AGENDA

MEETING OF THE
PLANNING COMMITTEE
AND
ALAMEDA COUNTY RECYCLING BOARD

Thursday, March 12, 2020

4:00 P.M.

StopWaste
1537 Webster Street
Oakland, CA 94612
510-891-6500

Meeting is wheelchair accessible. Sign language interpreter may be available upon five (5) days' notice to 510-891-6500.

I. CALL TO ORDER

II. ROLL CALL OF ATTENDANCE

III. ANNOUNCEMENTS BY PRESIDENT

IV. OPEN PUBLIC COMMENT
An opportunity is provided for any member of the public wishing to speak on any matter within the jurisdiction of the Board, but not listed on the agenda. Each speaker is limited to three minutes.

Page **V. CONSENT CALENDAR**

VI. REGULAR CALENDAR

future amendments to the Countywide Element may be adopted by resolution, and also recommend that the WMA Board direct staff to place the ordinance on the calendar for adoption at the April 22, 2020, meeting.

VII. MEMBER COMMENTS AND COMMUNICATIONS FROM THE EXECUTIVE DIRECTOR

VIII. ADJOURNMENT

DRAFT

MINUTES OF REGULAR MEETING OF THE PLANNING COMMITTEE AND ALAMEDA COUNTY RECYCLING BOARD

Thursday, February 13, 2020

7:00 P.M.

San Leandro Senior Community Center
Meeting Room C
13909 E. 14th Street
San Leandro, CA 94578
(510) 577-3462

I. CALL TO ORDER

President Deborah Cox called the meeting to order at 7:00 p.m.

II. ROLL CALL OF ATTENDANCE

Jillian Buckholz, Recycling Programs
Bernie Camara, Recycling Materials Processing Industry
Bob Carling, ACWMA
Deborah Cox, ACWMA
Darby Hoover, Environmental Organization
Tianna Nourot, Solid Waste Industry Representative
Jim Oddie, ACWMA
Dave Sadoff, ACWMA
Francisco Zermeño, ACWMA

Absent:
Vacant, Source Reduction Specialist
Vacant, Environmental Educator

Staff Present:
Wendy Sommer, Executive Director
Jeff Becerra, Communications Manager
Meri Soll, Senior Program Manager
Farand Kan, Deputy County Counsel

Others Participating:
Arthur Boone
Rebecca Parnes, City of Dublin
Becky Hopkins, City of Pleasanton
Dagny Tucker, Vessel Works
Erica Everett, Ecology Center

III. ANNOUNCEMENTS BY THE PRESIDENT

The Board expressed their condolences to Clerk Arliss Dunn, in her absence, on the sudden passing of her nephew.

IV. OPEN PUBLIC COMMENT

Arthur Boone announced the upcoming Zero Waste Conference in March at the UC Berkeley Campus. Mr. Boone encouraged everyone to attend. Mr. Boone stated that two notable speakers will be attending the conference: Jeffry Morrison, who did a study on mixed waste processing and the differences between people sorting the garbage and machines, and Enzo Favoino, Zero Waste Coordinator for Europe. Mr. Boone also announced that the Northern California Recycling Association would be holding their annual update on March 17, 2020 in Berkeley.

V. CONSENT CALENDAR

1. Approval of the Draft Minutes of January 9, 2020 (Jeff Becerra)

2. Board Attendance Record (Jeff Becerra)

3. Written Report of Ex Parte Communications (Jeff Becerra)

There were no public comments for the consent calendar. Board member Zermeño made the motion to approve the consent calendar. Board member Oddie seconded and the motion carried 8-0:
(Ayes: Buckholz, Camara, Carling, Cox, Hoover, Oddie, Sadoff, Zermeño. Nays: None. Abstain: None. Absent: Nourot. Vacant: Source Reduction Specialist, Environmental Educator)

VI. REGULAR CALENDAR

1. Accumulated Measure D Fund Balance Exceeding Policy Threshold – Approval of City of Dublin and City of Pleasanton Expenditure Plans (Meri Soll)

Approve the Expenditure Plans submitted by the City of Dublin and City of Pleasanton, and find both cities eligible to continue receiving their quarterly per-capita disbursements from the Recycling Fund through June 30, 2021.

Ms. Soll provided an overview of the staff report. A link to the report is available here: MeasureD-Expenditure-Plan-Requests.pdf. Rebecca Parnes, City of Dublin, and Becky Hopkins, City of Pleasanton, were available to answer questions.

There were no public comments on this item. Board member Sadoff made the motion to approve the staff recommendation. Board member Zermeño seconded and the motion carried 9-0:
(Ayes: Buckholz, Camara, Carling, Cox, Hoover, Nourot, Oddie, Sadoff, Zermeño. Nays: None. Abstain: None. Absent: None. Vacant: Source Reduction Specialist, Environmental Educator)

2. Reuse Grant Update – Ecology Center/Vessel Cups (Meri Soll)

This item is for information only.

Meri Soll provided an overview of the staff report. A link to the report is available here: Reuse-Grant-Update.pdf. Ms. Soll introduced Dagny Tucker, Vessel Works, and Erica Everett, Ecology Center. Ms. Tucker provided a PowerPoint presentation and an overview of Vessel Works. Ms. Everett provided an overview of the pilot project with the Ecology Center and Vessel Works. A link to the presentation is available here: Vessel-Ecology-Presentation.pdf

Board member Hoover inquired about the materials used in manufacturing the cup and inquired if the cup can be used with hot and cold beverages. Ms. Tucker stated that the cup is stainless steel and can be used for both hot and cold beverages. Ms. Tucker stated that the lids are a problem but a majority

of the cups are returned with the lids intact and many customers don't take a lid. Ms. Tucker stated that you have five days in which to return the cup and there is a $15 charge for unreturned cups. Board member Hoover inquired if they have had requests from companies that were interested in branding the cups. Ms. Tucker stated that they have had interest from large companies wanting to do open network without branding. Board member Carling inquired about how to get a cup from a business. Ms. Tucker stated that customers use an app to check out a cup at participating businesses by using their phone and scanning the cup's QR code or customers can use a computer to sign up as well. Ms. Tucker added there is a map available for drop-off locations. Board member Carling inquired about their business model. Ms. Tucker stated that they have a non-profit side that provides education and impact metrics and the provision of the service is on the for-profit side. Board member Oddie inquired how the cities can help. Ms. Tucker stated that having pilots in the cities and having matching funding helps them to mitigate their risks. Board member Zermeño inquired as to how we can partner with Vessel on a countywide basis. Ms. Sommer stated that this why staff introduced the pilot project option with regard to the reusable food ware ordinance as this method provides an opportunity to hear from companies like Vessel and to also identify the cities that are interested and the types of businesses that the cities are able to bring to the pilot. Board member Buckholz inquired about where the cups are manufactured and if the workers are paid a prevailing wage. Ms. Tucker stated that the cups are manufactured in China and they are cognizant of the social as well as the environmental life cycle analysis. President Cox inquired about washing the cups. Ms. Tucker stated that they utilize a dishwashing service called Dishjoy.

