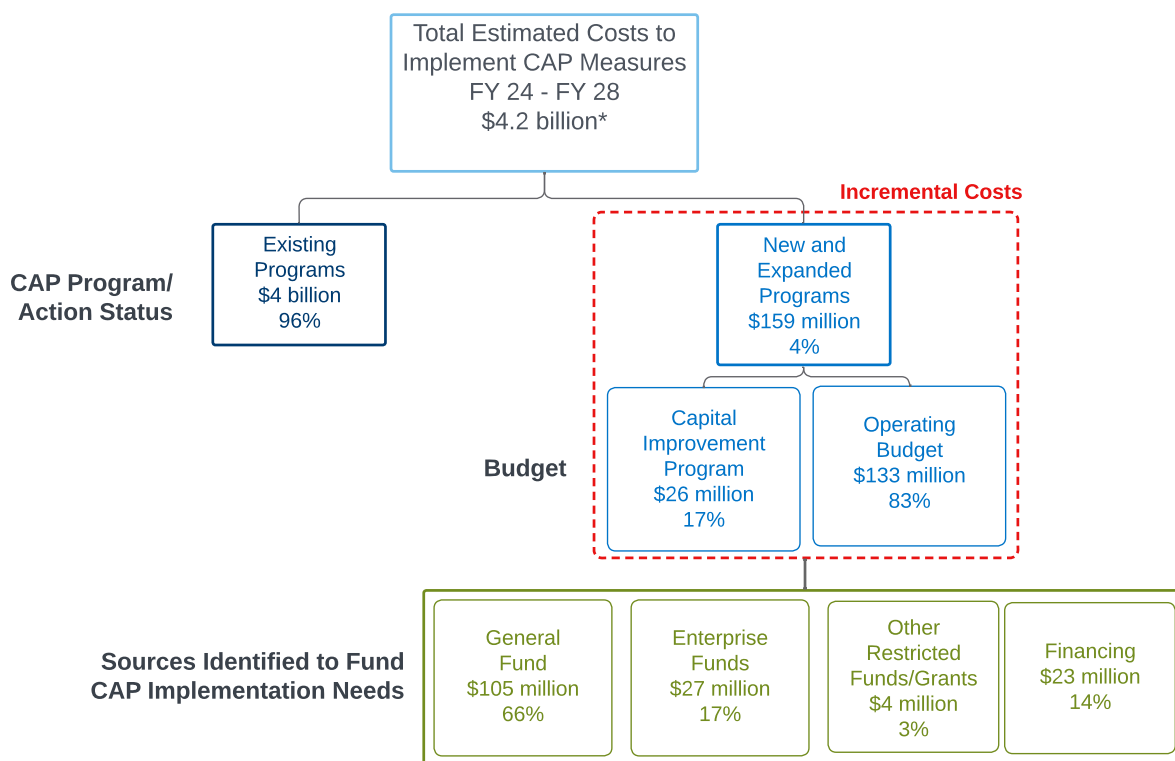
This section presents the results of the City of San Diego CAP Implementation Cost Analysis and answers the question: **What are the potential costs to the City of San Diego to implement CAP-related activities over the first five fiscal years?** It presents an overall summary of results for the first five fiscal years and summarizes results by CAP strategy and measure, City department, and expenditure category.

3.1 Total CAP Implementation Costs

The total estimated cost to implement CAP-related actions over the first five fiscal years (FY24–FY28) is about \$4.2 billion (Figure 8). Nearly all of these costs, about (96%) are associated with existing programs, including Pure Water led by the Department of Public Utilities, stormwater-related projects led by the Stormwater Department, and the advanced undergrounding utilities project led by the Department of Transportation — all of which would have occurred regardless of CAP adoption.

The estimated cost associated with new and expanded programs is \$159 million (4%) over this same period. These represent the known incremental costs for the City to implement CAP activities over the first five fiscal years. Of this total, about 83% is associated with the Operating Budget (i.e., personnel and non-personnel costs) while 17% is for Capital Improvement Program (CIP) costs. Staff has identified the General Fund as the source for about \$105 million, or 66% of new and expanded program costs. Not all costs associated with decarbonizing buildings over the first five fiscal years is included in this analysis. The City has commissioned a consultant study to estimate the cost of electrifying the municipal fleet and buildings. This project is expected to be complete at the end of calendar year 2023. CAP implementation cost estimates can be updated at that time. Also, no costs are included for Strategy 6 (Emerging Climate Action) given the focus at this time on GHG reductions, state and regional policy uncertainty, and the early stage of carbon dioxide removal and related technology and markets.

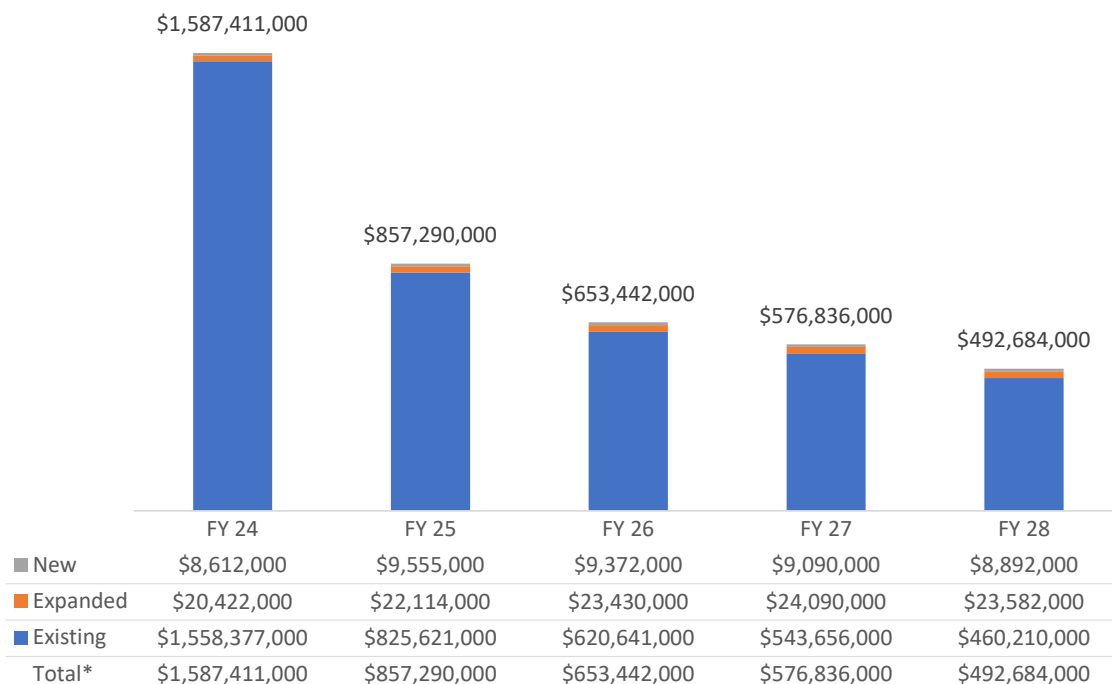
Figure 8 CAP Implementation Costs Summary FY24–FY28



*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

The estimated annual cost to implement CAP programs is about \$1.6 billion in FY24 and declines to about \$493 million in FY28. (Figure 9). Nearly all of these costs, which are associated with existing programs that would have happened regardless of whether the 2022 CAP were adopted, are expected to decline over time as implementation occurs and previously committed funding phases out. Costs associated with new and expanded programs range from \$29 to \$33 million during FY24–FY28. Of this amount, most of the costs, between about \$20 and \$24 million annually, are associated with the expanded portion of existing programs. New programs account for approximately \$8.6 million to \$9.5 million over this same period. For context, the City’s adopted budget for FY23 is over \$5 billion, most of which includes expenditures associates with the Operating Budget. Estimated annual CAP implementation costs during FY24–FY28 represent less than 1% of the City’s FY23 adopted budget.

Figure 9 Annual CAP Implementation Costs FY24–FY28



*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

3.1.1 Identified Funding Sources for New and Expanded Programs

As part of the data collection process, City staff identified potential sources to fund CAP implementation costs. Table 4 and Table 5 show the funding sources identified by staff for new and expanded program costs. Note that the colors in Table 4 show the range of costs. Higher costs are in darker blue, lower costs are in lighter blue. The General Fund was identified for about \$105 million (66%) of all new and expanded costs during FY24–FY28, including \$21 million in FY24. The next highest funding sources was Financing and Other (\$23 million, 15%), which includes financing, SRF loans, and grants and was identified as the main mechanism to fund CIP. Two other funding sources — both restricted funds — were identified as the funding source for over \$10 million of new and expanded program costs over five years: Energy Conservation Program Fund (\$14 million, 9%) and the Development Services Fund (\$12 million, 7%).

Table 4 Funding Sources Identified for New and Expanded Program Costs FY24–FY28

Potential Funding Source	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Airports Fund	\$260,000	\$307,000	\$316,000	\$325,000	\$334,000	\$1,542,000	1%
CalRecycle City/County Grant Payment Program	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
Developer Funding	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
Development Services Fund	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
Energy Conservation Program Fund	\$2,854,000	\$2,726,000	\$2,823,000	\$2,846,000	\$2,869,000	\$14,118,000	9%
Financing and Other	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
General Fund	\$20,943,000	\$20,897,000	\$21,030,000	\$21,101,000	\$20,886,000	\$104,857,000	66%
Information Technology Fund	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Infrastructure Fund	\$50,000	0	0	0	0	\$50,000	0%
Recycling Fund	\$56,000	\$43,000	\$45,000	\$46,000	\$47,000	\$237,000	0%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Table 5 Sources Identified to Fund New and Expanded CAP Programs Cost by Budget FY24–FY28

Potential Funding Source	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Operating Budget	\$26,184,000	\$26,395,000	\$26,761,000	\$26,865,000	\$26,685,000	\$132,889,000	83%
General Fund	\$20,793,000	\$20,897,000	\$21,030,000	\$21,101,000	\$20,886,000	\$104,707,000	66%
Energy Conservation Program Fund	\$2,354,000	\$2,476,000	\$2,698,000	\$2,721,000	\$2,744,000	\$12,993,000	8%
Development Services Fund	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
Information Technology Fund	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Airports Fund	\$260,000	\$307,000	\$316,000	\$325,000	\$334,000	\$1,542,000	1%
Recycling Fund	\$56,000	\$43,000	\$45,000	\$46,000	\$47,000	\$237,000	0%
CalRecycle City/County Grant Payment Program	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
Infrastructure Fund	\$50,000	0	0	0	0	\$50,000	0%
Capital Improvement Program (CIP) Budget	\$2,850,000	\$5,274,000	\$6,041,000	\$6,315,000	\$5,789,000	\$26,269,000	17%
Other-Debt Financing/ Grants/ SRF Loans	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Developer Funding	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
Energy Conservation Program Fund	\$500,000	\$250,000	\$125,000	\$125,000	\$125,000	\$1,125,000	1%
General Fund	\$150,000	0	0	0	0	\$150,000	0%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Two CAP measures account for nearly three-quarters of all new and expanded CAP implementation costs for which staff identified the General Fund as a source of funding (Table 6). RIHE-5.2 (Tree Canopy) has estimated costs of \$49 million over five years, about 46% of new and expanded costs. This includes about \$9.4 million in costs for FY24. RIHE-5.1 (Sequestration) has estimated costs of about \$28 million (27%) over five years, including \$5.5 million for FY24. The next largest measure is MLU-3.3 (Work from Anywhere), which has a five-year estimated cost of \$7 million (7%) during FY24–FY28. Measures CECC-4.1 (Changes to the Waste Stream) and CECC-4.5 (Capture Methane from Wastewater Treatment Facilities) do not have costs associated with new and expanded programs and are not shown in Table 6.

Table 6 CAP Measures with General Fund as Identified Source to Fund New and Expanded Costs FY24–FY28

CAP Measures	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
BE-1.1 Decarbonize Existing Buildings	\$396,000	\$337,000	\$283,000	\$248,000	\$216,000	\$1,480,000	1%
BE-1.2 Decarbonize New Building Development	\$62,000	\$65,000	\$45,000	\$43,000	\$22,000	\$236,000	0%
BE-1.3 Decarbonize City Facilities	\$219,000	\$722,000	\$630,000	\$424,000	\$430,000	\$2,424,000	2%
BE-SA Other Supporting Actions	\$251,000	\$321,000	\$324,000	\$311,000	\$315,000	\$1,523,000	1%
CCR1 CAP Coordination and Reporting	\$626,000	\$694,000	\$1,024,000	\$826,000	\$843,000	\$4,014,000	4%
CECC-4.2 Municipal Waste Reduction	\$14,000	\$14,000	\$14,000	\$15,000	\$15,000	\$72,000	0%
CECC-4.3 Local Food Systems and Food Recovery	\$759,000	\$779,000	\$795,000	\$900,000	\$949,000	\$4,182,000	4%
CECC-4.4 Zero Waste to Landfill	\$183,000	\$216,000	\$192,000	\$197,000	\$202,000	\$990,000	1%
MLU-3.1 Safe Routes for Pedestrians and Cyclists	\$1,215,000	\$830,000	\$792,000	\$812,000	\$832,000	\$4,482,000	4%
MLU-3.2 Increase Transit Use	\$74,000	\$75,000	\$76,000	\$78,000	\$287,000	\$590,000	1%
MLU-3.3 Work From Anywhere	\$2,189,000	\$1,232,000	\$1,232,000	\$1,232,000	\$1,232,000	\$7,118,000	7%
MLU-3.4 Traffic Congestion and Air Quality	\$2,000	\$50,000	\$2,000	\$2,000	\$2,000	\$58,000	0%
MLU-3.5 Climate-Focused Land Use	\$45,000	\$322,000	\$47,000	\$47,000	\$48,000	\$509,000	0%
MLU-3.6 Vehicle Management	\$35,000	0	\$175,000	0	0	\$210,000	0%
RE-2.1 Citywide Renewable Energy Generation	\$6,000	\$9,000	\$10,000	\$7,000	\$5,000	\$37,000	0%
RIHE-5.1 Sequestration	\$5,477,000	\$5,599,000	\$5,725,000	\$5,965,000	\$5,604,000	\$28,371,000	27%
RIHE-5.2 Tree Canopy	\$9,386,000	\$9,628,000	\$9,660,000	\$9,990,000	\$9,881,000	\$48,545,000	46%
RIHE-5.3 Local Water Supply	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$16,000	0%
Total- New and Expanded Covered by General Fund*	\$20,943,000	\$20,897,000	\$21,030,000	\$21,101,000	\$20,886,000	\$104,857,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

3.2 Costs by Strategy and Measure for New and Expanded Programs

This section summarizes the total estimated costs to implement new and expanded CAP activities associated with each CAP strategy and associated GHG reduction measure (Table 7). As noted in Section 2, the CAP has six main strategies, which comprise 20 measures, 65 implementation actions, and 125 supporting actions. No costs are included for Strategy 6 (Emerging Climate Action) given the focus at this time on GHG reductions, state and regional policy uncertainty, and the early stage of carbon dioxide removal and related technology and markets. In addition, this report also includes staffing and cost impacts related to CAP coordination and reporting activities, which were not originally included in the CAP. Table 7 provides a list of CAP strategies and measures for which costs are provided in this Section.