President Cox thanked Ms. Tucker and Ms. Everett for their presentations.

VII. COMMUNICATIONS/MEMBER COMMENTS

Ms. Soll announced that the agency is currently accepting applications for a range of grant opportunities with total funding up to $400k available to both nonprofits and businesses, aimed at increasing individual, business, and community involvement in the reduction of waste in Alameda County. Areas of focus can be on waste prevention, reuse and recovery of goods and materials, as well as development, marketing, and use of recovered products.

Mr. Becerra reported on the vacancies on the Recycling Board. The Board of Supervisors recently appointed Laura McKaughan in the category of Source Reduction Specialist. Ms. McKaughan is a former President of the Northern California Recycling Association and will join the Board at the March meeting. Board member Camara has graciously agreed to remain on the Board until a candidate is identified for her category. The Board of Supervisors is currently reviewing candidates for both the Environmental Educator and the Recycling Materials Processing Industry positions and we hope to have them filled by April.

Board member Sadoff announced that last week CVSan celebrated Zero Waste week and there were several community events including a fruit gleaning event, and 48 community members along with staff went out and gleaned over 2000 pounds of fruit that was provided to folks in need. There was also a Fixit clinic for bikes and electronics. Board member Sadoff stated that he attended a zero waste chef demonstration that showed how to not use plastic and how to buy bulk. He also had a demonstration on how to make kimchi. Board member Zermeño announced that Chabot College just started a Sustainability Committee and they're hoping to make Chabot College a green college. Board member Buckholz announced that StopWaste and Cal State East Bay are collaborating on a food waste reduction campaign in the residence hall and the kick-off was successful. The website will be coming soon and they are finalizing an MOU with Leanpath to have them onboard in the kitchen for one year.

VIII. ADJOURNMENT

The meeting adjourned at 8:15 p.m.

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2020 - ALAMEDA COUNTY RECYCLING BOARD ATTENDANCE

	J	F	M	A	M	J	J	A	S	O	N	D
REGULAR MEMBERS												
J. Buckholz	X	X										
B. Camara	X	X										
B. Carling	X	X										
D. Cox	X	X										
D. Hoover	X	X										
T. Nourot	A	X										
J. Oddie	X	X										
D. Sadoff	X	X										
F. Zermeño	X	X										
INTERIM APPOINTEES												

Measure D: Subsection 64.130, F: Recycling Board members shall attend at least three fourths (3/4) of the regular meetings within a given calendar year. At such time, as a member has been absent from more than one fourth (1/4) of the regular meetings in a calendar year, or from two (2) consecutive such meetings, her or his seat on the Recycling Board shall be considered vacant.

X=Attended A=Absent I=Absent - Interim Appointed

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DATE: March 12, 2020

TO: Recycling Board

FROM: Jeff Becerra, Communications Manager

SUBJECT: Written Reports of Ex Parte Communications

BACKGROUND

Section 64.130 (Q)(1)(b) of the Alameda County Charter requires that full written disclosure of ex parte communications be entered in the Recycling Board's official record. At the June 19, 1991 meeting of the Recycling Board, the Board approved the recommendation of Legal Counsel that such reports be placed on the consent calendar as a way of entering them into the Board's official record. The Board at that time also requested that staff develop a standard form for the reporting of such communications. A standard form for the reporting of ex parte communications has since been developed and distributed to Board members.

At the December 9, 1999 meeting of the Recycling Board, the Board adopted the following language:

Ex parte communication report forms should be submitted only for ex parte communications that are made after the matter has been put on the Recycling Board's agenda, giving as much public notice as possible.

Per the previously adopted policy, all such reports received will be placed on the consent calendar of the next regularly scheduled Recycling Board meeting.

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DATE: March 12, 2020

TO: Programs and Administration Committee
Planning Committee/Recycling Board

FROM: Pat Cabrera, Administrative Services Director

SUBJECT: Multi-Year Fiscal Forecast

SUMMARY

Starting in 2016, staff committed to presenting a revised multi-year forecast on an annual basis in preparation of budget development. At both the March 12, 2020 Programs and Administration Committee and the Planning Committee/Recycling Board meetings, staff will present a revised multi-year forecast based on new core revenue estimates and a stable core expenditure plan.

DISCUSSION

In Fiscal Year 2018-19, the Agency spent about 98% of the core budget, and collected 26% more revenue than projected at the beginning of the fiscal year, not including a one-time payment from NextEra (approximately $1.8M) for the conservation easement. The surplus is due to several reasons: an increase in tonnages (explained more below), better overall interest yields, a combination of salary and hard-cost savings and continued reduction in end-of-year encumbrances as we move away from the "use it or lose it" mindset of past budget practices.

	FY 18-19 Actuals	FY 18-19 Budget*	Difference
Core expenditures	$10,412,221	$10,644,210	($231,989)
Core revenues			
Tonnage: facility fee	$5,878,000	$5,091,688	$786,312
Tonnage: mitigation	$1,096,353	$361,503	$734,850
Tonnage: Measure D	$5,013,797	$4,344,946	$668,850
Tonnage: fee enforcement (out of county)	$387,433	$250,000	$137,433
Property and interest	$1,067,371	$732,700	$334,671
Miscellaneous and citations	$137,236	-	$137,236
One time Easement revenue	$1,790,470	-	$1,790,470
Total core revenues	$15,370,660	$10,780,837	$4,589,823

* Budget amended for additional grants to non-profits funding. Core budget increased by $50k

The ending core fund balance available totaled approximately $17.7M in FY18-19. The Agency continues to accumulate sizeable fund balances along with reserves to cover any budget gaps (should they occur), and to make any pension related lump-sum payments in conjunction with our long-term expenditure plan. This approach will ensure the ongoing operations of the Agency without the need to increase fees in the near future.