Table 7 2022 City of San Diego CAP Strategies and Measures¹⁰

STRATEGY 1 - Decarbonization of the Built Environment	STRATEGY 4 - Circular Economy & Clean Communities
BE-1.3 Decarbonize City Facilities	CECC-4.1 Changes to the Waste Stream
BE-1.2 Decarbonize New Building Development	CECC-4.2 Municipal Waste Reduction
BE-1.1 Decarbonize Existing Buildings	CECC-4.3 Local Food Systems and Food Recovery
BE-SA Other Supporting Actions	CECC-4.4 Zero Waste to Landfill
STRATEGY 2 - Access to Clean & Renewable Energy	CECC-4.5 Capture Methane from Wastewater Treatment Facilities
RE-2.1 Citywide Renewable Energy Generation	STRATEGY 5 - Resilient Infrastructure and Healthy Ecosystems
RE-2.2 Increase Municipal Zero Emission Vehicles	RIHE-5.1 Sequestration
RE-2.3 Increase Electric Vehicle Adoption	RIHE-5.2 Tree Canopy
STRATEGY 3 - Mobility & Land Use	RIHE-5.3 Local Water Supply
MLU-3.1 Safe and Enjoyable Routes for Pedestrians and Cyclists	CAP Coordination and Reporting
MLU-3.2 Increase Safe, Convenient, and Enjoyable Transit Use	CCR1 CAP Coordination and Reporting
MLU-3.3 Work From Anywhere	
MLU-3.4 Reduce Traffic Congestion to Improve Air Quality	
MLU-3.5 Climate-Focused Land Use	
MLU-3.6 Vehicle Management	

Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) accounts for about \$100 million, 63% of estimated new and expanded CAP implementation costs over five years (Table 8). This strategy has a cost of about \$17 million in FY24. While CAP Coordination and Reporting is not a CAP strategy, it is included the analysis to provide a more complete estimate of costs.

Table 8 Annual New and Expanded CAP Implementation Costs by CAP Strategy FY24–FY28

2022 CAP Strategy	FY 24	FY 25	FY 26	FY 27	FY 28	Total	Percent of Total
CAP Coordination and Reporting	\$1,080,000	\$1,191,000	\$1,526,000	\$1,333,000	\$1,355,000	\$6,485,000	4%
STRATEGY 1 - Decarbonization of the Built Environment	\$3,878,000	\$4,269,000	\$4,206,000	\$3,976,000	\$3,958,000	\$20,287,000	13%
STRATEGY 2 - Access to Clean & Renewable Energy	\$259,000	\$449,000	\$451,000	\$449,000	\$448,000	\$2,056,000	1%
STRATEGY 3 - Mobility & Land Use	\$3,953,000	\$2,853,000	\$2,669,000	\$2,516,000	\$2,747,000	\$14,738,000	9%
STRATEGY 4 - Circular Economy & Clean Communities	\$2,998,000	\$3,052,000	\$3,047,000	\$3,158,000	\$3,213,000	\$15,467,000	10%
STRATEGY 5 - Resilient Infrastructure and Healthy Ecosystems	\$16,866,000	\$19,855,000	\$20,904,000	\$21,748,000	\$20,752,000	\$100,126,000	63%
Total New and Expanded Costs	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Table 9 shows annual costs by CAP Measure and Strategy. Four measures account for about three-quarters of estimated new and expanded program costs over the first five years. The three CAP measures in Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) have the highest implementation cost for new and expanded programs. RIHE-5.2 (Tree Canopy) has an estimated new and expanded cost of \$49 million during FY24-FY28, about \$9.5 million annually. This measure alone represents about 31% of new and expanded program costs. RIHE-5.1(Sequestration) has the second highest cost with about \$28 million (18%), or about \$5.5 million annually. The third highest estimated new and expanded costs is for RIHE-5.3 (Local Water Supply), which is estimated to cost about \$23 million over five years (15%). The next highest measure is BE-1.3 (Decarbonize City Facilities), which has an estimated cost of \$17 million (11%) during FY24-FY28.¹¹ Measures CECC-

¹⁰ BE-SA is not a measure but is included here because it represents the Supporting Actions for the Strategy 1.

¹¹ Not all costs associated with decarbonizing buildings over the first five fiscal years is included in this analysis. The City of San Diego has commissioned a consultant study to estimate the cost of electrifying the municipal fleet and buildings. This project is expected to be complete at the end of calendar year 2023.

4.1 (Changes to the Waste Stream) and CECC-4.5 (Capture Methane from Wastewater Treatment Facilities) do not have costs associated with new and expanded programs and are not shown in Table 9.

Table 9 Annual New and Expanded CAP Implementation Costs by CAP Measure FY24–FY28

2022 CAP Strategy and Measure	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
CAP Coordination and Reporting							
CCR1 CAP Coordination and Reporting	\$1,080,000	\$1,191,000	\$1,526,000	\$1,333,000	\$1,355,000	\$6,485,000	4%
STRATEGY 1 - Decarbonization of the Built Environment							
BE-1.1 Decarbonize Existing Buildings	\$396,000	\$337,000	\$283,000	\$248,000	\$216,000	\$1,480,000	1%
BE-1.2 Decarbonize New Building Development	\$62,000	\$65,000	\$45,000	\$43,000	\$22,000	\$236,000	0%
BE-1.3 Decarbonize City Facilities	\$3,169,000	\$3,546,000	\$3,554,000	\$3,373,000	\$3,406,000	\$17,048,000	11%
BE-SA Other Supporting Actions	\$251,000	\$321,000	\$324,000	\$311,000	\$315,000	\$1,523,000	1%
STRATEGY 2 - Access to Clean & Renewable Energy							
RE-2.1 Citywide Renewable Energy Generation	\$6,000	\$9,000	\$10,000	\$7,000	\$5,000	\$37,000	0%
RE-2.2 Increase Municipal Zero Emission Vehicles	\$14,000	0	0	0	0	\$14,000	0%
RE-2.3 Increase Electric Vehicle Adoption	\$239,000	\$440,000	\$441,000	\$442,000	\$443,000	\$2,004,000	1%
STRATEGY 3 - Mobility & Land Use							
MLU-3.1 Safe Routes for Pedestrians and Cyclists	\$1,236,000	\$852,000	\$814,000	\$835,000	\$856,000	\$4,593,000	3%
MLU-3.2 Increase Transit Use	\$74,000	\$75,000	\$76,000	\$78,000	\$287,000	\$590,000	0%
MLU-3.3 Work From Anywhere	\$2,511,000	\$1,554,000	\$1,554,000	\$1,554,000	\$1,554,000	\$8,727,000	5%
MLU-3.4 Traffic Congestion and Air Quality	\$52,000	\$50,000	\$2,000	\$2,000	\$2,000	\$108,000	0%
MLU-3.5 Climate-Focused Land Use	\$45,000	\$322,000	\$47,000	\$47,000	\$48,000	\$509,000	0%
MLU-3.6 Vehicle Management	\$35,000	0	\$175,000	0	0	\$210,000	0%
STRATEGY 4 - Circular Economy & Clean Communities							
CECC-4.2 Municipal Waste Reduction	\$35,000	\$36,000	\$37,000	\$37,000	\$38,000	\$183,000	0%
CECC-4.3 Local Food Systems and Food Recovery	\$759,000	\$779,000	\$795,000	\$900,000	\$949,000	\$4,182,000	3%
CECC-4.4 Zero Waste to Landfill	\$2,202,000	\$2,235,000	\$2,212,000	\$2,218,000	\$2,224,000	\$11,091,000	7%
CECC-4.4 Zero Waste to Landfill	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$11,000	0%
STRATEGY 5 - Resilient Infrastructure and Healthy Ecosystems							
RIHE-5.1 Sequestration	\$5,477,000	\$5,599,000	\$5,725,000	\$5,965,000	\$5,604,000	\$28,370,000	18%
RIHE-5.2 Tree Canopy	\$9,386,000	\$9,628,000	\$9,660,000	\$9,990,000	\$9,881,000	\$48,545,000	31%
RIHE-5.3 Local Water Supply	\$2,003,000	\$4,627,000	\$5,519,000	\$5,793,000	\$5,267,000	\$23,210,000	15%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

3.2.1 Identified Funding Sources for New and Expanded Programs by Measure

Table 10 shows the sources identified by staff to fund new and expanded programs for each CAP measure. Two of the highest cost measures have General Fund as the potential funding sources. RIHE-5.2 (Tree Canopy) has the highest need associated with the General Fund with \$49 million, or 31% of new and expanded costs. RIHE-5.1 (Sequestration) represents \$28 million (18%). The next highest cost measure is RIHE-5.3 (Local Water Supply), which has an estimated cost of \$23 million and is associated with financing, which is typical for CIP projects.