Tonnage Revenue Projections

For the past several years, we have been using a simpler model to project tonnages, as the previously used statistical model was no longer viable. Upon examining tonnages going back to 1999, and based on those trends, we chose to implement a modest annual tonnage decline averaging approximately 3%. In fact, as shown in attachment B, in-county tonnage disposed at the Altamont and Vasco landfills between July 2006 and July 2016 declined an average of 3.6% annualized. However, we have seen an uptick in tonnages starting in FY16-17. While over the past three years, one-time disposal tonnages from other special wastes can explain some of the upturn, disposal in general increased in FY18-19. This increase is consistent with statewide disposal trends and can be explained in part by the strong regional economy. Alameda County's population has also increased by approximately 9.9% since 2010. It is important to note that in the current fiscal year we are seeing at least a stabilization if not actual modest declines in ongoing tonnage and as such have made some tonnage related revenue adjustments for FY20-21.

In FY18-19, tonnage-based fees (including fee enforcement efforts) comprised almost 91% of the Agency's core revenues, not including the conservation easement payment. The remaining 9% came from property-related revenues, interest, and mandatory recycling enforcement activities. For the current fiscal year (FY19-20), we are estimating that actual tonnage revenues will total $11.1 million, which represents an increase of approximately $700,000 (7.1%) compared to the budgeted amount. Property and enforcement related fees are projected to match budgeted figures, whereas interest revenue is projected to exceed budgeted amounts by at least $100,000. As such, core revenues in FY19-20 are estimated to total approximately $12.3 million.

The new baseline for FY20-21 is reset at approximately $11.3M. From that baseline, we have decreased the projected FY21-22 through FY23-24 tonnage estimates by a modest 2.1% annually. This decrease reflects both estimated reduced tonnages resulting from the Organics Materials Recovery Facility (OMRF) at Davis Street, San Leandro, potential changes due to China's "National Sword" policy, and our programmatic efforts. This forecast could be revised due to several factors: a major downturn in the economy during this period, the OMRF diversion exceeding current estimates, continued change due to National Sword, or any additional waste reduction efforts or changes.

Based on these projections, at the end of FY23-24 disposal will total approximately 1.1 million tons. While this number does not reflect our aspirational "less than 10% good stuff in garbage" goal (which would translate into roughly 600,000 tons of waste disposal), it is a more reasonable estimate based on current conditions. Should the Board adopt the 75% diversion goal, in-county tonnage would total an estimated 930,000 tons. As always, we will continue to monitor disposal trends carefully and apprise the boards as needed.

Core Expenditures

Staff is in the process of developing the FY20-21 budget in alignment with the Board-approved guiding principles and with a continued focus on cost synergies. Given the requirements stemming from SB 1383 as well as our own initiatives we have not finalized a core budget, but are fully committed to matching ongoing expenditures with ongoing revenues. For purposes of this projection we are estimating the core budget to total approximately $11.0M in FY20-21 and FY21-22, dropping modestly to $10.9M and $10.7M in FY22-23 and FY23-24 respectively. Furthermore, given that we have

accumulated both significant fund balances and reserves, we have factored in this projection additional discretionary payments to CalPERS. Based on the most current actuarial information from CalPERS, these pension payments would result in the Agency attaining a funded status of 100% by the beginning of FY25-26.

At the end of FY 19-20, we project combined available fund balances and reserves to total $27.2M. Even with the additional discretionary payments beginning in FY20-21, fund balances and reserves are projected to total $25.8M at the end of FY23-24, which is more than twice our average core budget.

Multi Year Fiscal Forecast

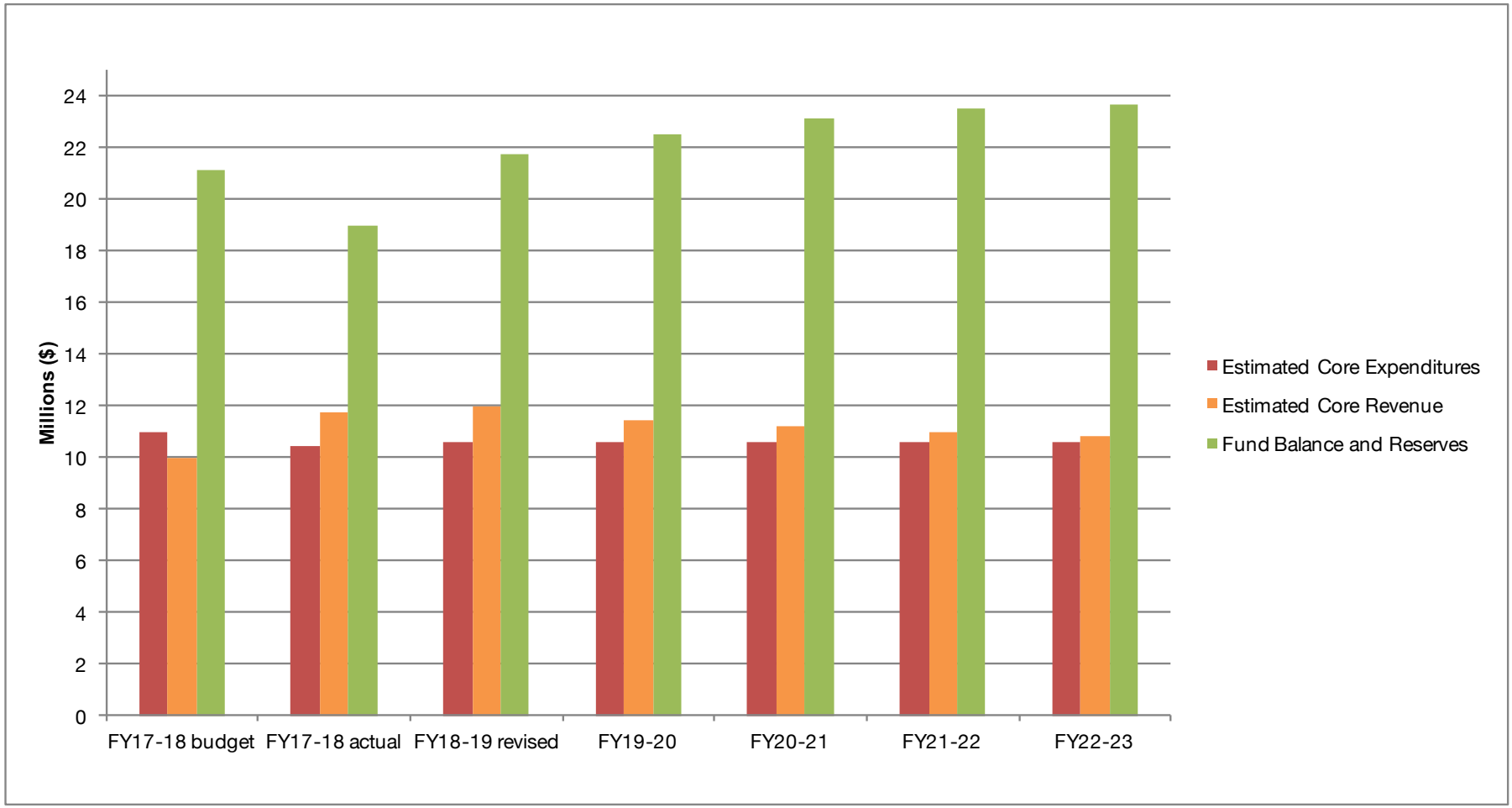
Attachment A1 (Prior Year Multi-Year Forecast) shows core revenue exceeding expenditures by approximately $800,000 in FY19-20 with a small surplus of $200,000 at the end of FY22-23. (Attachment A1). This was based on maintaining core expenditures at $10.6M per year. Attachment A2 (Revised Multi-Year Forecast) shows revenue exceeding expenditures by approximately $1.7M in FY19-20 and matching expenditures at the end of FY23-24. This projection is based on annual core expenditures increasing to $11.0M in FY20-21 and FY21-22 and decreasing to $10.7M in FY23-24.