Table 10 Identified Sources to Fund New and Expanded CAP Costs by Measure FY24–FY28

Fund Name/ CAP Measure	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Airports Fund	\$260,000	\$307,000	\$316,000	\$325,000	\$334,000	\$1,542,000	1%
BE-1.3 Decarbonize City Facilities	\$96,000	\$98,000	\$101,000	\$104,000	\$107,000	\$506,000	0%
CCR1 CAP Coordination and Reporting	\$126,000	\$169,000	\$174,000	\$179,000	\$184,000	\$831,000	1%
RE-2.3 Increase Electric Vehicle Adoption	\$39,000	\$40,000	\$41,000	\$42,000	\$43,000	\$204,000	0%
CalRecycle City/County Grant Payment Program	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
MLU-3.1 Safe and Enjoyable Routes for Pedestrians a	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
Developer Funding	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
RE-2.3 Increase Electric Vehicle Adoption	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
Development Services Fund	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
CCR1 CAP Coordination and Reporting	\$328,000	\$328,000	\$328,000	\$328,000	\$328,000	\$1,640,000	1%
CECC-4.4 Zero Waste to Landfill	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$10,000,000	6%
Energy Conservation Program Fund	\$2,854,000	\$2,726,000	\$2,823,000	\$2,846,000	\$2,869,000	\$14,118,000	9%
BE-1.3 Decarbonize City Facilities	\$2,854,000	\$2,726,000	\$2,823,000	\$2,846,000	\$2,869,000	\$14,118,000	9%
General Fund	\$20,943,000	\$20,897,000	\$21,030,000	\$21,101,000	\$20,886,000	\$104,857,000	66%
BE-1.1 Decarbonize Existing Buildings	\$396,000	\$337,000	\$283,000	\$248,000	\$216,000	\$1,480,000	1%
BE-1.2 Decarbonize New Building Development	\$62,000	\$65,000	\$45,000	\$43,000	\$22,000	\$236,000	0%
BE-1.3 Decarbonize City Facilities	\$219,000	\$722,000	\$630,000	\$424,000	\$430,000	\$2,424,000	2%
BE-SA Other Supporting Actions	\$251,000	\$321,000	\$324,000	\$311,000	\$315,000	\$1,523,000	1%
CCR1 CAP Coordination and Reporting	\$626,000	\$694,000	\$1,024,000	\$826,000	\$843,000	\$4,013,000	3%
CECC-4.2 Municipal Waste Reduction	\$14,000	\$14,000	\$14,000	\$15,000	\$15,000	\$72,000	0%
CECC-4.3 Local Food Systems and Food Recovery	\$759,000	\$779,000	\$795,000	\$900,000	\$949,000	\$4,182,000	3%
CECC-4.4 Zero Waste to Landfill	\$183,000	\$216,000	\$192,000	\$197,000	\$202,000	\$990,000	1%
MLU-3.1 Safe and Enjoyable Routes for Pedestrians a	\$1,215,000	\$830,000	\$792,000	\$812,000	\$832,000	\$4,482,000	3%
MLU-3.2 Increase Safe, Convenient, and Enjoyable Tr	\$74,000	\$75,000	\$76,000	\$78,000	\$287,000	\$590,000	0%
MLU-3.3 Work From Anywhere	\$2,189,000	\$1,232,000	\$1,232,000	\$1,232,000	\$1,232,000	\$7,118,000	4%
MLU-3.4 Reduce Traffic Congestion to Improve Air Q	\$2,000	\$50,000	\$2,000	\$2,000	\$2,000	\$58,000	0%
MLU-3.5 Climate-Focused Land Use	\$45,000	\$322,000	\$47,000	\$47,000	\$48,000	\$509,000	0%
MLU-3.6 Vehicle Management	\$35,000	0	\$175,000	0	0	\$210,000	0%
RE-2.1 Citywide Renewable Energy Generation	\$6,000	\$9,000	\$10,000	\$7,000	\$5,000	\$37,000	0%
RIHE-5.1 Sequestration	\$5,477,000	\$5,599,000	\$5,725,000	\$5,965,000	\$5,604,000	\$28,370,000	18%
RIHE-5.2 Tree Canopy	\$9,386,000	\$9,628,000	\$9,660,000	\$9,990,000	\$9,881,000	\$48,545,000	31%
RIHE-5.3 Local Water Supply	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$16,000	0%
Information Technology Fund	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
MLU-3.3 Work From Anywhere	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Infrastructure Fund	\$50,000	0	0	0	0	\$50,000	0%
MLU-3.4 Reduce Traffic Congestion to Improve Air Q	\$50,000	0	0	0	0	\$50,000	0%
Other-Debt Financing/ Grants/ SRF Loans	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
RIHE-5.3 Local Water Supply	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Recycling Fund	\$56,000	\$43,000	\$45,000	\$46,000	\$47,000	\$237,000	0%
CECC-4.2 Municipal Waste Reduction	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
CECC-4.4 Zero Waste to Landfill	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
RE-2.2 Increase Municipal Zero Emission Vehicles	\$14,000	0	0	0	0	\$14,000	0%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

3.3 Costs by Department for New and Expanded Programs

Two departments that will mainly implement measures and actions associated with Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) account for more than half of new and expanded CAP implementation costs. The Transportation Department has estimated CAP implementation costs between \$8.6 million and \$9.1 million annually and a total of \$44 million (28%) over five years, the highest level of City departments. These costs, which represent nearly one-third of new and expanded costs, comprise personnel and non-personnel costs associated with CAP measure RIHE-5.2 (Tree Canopy). The Parks and Recreation Department has estimated costs of about \$39 million (25%) over the first five years with an annual cost of between \$7.5 million and 8.1 million. These costs are mainly to implement CAP measures RIHE-5.1 (Sequestration) and RIHE-5.2 (Tree Canopy).

The Stormwater Department (\$23 million, 15%), Sustainability and Mobility Department (\$18 million, 12%), and Development services (\$12 million, 7%) have the next highest costs to implement new and expanded CAP actions. Table 11 summarize annual new and expanded CAP implementation costs by City Department.

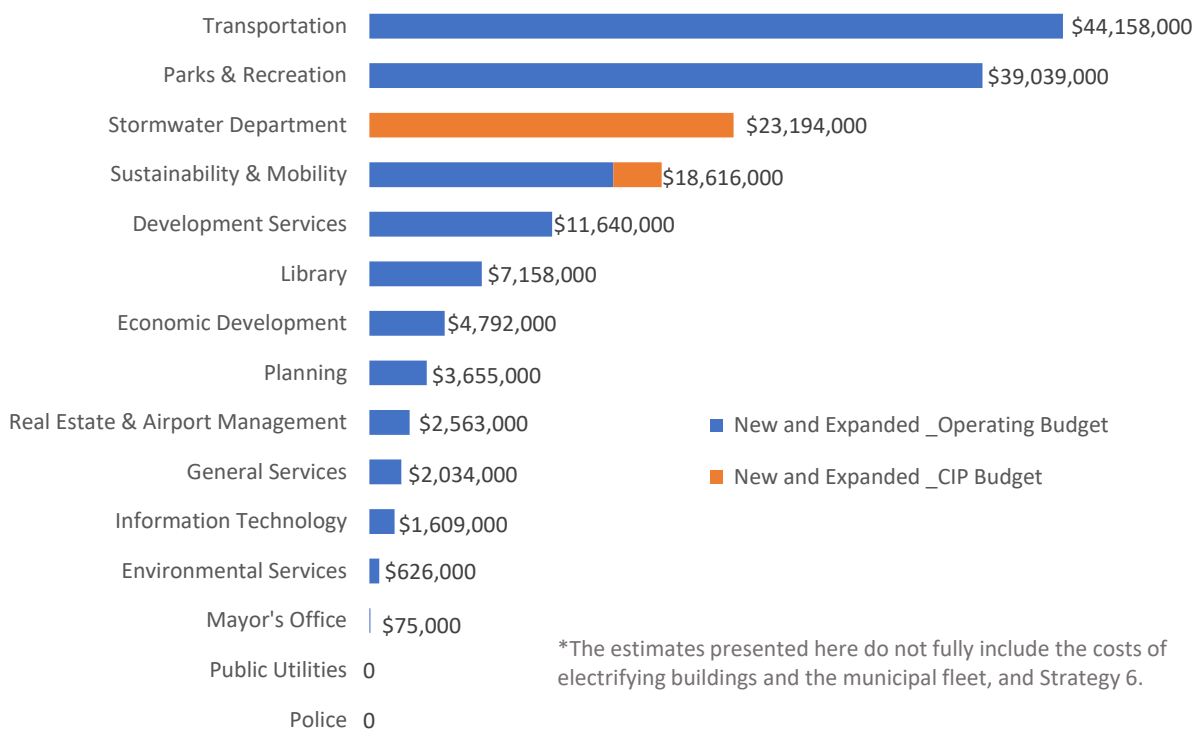
Table 11 Annual New and Expanded CAP Implementation Costs by Department FY24–FY28

Department	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Development Services	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$2,328,000	\$11,640,000	7%
Economic Development	\$921,000	\$939,000	\$958,000	\$977,000	\$997,000	\$4,792,000	3%
Environmental Services	\$124,000	\$141,000	\$117,000	\$120,000	\$124,000	\$626,000	0%
General Services	\$125,000	\$603,000	\$719,000	\$293,000	\$293,000	\$2,034,000	1%
Information Technology	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Library	\$2,193,000	\$1,241,000	\$1,241,000	\$1,241,000	\$1,242,000	\$7,158,000	4%
Mayor's Office	\$13,000	\$20,000	\$18,000	\$14,000	\$10,000	\$75,000	0%
Parks & Recreation	\$7,533,000	\$7,742,000	\$7,916,000	\$8,096,000	\$7,752,000	\$39,039,000	25%
Planning	\$829,000	\$774,000	\$572,000	\$600,000	\$880,000	\$3,655,000	2%
Real Estate & Airport Management	\$453,000	\$506,000	\$520,000	\$534,000	\$550,000	\$2,563,000	2%
Stormwater	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Sustainability & Mobility	\$3,631,000	\$3,667,000	\$3,792,000	\$3,789,000	\$3,737,000	\$18,616,000	12%
Transportation	\$8,563,000	\$8,762,000	\$8,783,000	\$9,075,000	\$8,976,000	\$44,158,000	28%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Figure 10 shows new and expanded costs by budget type for each department that will implement CAP actions. Most of the costs are associated with the Operating Budget (i.e., personnel and non-personnel costs), including those associated with the two departments with the highest estimated costs: The Transportation and Parks and Recreation. The General Fund was identified as a source to fund 100% of the costs associated with the Parks and Recreation Department. Only two departments have CIP costs. All of the Stormwater Department's costs are related to CIP. For Sustainability and Mobility, 17% of new and expanded implementation costs are associated with CIP.

Figure 10 New and Expanded CAP Implementation Costs by Department FY24–FY28



3.4 Costs by Expenditure Category for New and Expanded Programs

Expenditure categories in this analysis include salary and fringe benefits, contracts, Capital Improvement Program projects, capital expenditures, information technology, and supplies. Figure 11 summarizes the breakdown of CAP implementation costs by expenditure category.¹²

- Salary and Fringe Benefits** – This category includes both salary and wages and fringe benefits and is tied as the largest expenditure category of CAP implementation costs, representing about 41% of new and expanded over the five years. Salary and wages “includes salaries, hourly wages, overtime, bilingual pay, and special pay expenses.”¹³ Fringe benefits “consists of the costs to provide employee benefits. Typical employee benefits include the flexible benefit program, insurance, and retirement.”¹⁴ City positions and associated hourly rates used in this analysis were provided by Department of Finance as part of the 5-year Outlook data collection tool.
- Contracts** – If City staff either do not have capacity or expertise to complete an activity related to CAP implementation, consultant support and services can be used. About 41% of estimated new and expanded costs are for contract services, similar to those for salary and fringe benefits. This can include project design and development, feasibility studies, and

¹² Debt is also an expenditure category but there were no CAP implementation costs in this category.

¹³ City of San Diego, Fiscal Year 2023 Adopted Budget.

¹⁴ Ibid.

plan development. An example of a contract expense is consultant costs associated with the municipal building and fleet electrification study.

- **Capital Improvement Program** – CIP-related actions accounts for about 17% of new and expanded costs over the analysis period. These projects are funded out of the CIP Budget and could generally include “large construction project such as the development of park land, the construction of an overpass, the installation of a traffic signal, the acquisition of land, or the construction or remodeling of a City building.”¹⁵ Examples of CIP projects in the CAP include Pure Water, electrification of city facilities and fleets, cool pavement, bike lanes, and roundabouts.
- **Capital Expenditures** – These expenses differ from CIP projects and are funded out of the City's Operations Budget. Capital expenditures include “purchases of capital equipment, such as furniture, vehicles, large machinery, and other capital items.”¹⁶ An example of a capital expenditure related to CAP implementation is lab equipment for wastewater treatment. This is a relatively small category, representing about 1% of new and expanded costs.
- **Information Technology** – This category includes costs for “data center, network, procurement and maintenance of hardware, software, telephones, and associated labor”¹⁷ associated with operations of City activities and accounts for less than 1% of new and expanded costs during FY24–FY28.
- **Supplies** – Supplies, which also accounts for less than 1% of new and expanded costs, comprises “materials, supplies, and other services”¹⁸ needed to implement CAP measures.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

Figure 11 New and Expanded CAP Implementation Costs by Expenditure Category FY24–FY28

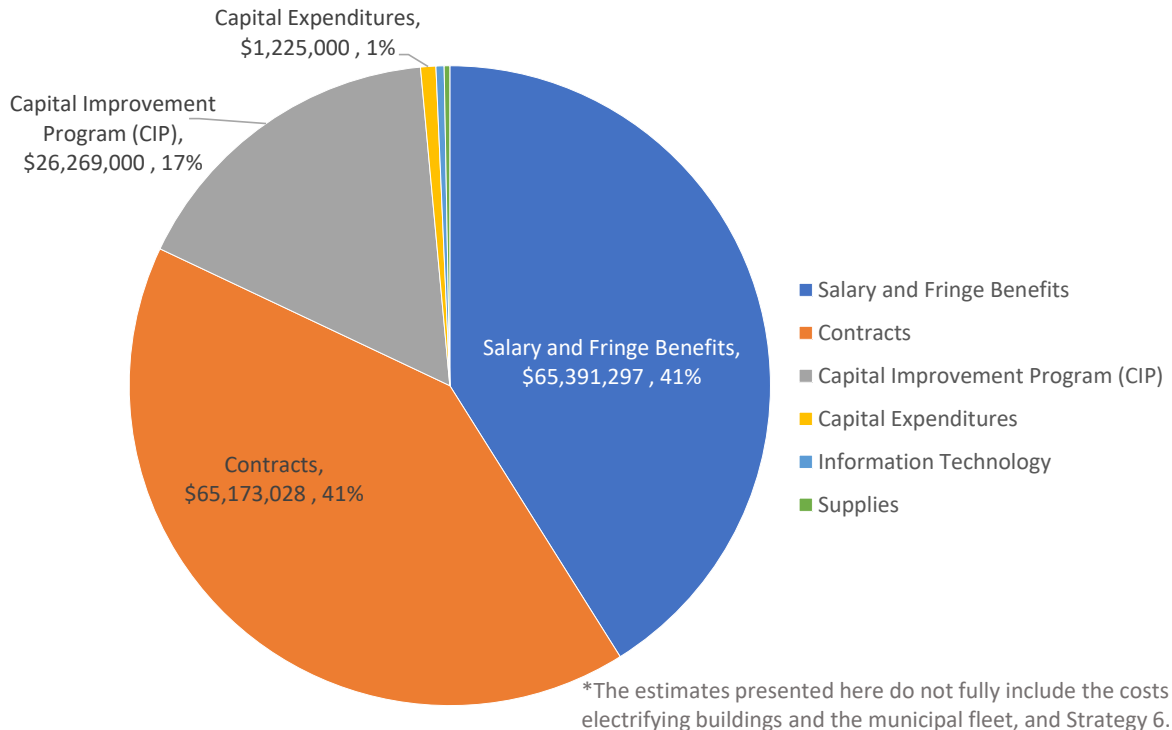
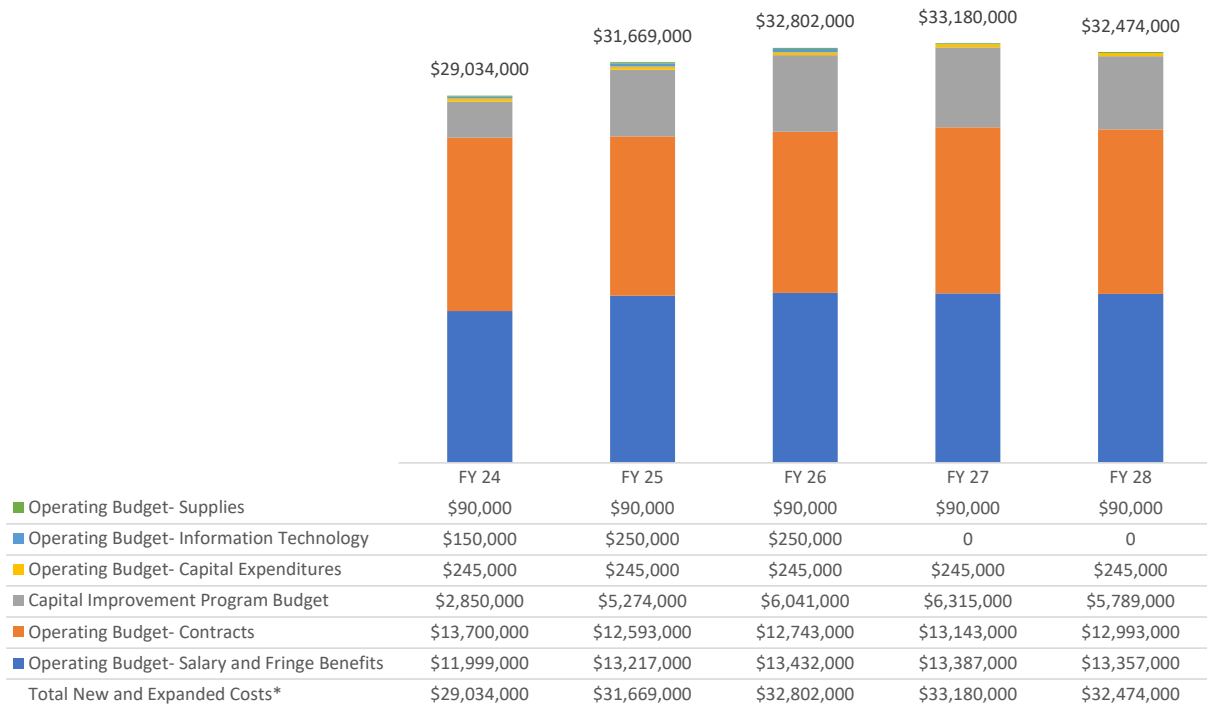