RECOMMENDATION

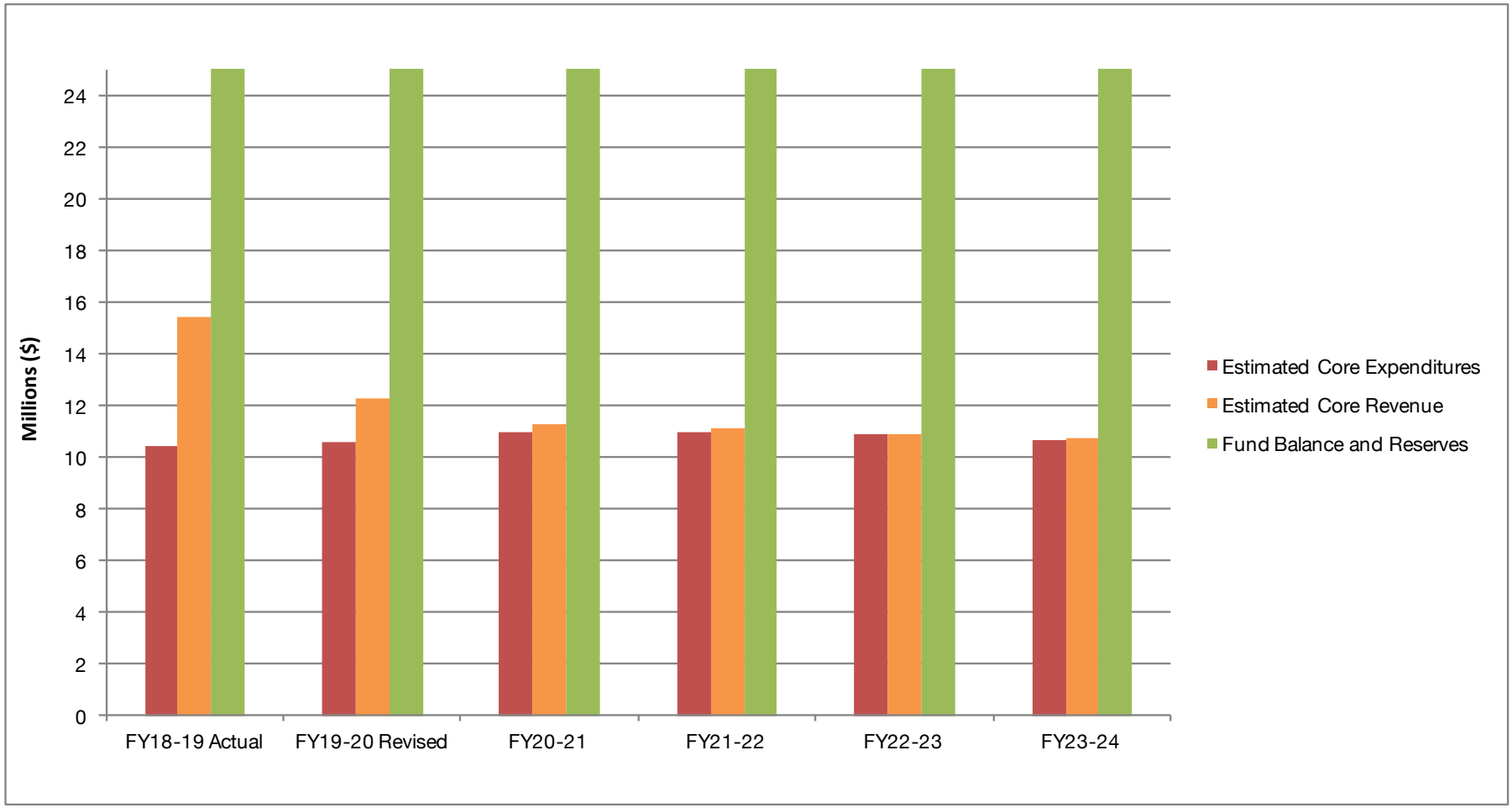
This item is for information only.

Attachment A1: Prior Year Multi-Year Forecast Through FY 22-23
Attachment A2: Revised Multi-Year Forecast Through FY 23-24
Attachment B: Disposal Trends in Alameda County

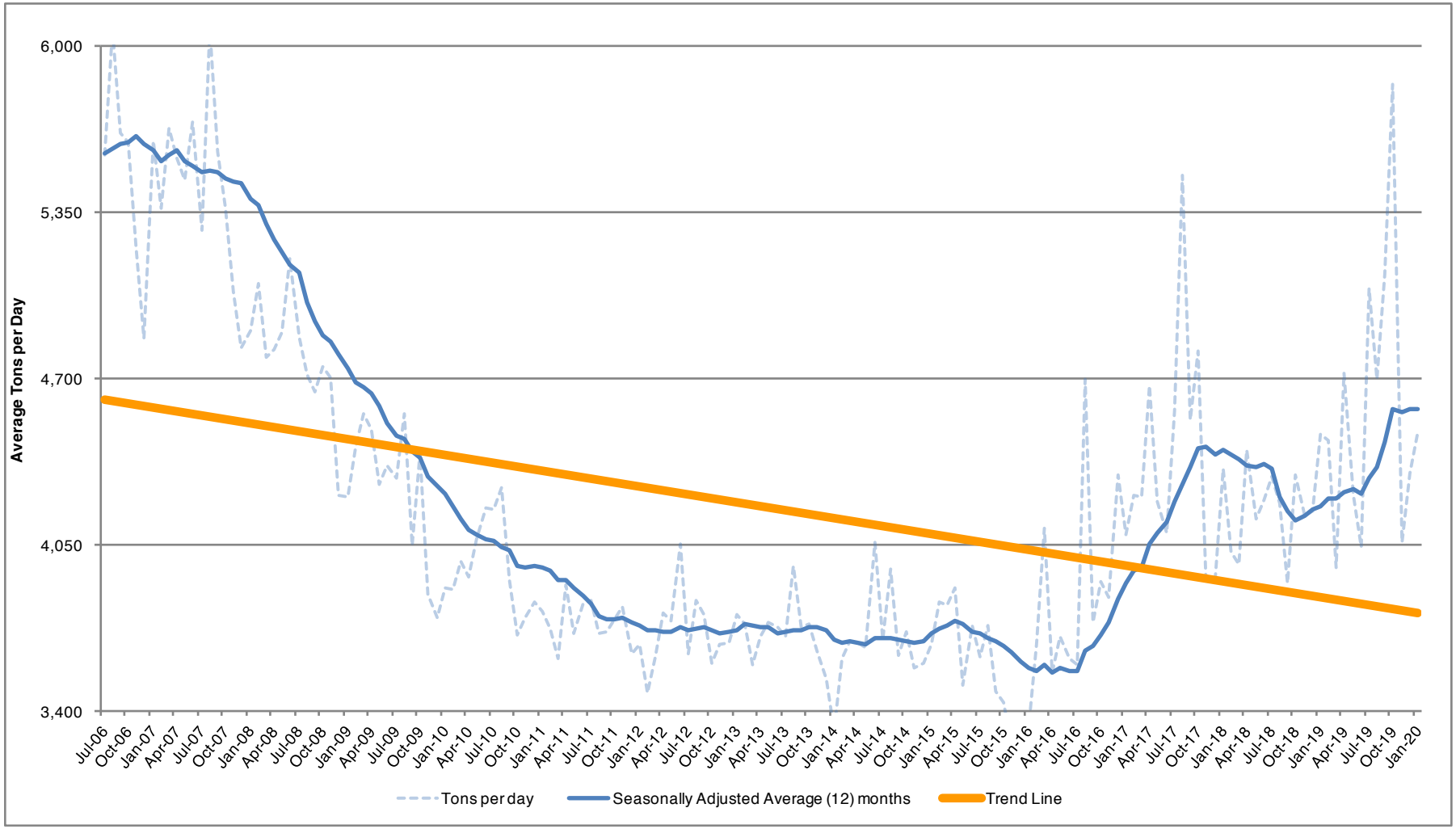
Attachment A1: Prior Year Multi-Year Forecast Through FY 22-23



Attachment A2: Revised Multi-Year Forecast Through FY23-24



Attachment B: Disposal Trends in Alameda County



DATE: March 12, 2020

TO: Programs & Administration Committee
Planning Committee/Recycling Board

FROM: Meghan Starkey, Senior Management Analyst

SUBJECT: Countywide Element Update: Draft Document

SUMMARY

Thirty years ago, pursuant to State law, the Alameda County Waste Management Authority adopted a Countywide Integrated Waste Management Plan (CoIWMP). Staff has prepared a comprehensive update of the CoIWMP Countywide Element, and will present the draft document at the March 12 meeting. The first public reading of the Countywide Element is scheduled for the March 25 Waste Management Authority Board meeting.

DISCUSSION

A CoIWMP serves as a roadmap to approaching countywide solid waste and recycling challenges, guides the design of programs to address these challenges, and plans for regional landfill needs. The WMA portion of the document: the Countywide Element, which consists of the CoIWMP Summary Plan and Siting Element, complements the components of the CoIWMP managed by local jurisdictions (the Source Reduction and Recycle Element, the Non-Disposal Facility Element, and Household Hazardous Waste Element). Since the current version of the Countywide Element is out of date and has numerous internal inconsistencies, staff undertook a comprehensive update. The purpose of the update is to reframe the structure and clarify the goals, objectives, and policies, while making it responsive to current challenges, consistent, appropriate to our role, and specific enough to provide meaningful guidance.

Staff has prepared a draft document of the entire Countywide Element for review. A guide to the document, describing each chapter's purpose and contents, is in Appendix A, while the entire document may be found at Draft-Countywide-Element.pdf and in Appendix B.

Chapters 1, 3, 4 and 7 and the appendices are more descriptive and data driven ("factual")., while three chapters contain policy discussion that will guide future WMA decisions and budget. These are:

- Chapter 2: Countywide Issues
- Chapter 5: Goals, Objectives, and Policies
- Chapter 6: Siting Criteria

Chapter 2: Countywide Issues

This chapter contains a discussion of the countywide solid waste-related issues that Alameda County is currently facing, or are likely to arise, over the course of the next five years. These issues have been brought to the board in various forms over the past 12-18 months. The six critical challenges facing the county are gathered, described, and analyzed in this chapter, in order to guide the WMA when planning and implementing its programs and making other key decisions.

The issues are:

- Recyclables markets
- Organics processing capacity and contamination
- Collaboration and roles in response to State mandates
- Climate change and waste reduction
- Alignment of public interests and WMA priorities
- Transition to closed loop systems

This chapter serves as a useful primer to Board members and the public on the most important issues facing the Agency. When considered in conjunction with the information in Chapter 3: Solid Waste System and Chapter 4: Countywide Needs, it provides the context and rationale for the goals, objectives, and policies contained in Chapter 5.

Chapter 5: Goals, Objectives, and Policies

This chapter forms the underpinnings of the entire document. It considers State and regional policies, solid waste management systems, and critical issues, and reflects the desire of the WMA to emphasize upstream waste reduction while considering overall environmental impact.