Figure 12 shows estimated annual new and expanded CAP implementation costs by expenditure category. Together the combined estimated annual costs for salary and fringe benefits and contracts accounts for over 80% of new and expanded program costs. Each category has a cost of about \$13 million (41%) per year over the first five years. CIP costs, which represents about 17% of new and expanded costs, range from \$3 million to \$6 million annually over this same period.

Figure 12 Annual New and Expanded CAP Implementation Costs by Expenditure Category FY24–FY28



*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Table 12 shows the identified funding source for each expenditure category of new and expanded CAP implementation costs. As noted above, City staff identified the General Fund as source to fund 66% of new and expanded CAP implementation costs. Two expenditure categories account for nearly all of the costs associated with the General Fund: salary and fringe benefits represent about \$56 million over five years, about \$11 million annually; contracts account for about \$48 million, between \$9 million and \$10 million annually.

Table 12 New and Expanded CAP Costs by Expenditure Type and Identified Funding Source FY24–FY28

Expenditure Category/ Fund Name	FY 24	FY 25	FY 26	FY 27	FY 28	Total*	Percent of Total
Operating Budget- Salaries/Fringe	\$11,999,000	\$13,217,000	\$13,432,000	\$13,387,000	\$13,357,000	\$65,391,000	41%
Airports Fund	\$260,000	\$307,000	\$316,000	\$325,000	\$334,000	\$1,542,000	1%
CalRecycle City/County Grant Payment Program	\$21,000	\$22,000	\$22,000	\$23,000	\$24,000	\$111,000	0%
Development Services Fund	\$178,000	\$178,000	\$178,000	\$178,000	\$178,000	\$890,000	1%
Energy Conservation Program Fund	\$1,054,000	\$1,076,000	\$1,098,000	\$1,121,000	\$1,144,000	\$5,493,000	3%
General Fund	\$10,108,000	\$11,269,000	\$11,452,000	\$11,372,000	\$11,308,000	\$55,509,000	35%
Information Technology Fund	\$322,000	\$322,000	\$322,000	\$322,000	\$322,000	\$1,609,000	1%
Recycling Fund	\$56,000	\$43,000	\$45,000	\$46,000	\$47,000	\$237,000	0%
Operating Budget- Contracts	\$13,700,000	\$12,593,000	\$12,743,000	\$13,143,000	\$12,993,000	\$65,173,000	41%
Development Services Fund	\$2,150,000	\$2,150,000	\$2,150,000	\$2,150,000	\$2,150,000	\$10,750,000	7%
Energy Conservation Program Fund	\$1,150,000	\$1,150,000	\$1,350,000	\$1,600,000	\$1,600,000	\$6,850,000	4%
General Fund	\$10,350,000	\$9,293,000	\$9,243,000	\$9,393,000	\$9,243,000	\$47,523,000	30%
Infrastructure Fund	\$50,000	0	0	0	0	\$50,000	0%
CIP Budget- Capital Improvement Program	\$2,850,000	\$5,274,000	\$6,041,000	\$6,315,000	\$5,789,000	\$26,269,000	17%
Developer Funding	\$200,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,800,000	1%
Energy Conservation Program Fund	\$500,000	\$250,000	\$125,000	\$125,000	\$125,000	\$1,125,000	1%
General Fund	\$150,000	0	0	0	0	\$150,000	0%
Financing and Other	\$2,000,000	\$4,624,000	\$5,516,000	\$5,790,000	\$5,264,000	\$23,194,000	15%
Operating Budget- Capital Expenditures	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$1,225,000	1%
General Fund	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$1,225,000	1%
Operating Budget- Information Technology	\$150,000	\$250,000	\$250,000	0	0	\$650,000	0%
Energy Conservation Program Fund	\$150,000	\$250,000	\$250,000	0	0	\$650,000	0%
Operating Budget- Supplies	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$450,000	0%
General Fund	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$450,000	0%
Total New and Expanded Costs*	\$29,034,000	\$31,669,000	\$32,802,000	\$33,180,000	\$32,474,000	\$159,158,000	100%

*The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

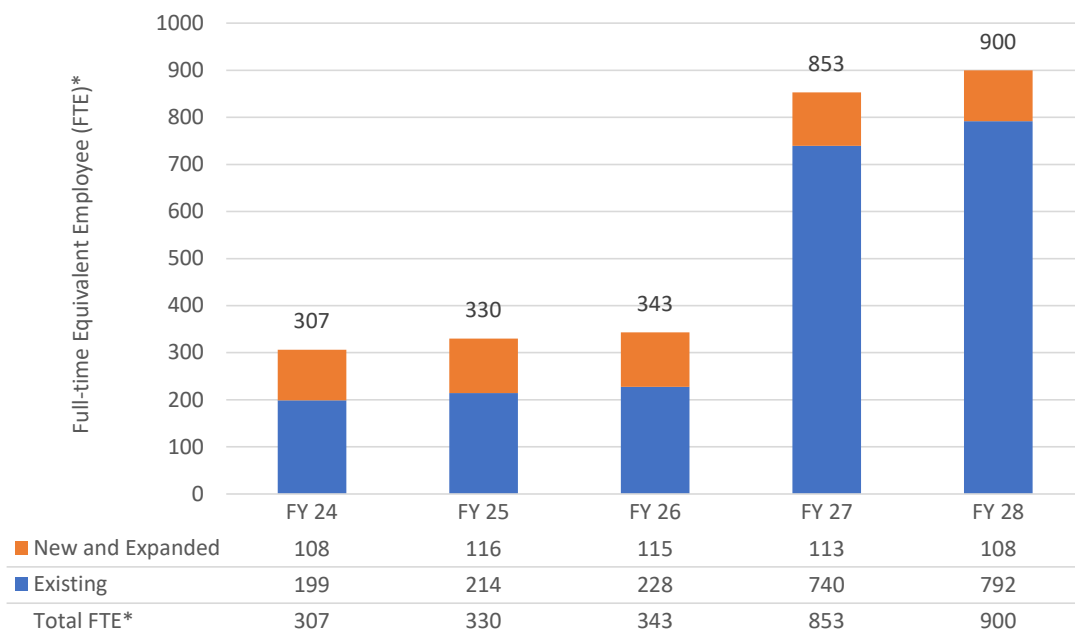
4 RESULTS – STAFFING IMPACTS (FTE)

This section presents the results of the City of San Diego CAP Implementation Cost Analysis and answers the question: **What level of effort will be needed to implement CAP-related activities over the first five fiscal years?** It presents an overall summary of staffing needs for the first five fiscal years and summarizes results by CAP measure, City department, and CAP measure. The level of effort included here is presented in full-time equivalents (FTE) and represents the estimated effort needed in a given year — values are not additive across years. This analysis does not comment on the number of new positions that could be needed to implement new and expanded CAP actions.