Goals are a general statement of what the WMA wants to accomplish, objectives are a narrower aspect of a goal and are an intermediate step toward reaching a goal, and policies are the specific means to achieve outcomes.

At the December and January meetings, the Programs & Administration Committee and the Planning & Organization Committee/Recycling Board reviewed and discussed draft goals, objectives, and policies. That chapter has been updated based on those discussions, as well as considering review and input from legal counsel, staff, Technical Advisory Committee members, and other stakeholders.

The most significant changes to this chapter are found on Goal 3, Materials Management. The objectives and policies have been expanded, reworded, and enhanced to provide a clearer understanding and connection between climate change issues as well as framing the approach to the materials management system as “regenerative.” Regenerative is a new framework for environmental issues, and is steadily supplanting the term “sustainable.” A regenerative system, as defined in Chapter 2: Countywide Issues, is one that naturally evolves to eliminate waste and benefit human health and the environment.

Apart from that, there are various minor tweaks to objectives and policies, such as incorporating environmental justice in several places and adding more specificity to the objectives. For example, Objective 1.2.3 now states that in addition to overseeing the HHW program, the WMA will increase public access to HHW facilities and promote the use of non-toxic alternatives; Policy 2.1.4 was added to make explicit that the WMA will use information developed through studies to develop plans and projects supplementing the CoIWMP; Objective 2.4.3 adds that the WMA will use its

conformance procedure to require that end products from processing facilities are suitable for their intended use.

Chapter 6: Siting Criteria

At the January committee meetings, the Board discussed whether the CoIWMP should continue to require that conformance findings are made for all facilities in the county, rather than just those requiring a full Solid Waste Facility Permit (which is the standard in State law). Staff recommended that that we only require findings for those requiring the full permit, and establish better working relations with our member agencies to be involved earlier and more substantively in the CEQA process. This draft incorporates that recommendation.

RECOMMENDATION

Staff recommends that the Planning Committee and the Recycling Board (in its role as Local Task Force) review the attached draft Countywide Element and recommend to the WMA Board that it hold a public hearing at the March 25, 2020, meeting and introduce and waive the first reading of an ordinance to (1) repeal the existing Summary Plan and Siting Element of the Countywide Integrated Waste Management Plan (CoIWMP) referred to collectively as the "Countywide Element," (2) adopt a new Countywide Element that would update and replace the existing Countywide Element, and (3) provide that future amendments to the Countywide Element may be adopted by resolution, and also recommend that the WMA Board direct staff to place the ordinance on the calendar for adoption at the April 22, 2020, meeting.

Appendix A: Guide to the Countywide Element
Appendix B: Draft Countywide Element

Appendix A: CoIWMP Countywide Element Document Guide

Chapter	Type	Purpose	Content
1 Introduction	Factual	Explain purpose of CoIWMP	Legal requirements of a CoIWMP Explanation of CoIWMP components List of chapters
2 Countywide Issues	Policy	Identify and discuss critical issues to inform WMA policies and actions	Discussion of six issues: • Recyclables market • Organics processing • Relative roles regarding State mandates • Climate and waste reduction connection • Alignment of public interests and WMA priorities • Transition to closed loop systems
3 Solid Waste Management System	Factual	Catalog existing solid waste, recycling, and organics organizations and infrastructure	Description of relevant organizations and roles List of facilities, including landfills, transfer stations, and recovery facilities List of Alameda County jurisdictions' recycling and organics diversion programs Description of the Countywide Household Hazardous Waste program
4 Countywide Needs	Factual	Quantify current waste disposal and diversion and discuss system capacity	Demonstration of legally required 15 year minimum landfill capacity Estimated landfill capacity and life Estimated organics processing capacity
5 Goals, Objectives and Policies	Policy	Define the ideal state of materials management in Alameda County and provide guidance to the WMA	Broad general goals Specific objectives under each goal Policies to guide WMA actions
6 Siting Criteria and Conformance Procedures	Policy	Establish criteria for siting facilities within Alameda County, and procedures for conformance determination	
7 Framework for Implementation	Factual	Outline the processes and programmatic approach by which the WMA will implement the Goals, Objectives, and Policies	Description of WMA planning and budget processes Summary of WMA programs Summary of local programs Discussion of WMA funding mechanisms and contingency funding plans
Appendix A	Factual	Describe Alameda County	General information on Alameda County, including climate, transportation, population, income, and housing
Appendix B	Factual	Describe methodology behind all quantitative figures	Descriptions of Waste Characterization Study, CalRecycle Recycling and Disposal Reporting System, annual reports to the WMA from member agencies, and annual reports to CalRecycle from member agencies

Appendix C	Factual	Provide detail on facilities in Alameda County	Detailed descriptions of the landfills, transfer stations, and processing facilities
Appendix D	Factual	Provide text of the document establishing the WMA	Full text of Joint Powers Agreement between the 17 member agencies of the WMA
Appendix E	Factual	Provide text of the document establishing the Source Reduction and Recycling Board	Full text of the Alameda County Waste Reduction Act of 1990 (“Measure D”)
Appendix F	Factual	Define key terms	Definitions of acronyms and terms used in the CoIWMP

Appendix B

ALAMEDA COUNTY INTEGRATED WASTE MANAGEMENT PLAN

Countywide Element

- Countywide Siting Element
- Countywide Summary Plan

DRAFT: March 5, 2020

ALAMEDA COUNTY
WASTE MANAGEMENT
AUTHORITY

CONTENTS

1. INTRODUCTION

SUMMARY

The Alameda County Countywide Integrated Waste Management Plan (CoIWMP) serves as a roadmap to approaching Alameda County's solid waste management and recycling issues. This document contains two elements of the CoIWMP and describes both the current and desired state of waste and materials management in the county. Similar to a city's general plan, it is intended to be far-reaching with long-term relevance.

In addition to addressing core infrastructure needs – collection, transport, processing facilities, and landfills – this document provides the context and rationale for a comprehensive approach to the current and future waste management issues facing Alameda County. In response to these issues, as well as fulfilling the requirement to provide a minimum 15 years of landfill capacity, the Alameda County Waste Management Authority (WMA) has adopted the goals, objectives, and policies included herein to guide decision-making and programs.

The CoIWMP, specifically the Countywide Element described below, is the primary tool to design programs that are countywide in scope, and that complement and support Alameda County jurisdictions' individual programs. The WMA's annual budget will implement the Countywide Element to ensure the goals, objectives, and policies are not just words on a page but are implemented on a practical level each year.

This chapter includes:

- Legal requirements for the CoIWMP;
- Description of the components of the CoIWMP; and
- List of chapters and a summary of their contents.

LEGAL REQUIREMENTS

The California Integrated Waste Management Act of 1989 (AB 939) required all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandated the 50 percent diversion requirement be achieved every year. The California Public Resources Code, beginning at Section 41750, describes the scope and requirements of a CoIWMP.

The WMA is a public agency formed in 1976 by a Joint Exercise of Powers Agreement (JPA) among the County of Alameda, each of the 14 cities within the county, and two sanitary districts that provide refuse and recycling collection services. These entities are referred to as the WMA's member agencies. The WMA has a 17-member board composed of elected officials appointed by each member agency.

The WMA is responsible for preparation of the Alameda County Countywide Element of the CoIWMP as described further below. The WMA manages a long-range program for development of solid waste facilities and offers many projects in the areas of source reduction and recycling, market development, technical assistance, and public education. A primary source of funding is provided by per-ton disposal and waste import mitigation fees.

COMPONENTS OF A COIWMP

A CoIMWP document includes five components:

- Countywide Siting Element
- Summary Plan
- Source Reduction and Recycling Element
- Household Hazardous Waste Element
- Non-Disposal Facility Element

This document contains two components of the Alameda County CoIWMP: the Countywide Siting Element and Summary Plan, referred to collectively as the "Countywide Element." Each member agency is responsible for preparing and updating the Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and the Non-Disposal Facility Element (NDFE) for its jurisdiction. Three of WMA's member agencies – Castro Valley Sanitary District, Oro Loma Sanitary District, and the County of Alameda -- have a memorandum of understanding for joint preparation a SRRE and NDFE.

Prior to preparing the initial Countywide Element in 1996, the WMA conducted a countywide waste characterization analysis and funded preparation of the SRREs and HHWEs for 15 member agencies. The WMA also provided a model NDFE for use by each agency. However, these elements are adopted by the local governing board or city council, not by the WMA. The WMA is only responsible for updating and adopting the Countywide Element.

Countywide Siting Element

This component of the CoIWMP demonstrates the ability to provide 15 years of permitted disposal capacity for all jurisdictions within the county. The Countywide Siting Element assists local governments and private industry in planning for integrated waste management and the siting of solid waste disposal facilities. The siting criteria and relevant siting related objectives and policies included in this element guide the selection of new disposal facilities and the expansion of current facilities.

The statutory requirement for the preparation of a Countywide Siting Element is set forth in California Public Resources Code Section 41700 et seq.

Summary Plan

The Summary Plan provides an overview of significant waste management issues in the county, along with specific steps to be taken independently and in concert with member agencies within their boundaries. The Summary Plan includes goals, objectives, and policies; a summary of waste management issues identified in the incorporated and unincorporated areas of the county; a summary of waste management programs and infrastructure; and existing and proposed solid waste facilities identified in the SRREs, HHWEs, and NDFEs.

Source Reduction and Recycling Element (SRRE)

SRREs are the responsibility of local jurisdictions and establish the basic strategy for management of solid waste generated within its borders, with emphasis on implementation of source reduction, recycling, and composting programs. The SRRE identifies the amount of landfill and/or transformation capacity necessary to dispose of solid waste that cannot be reduced at the source, recycled, or composted.

Household Hazardous Waste Element (HHWE)

The member agencies of the WMA adopted a single Countywide Household Hazardous Waste Plan in 1995 that guides how to safely collect and dispose of household hazardous wastes generated by its residents. It includes a program description, funding, implementation strategy and schedule, and education and public information strategy.

Non-Disposal Facility Element (NDFE)

The NDFE identifies CalRecycle-permitted "non-disposal" facilities (NDFs) used by a jurisdiction to help reach its diversion mandates. NDFs are primarily materials recovery facilities (MRFs), compost facilities, and transfer stations. A jurisdiction's NDFE may also discuss recycling centers, drop-off centers, and HHW facilities. NDFEs are described more fully in Chapter 3.

STRUCTURE OF COUNTYWIDE ELEMENT

The Countywide Element consists of seven chapters and appendices. This document fulfills the requirements and legal mandate of AB 939.

Chapter 1	**Introduction** Summarizes and outlines the purpose, legal requirements, and structure of the CoIWMP.
Chapter 2	**Countywide Issues** Discusses the critical challenges facing Alameda County, including recyclables markets, organics capacity and contamination, roles in response to State legislation, connection between waste reduction and climate, alignment of public concerns and WMA priorities, and transition to closed loop systems.
Chapter 3	**Solid Waste Management System** Describes the county's solid waste management system, including key organizations and roles, facilities (landfills, transfer stations, and recovery facilities), jurisdiction collection and processing programs, and the countywide Household Hazardous Waste program.
Chapter 4	**Countywide Needs** Demonstrates legally required minimum 15-year landfill capacity, estimates remaining landfill capacity and life, and discusses organics capacity.
Chapter 5	**Goals, Objectives, and Policies** Establishes goals, objectives, and policies to guide WMA decisions, programs, and annual budget.
Chapter 6	**Siting Criteria and Conformance Procedures** Includes a set of criteria for siting of solid waste disposal facilities in Alameda County. It discusses a conformance procedure for solid waste facilities, and an amendment process for updates to the Countywide Facilities Map and Facility Description.
Chapter 7	**Framework for Implementation** Outlines the processes by which the WMA will implement the goals, objectives, and policies in the Countywide Element. Summarizes WMA programs; indexes programs in the local SRREs; and addresses funding mechanisms to fulfill the Countywide Element.

Appendices

Appendix A: Countywide Description

Appendix B: Overview of Methodologies

Appendix C: Description of Non-Disposal Facilities in Alameda County

Appendix D: Alameda County Waste Management Authority Joint Powers Agreement (link)

Appendix E: Alameda County Waste Reduction and Recycling Act of 1990 (“Measure D”) (link)

Appendix F: Glossary of Terms

2. COUNTYWIDE ISSUES

This section provides an overview of the countywide solid waste-related issues that Alameda County is currently facing, or are likely to arise, over the course of the planning period. These issues, in conjunction with the solid waste system and countywide needs discussed in Chapters 3 and 4, guide the WMA goals and policies presented in Chapter 5.