4.1 Overall Staffing Needs

Total annual staffing needs to implement CAP measures range between 307 FTE and 343 FTE over the first three fiscal years of CAP implementation and then more than doubles to 853 FTE in year four and 900 FTE in year 5 (Figure 13). The significant jump in level of effort is due to numerous positions in the Stormwater Department starting in FY27, including truck drivers and utility workers for future green infrastructure maintenance under Measure RIHE-5.3 (Local Water Supply). As with overall CAP implementation costs, the majority of staffing impacts would be associated with existing programs. The portion of staff effort associated with new and expanded programs ranges from 108 FTE to 116 FTE per year over the first five years. The level of effort for new and expanded programs describes the staffing need to implement related programs; it is not a projection of additional positions needed to implement these programs. It is possible that new and expanded programs will be implemented through a combination of reassigned existing positions and newly hired positions.

Figure 13 Annual Staffing Impact (FTE) by Program Status FY24–FY28



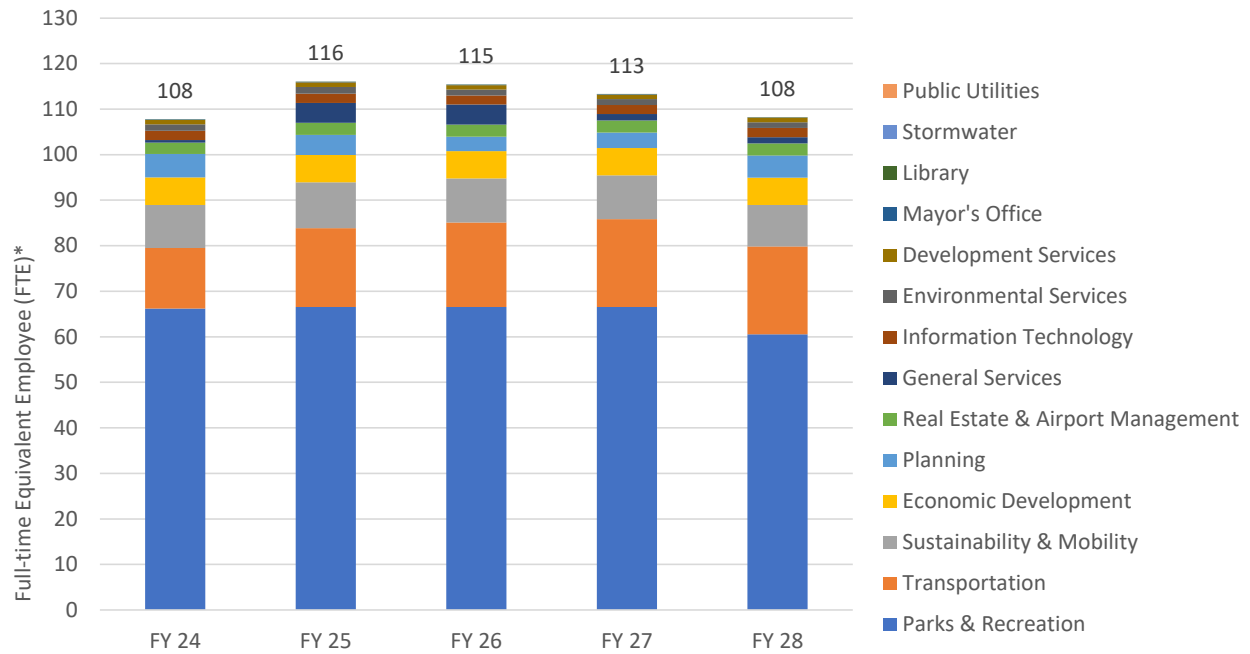
*FTE values represent the estimated effort needed in a given year and are not additive across years. The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6. Public Utilities - Pure Water Baseline Budget does not include the breakdown of FTE; only personnel costs of Pure Water Baseline Budget are included.

4.2 Staffing Impact by Department for New and Expanded Programs

The City of San Diego CAP Implementation Cost Analysis estimates level of effort needed for each department that will participate in new and expanded CAP implementation actions to illustrate how workload would be distributed across the City’s organizational structure. Values presented in this section represent the estimated effort needed in a given year and are not additive across years. This does not include the significant staffing needed to implement existing programs; it only represents the level of effort to implement new and expanded programs that result from the 2022 CAP adoption.

The Parks and Recreation Department has the highest level of staffing impact with a range of about 60 FTE to 66 FTE during the first five years. This level of effort is commensurate with the estimated increase in activity to implement the measure associated with Strategy 5 (Resilient Infrastructure and Healthy Ecosystems) and its three associated measures. The level of effort for the Parks and Recreation Department is associated mainly with Measures RIHE-5.1 (Sequestration) and RIHE-5.2 (Tree Canopy). Department of Transportation has the next highest staffing impacts with between about 13 FTE and 19 FTE during FY24–FY28. Figure 14 and Table 13 show annual staffing impact by City department.

Figure 14 Annual Staffing Impact (FTE) for New and Expanded Programs by Department FY24–FY28



*FTE values represent the estimated effort needed in a given year and are not additive across years. The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6. Public Utilities - Pure Water Baseline Budget does not include the breakdown of FTE; only personnel costs of Pure Water Baseline Budget are included.

Table 13 Annual Level of Effort (FTE) Needed for New and Expanded Programs by Department FY24–FY28

Department	FY 24	FY 25	FY 26	FY 27	FY 28
Development Services	1.0	1.0	1.0	1.0	1.0
Economic Development	6.0	6.0	6.0	6.0	6.0
Environmental Services	1.4	1.5	1.3	1.3	1.3
General Services	0.6	4.4	4.4	1.4	1.4
Information Technology	2.0	2.0	2.0	2.0	2.0
Library	0	0.1	0.1	0.1	0.1
Mayor's Office	0.1	0.1	0.1	0.1	0.1
Parks & Recreation	66.2	66.6	66.6	66.6	60.6
Planning	5.2	4.4	3.2	3.4	4.9
Police	0	0	0	0	0
Public Utilities	0	0	0	0	0
Real Estate & Airport Management	2.5	2.7	2.7	2.7	2.7
Stormwater	0	0	0	0	0
Sustainability & Mobility	9.5	10.1	9.7	9.6	9.1
Transportation	13.3	17.3	18.5	19.3	19.3
Total FTE for New/ Expanded Programs*	108	116	115	113	108

*FTE values represent the estimated effort needed in a given year and are not additive across years. The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6. Public Utilities - Pure Water Baseline Budget does not include the breakdown of FTE; only personnel costs of Pure Water Baseline Budget are included.

4.3 Staffing Impact by Strategy and Measure for New and Expanded Programs

Consistent with other results presented above, the largest level of effort to implement CAP actions is associated with two measures in Strategy 5 (Resilient Infrastructure and Healthy Ecosystems). Measures RIHE-5.1 (Sequestration) needs an average of about 53 FTE per year over the first five years and RIHE-5.2 (Tree Canopy) needs an average of 21 FTE. These two measures represent about two-thirds of the staffing needed over the first five years of CAP implementation. The measures with the next highest associated level of effort are BE-1.3 (Decarbonize City Facilities), which needs an average of about 10 FTE annually, and CECC-4.3 (Local Food Systems and Food Recovery), which averages about 6 FTE per year during FY24–FY28. Table 14 summarizes annual staffing needs for new and expanded programs by CAP measure. Measures CECC-4.1 (Changes to the Waste Stream) and CECC-4.5 (Capture Methane from Wastewater Treatment Facilities) do not have FTE associated with new and expanded programs and are not shown in Table 14.

Table 14 Annual Staffing Impact (FTE) for New and Expanded Programs by CAP Measure FY24–FY28

2022 CAP Strategy and Measure	FY 24	FY 25	FY 26	FY 27	FY 28
CAP Coordination and Reporting	6.21	6.86	7.86	6.86	6.86
CCR1 CAP Coordination and Reporting	6.21	6.86	7.86	6.86	6.86
STRATEGY 1 - Decarbonization of the Built Environment	11.28	16.12	14.71	12.40	12.09
BE-1.1 Decarbonize Existing Buildings	1.60	2.12	1.82	1.62	1.42
BE-1.2 Decarbonize New Building Development	0.33	0.35	0.24	0.23	0.12
BE-1.3 Decarbonize City Facilities	8.35	12.25	11.25	9.25	9.25
BE-SA Other Supporting Actions	1.00	1.40	1.40	1.30	1.30
STRATEGY 2 - Access to Clean & Renewable Energy	0.39	0.26	0.26	0.24	0.23
RE-2.1 Citywide Renewable Energy Generation	0.04	0.06	0.06	0.04	0.03
RE-2.2 Increase Municipal Zero Emission Vehicles	0.15	0.00	0.00	0.00	0.00
RE-2.3 Increase Electric Vehicle Adoption	0.20	0.20	0.20	0.20	0.20
STRATEGY 3 - Mobility & Land Use	11.47	10.34	9.12	8.22	9.32
MLU-3.1 Safe and Enjoyable Routes for Pedestrians and Cyclists	8.54	5.84	5.51	5.51	5.51
MLU-3.2 Increase Safe, Convenient, and Enjoyable Transit Use	0.45	0.45	0.45	0.45	1.55
MLU-3.3 Work From Anywhere	2.00	2.00	2.00	2.00	2.00
MLU-3.4 Reduce Traffic Congestion to Improve Air Quality	0.01	0.30	0.01	0.01	0.01
MLU-3.5 Climate-Focused Land Use	0.25	1.75	0.25	0.25	0.25
MLU-3.6 Vehicle Management	0.22	0.00	0.90	0.00	0.00
STRATEGY 4 - Circular Economy & Clean Communities	7.77	8.00	7.80	8.33	8.50
CECC-4.2 Municipal Waste Reduction	0.35	0.35	0.35	0.35	0.35
CECC-4.3 Local Food Systems and Food Recovery	5.68	5.71	5.71	6.24	6.41
CECC-4.4 Zero Waste to Landfill	1.74	1.94	1.74	1.74	1.74
STRATEGY 5 - Resilient Infrastructure and Healthy Ecosystems	70.65	74.47	75.70	77.28	71.26
RIHE-5.1 Sequestration	53.43	53.43	53.43	54.06	48.24
RIHE-5.2 Tree Canopy	17.20	21.02	22.25	23.20	23.00
RIHE-5.3 Local Water Supply	0.02	0.02	0.02	0.02	0.02
Total FTE for New/ Expanded Programs*	108	116	115	113	108

*FTE values represent the estimated effort needed in a given year and are not additive across years.

The estimates presented here do not fully include the costs of electrifying buildings and the municipal fleet, and Strategy 6.

Public Utilities - Pure Water Baseline Budget does not include the breakdown of FTE; only personnel costs of Pure Water Baseline Budget are included.

5 LIMITATIONS

There are inherent limitations with any data analysis that result in a degree of uncertainty. This implementation cost and staffing impact analysis uses the best information, data, and methods available at the time. Nonetheless, the following limitations should be considered.

5.1 First Attempt to Estimate CAP Implementation Costs

This report summarizes findings of the City's first attempt to develop a detailed, bottom-up estimate costs and staffing impacts associated with CAP implementation. While this effort was a necessary step to build the processes and tools necessary to estimate implementation costs in the future, the timing of this effort came after the City's 5-year budget outlook process was complete. Future efforts could be better timed and integrated into the existing process, which would save staff time and specifically account for CAP costs in the budget. This would help further City efforts to integrate CAP implementation into existing planning processes, including the 5-year budget outlook, departmental work plans, and a citywide Climate Action Implementation Plan.

5.2 Preliminary Estimate

The cost and staffing impact results presented are preliminary estimates. Because in some cases there is limited information about the specific tasks that would be required to implement the CAP measures, the estimates included are based on assumptions about the work to be performed. Over time, the specific tasks required to implement final CAP measures will become clearer and considerations for how to coordinate and sequence activities can be made, which may also affect the ultimate cost and staffing required to implement the final CAP.

5.3 Some Costs Not Included

While this analysis attempted to be as comprehensive as possible, not all potential costs are included in the estimates presented here. For example, not all costs associated with decarbonizing buildings over the first five fiscal years is included in this analysis. The City has commissioned a consultant study to estimate the cost of electrifying the municipal fleet and buildings. This project is expected to be complete by the end of calendar year 2023. Also, no costs are included for Strategy 6 (Emerging Climate Action) given the focus at this time on GHG reductions, state and regional policy uncertainty, and the early stage of carbon dioxide removal and related technology and markets. By omitting this strategy, it is possible that some limited staff costs to track policies and technologies over the next five years are not included in the implementation costs presented in this report. Future efforts could estimate the cost of developing a program to compensate for residual emissions, which are estimated to be about 2 MMT CO₂e annually starting in 2035.

It also should be noted that this analysis estimated costs during FY24–FY28, so any costs to implement CAP activities associated with the 2015 CAP during FY23 are not included here.

5.4 Overlap between Existing and Expanded Programs

This analysis attempted to separate out existing programs that would have happened regardless of CAP adoption from the expanded portion of existing programs and new programs that are needed

to implement CAP actions included in the 2022 CAP. In some cases, it is possible that previous existing efforts did not achieve the targets in the 2015 CAP and that costs and staffing needed to achieve the unmet portion of related activity are categorized as an expanded program. Trees provide an instructive example. If the targets for tree planting from the previous CAP were not achieved and staff estimated the cost to achieve new tree targets in the 2022 CAP, then these costs are not caused only by the 2022 CAP but also include some carryover activity from the previous CAP. While we acknowledge this potential overlap, it may not be possible in all cases to separate out all existing costs from expanded and new costs.

5.5 CAP Time Horizon

This analysis evaluated the cost and staffing impact (FTE) for the first five years of CAP implementation through FY28. This is consistent with the City's budget outlook. While the CAP has an implementation horizon of 2035 this report does not estimate costs between FY29 and 2035. It would be too speculative to determine specific tasks and staffing needs for implementation activities beyond year five. Certain CAP measures will be implemented and will have costs beyond the scope of this initial cost analysis. To account for future costs, the City could conduct periodic cost analyses as part of the CAP monitoring and update process.

5.6 Cost Savings Not Considered

This report estimates costs that are anticipated to be incurred by the City to implement CAP measures. It does not consider any potential cost savings that might result from those measures. For example, rooftop solar, battery storage, and energy efficiency retrofits have an upfront cost but could result in a net savings over the project lifetime. A benefit-cost analysis would be required to estimate the net savings or costs that would accrue to the City for municipal projects, and residents, and businesses located within the City.

5.7 GHG Emissions

This report does not consider the GHG emissions associated with CAP measures. It is common for cost analyses to divide costs by GHG emissions to derive a cost per ton of carbon-dioxide equivalent (CO₂e) reduced. It is not possible to derive such values from the cost information included in this report, because there is no way to correlate the amount of GHG reductions that would occur due to the specific staffing and other expenditures estimated for this effort. For example, it would not be accurate to divide costs for the first five fiscal years by the total GHG reduction for 2035, as there could be additional costs associated with achieving those reductions.