Six issues are discussed:

- Recyclables markets
- Organics processing capacity and contamination
- Collaboration and roles in response to State mandates
- Climate and waste reduction
- Alignment of public interests and WMA priorities
- Transition to closed loop systems

BACKGROUND

In the 30 years since the passage of AB 939, the landscape of solid waste and recycling programs has evolved greatly. Residents and businesses in Alameda County enjoy convenient access to a range of recycling and compost services. Despite this access, however, new complications have arisen. State legislation, international markets, manufacturing changes, technology, packaging redesign, climate crisis, marine debris, and more have put stress on our solid waste and recycling programs in ways that were not envisioned decades ago.

In 1990, the central goal of waste management in Alameda County was creating infrastructure and programs for landfill diversion and planning for adequate landfill capacity. Now, a better understanding of the lifecycle impacts of products has led to greater acceptance that upstream programs to reduce consumption are just as, if not more, important as planning for diversion and disposal. These programs ensure adequate landfill capacity and at the same time reduce environmental impacts, including pollution and greenhouse gas (GHG) emissions. They also provide a more resilient approach in the face of unknown recycling markets.

The WMA has set goals to ensure that the county's infrastructure and programs can respond to current challenges, provide cost effective services, take advantage of synergies, and produce the best environmental outcomes possible.

1. RESPONDING TO MARKET UNCERTAINTIES FOR RECYCLABLE COMMODITIES

Materials diverted from the waste stream must be put to good use. This fundamental principle is critical for local agencies that are committing public monies for current and future recycling programs, and to realize the environmental benefits of recycling. There are two interrelated issues that threaten use of our recycling commodities: challenges due to mixed materials and contamination in the recycling stream, and market uncertainty.

Mixed Materials and Contamination

The composition of recyclables continues to shift with societal and commodity changes, such as the "Amazon effect" (cardboard and non-recyclable plastic mailers), less newsprint, thinner plastic bottles, and common use of new types of materials. With the constant evolution of packaging, the volume of packaging has increased along

with the composition of materials used in packaging. Modern packaging often includes a mix of materials that are harder to separate, and more expensive and complicated to process, and that are increasing in quantity in curbside recycling.

Growing consumer awareness of waste management issues, and a desire to do the right thing, leads to confusion and an abundance of information from many sources on "what goes where." Simultaneously, the list of items that can and cannot be recycled is constantly changing due to technological advancements and market price fluctuations. It is also a local issue, as what is recycled in one city may be different from another city, even within Alameda County.

The lack of clarity in labeling and misleading environmental claims, or "greenwashing," leads to wish-cycling: tossing items in the recycling or organics bins in the hope that they are recyclable or compostable, or when one thinks that they can or should be recyclable or compostable. Even when well-intentioned this behavior can lead to contaminating tons of recyclable and compostable materials, causing more material to be sent to landfills instead of being recycled or composted.

Market Uncertainty

Alameda County, like much of the United States and other parts of the world, had relied on China as an export destination for mixed paper (such as junk mail, office paper, newsprint, and cereal boxes) and mixed plastics. Due to concerns about contamination, and to shut down older polluting mills, China instituted policies that effectively closed the doors on most imported mixed recyclables, impacting local and regional recycling processes in the U.S. While other countries, primarily in Southeast Asia, have absorbed processing volumes from Alameda County, the economics of recycling remain depressed, and uncertainty remains as those countries also adopt new standards or encounter issues with unsustainably high incoming volumes.

Locally, most processors have responded with a combination of steps, such as adding labor and slowing sort lines to remove more contaminants, implementing new technology, finding new markets, and sending residuals for additional processing. Cities and their service providers have also made a push for better sorting by residents and businesses. These steps have generally added cost at a time when revenues for materials have plummeted from previous levels.

Development of new domestic processing capacity and markets is urgently needed. While market development programs can be established at the local level, a comprehensive effort will require new state and federal legislation and significant capital investment. Fixing the problem of improper sorting by customers will remain a priority.

Applicable goals:

- **GOAL 1: DISPOSAL CAPACITY.** Maintain Adequate Disposal Capacity and Minimize Landfill Impacts.
- **GOAL 2: RESPONSIBLE INFRASTRUCTURE.** Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.
- **GOAL 3: MATERIALS MANAGEMENT.** Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.
- **GOAL 4: PUBLIC ENGAGEMENT**. Inform and Engage the Public in Waste Reduction Activities.
- **GOAL 5: REGIONAL COLLABORATION**. Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.

2. ADDRESSING PROCESSING CAPACITY AND PRODUCT QUALITY OF ORGANICS

Similar to recycling, organic materials must be put to good use to maximize benefits. Organic materials decomposing in landfills release methane, a powerful and short-lived climate pollutant. Diverting these materials to composting facilities can reduce GHGs, increase landfill capacity, and produce a valuable commodity: compost. The importance of diverting organics from landfills was the main driver of the passage in 2016 of Senate Bill (SB) 1383: The Short-Lived Climate Pollutants Reduction Act, which requires both diversion of organics and procurement of processed organic materials by cities. However, complications with maintaining viable organics markets (based on sufficient processing capacity, demand, and quality of product) must be addressed in order to successfully divert organics from landfills and for cities to comply with the requirements of SB 1383.

Processing Capacity

The regional organics management system appears adequate to handle the current flow of organic materials (see Chapter 4: Countywide Needs). As more organic waste is diverted from landfills, however, the number of facilities needed to handle and process this material will increase. This issue has become more important with the passage of SB 1383, which requires approximately 100 new facilities statewide to process the amount of organic material currently going to landfills. While new facilities will be necessary regionally and statewide, stringent facility siting and operating requirements as well as community opposition may make construction of such facilities difficult. Together, these factors will increase the cost of processing, possibly pushing it higher relative to the cost of landfilling organic materials. A focus on source reduction, which has superior benefits to the environment and climate, will help decrease the demand for capacity.

Product Quality and Contamination

Poor quality compost contains a number of problematic materials, such as glass, plastic, or toxic chemicals. Such contamination is introduced into the compost systems either through curbside organics collections or centralized sources, such as distribution centers that haul materials directly to facilities. In both residential and commercial curbside programs, people mistakenly throw contaminating materials into bins designated for compostables, including bottles, cans, non-compostable or chemically treated food packaging, and garden equipment. Even if materials are properly sorted inside a residence or business, contamination at the curbside may still occur due to people simply using the bins incorrectly.

Once unsuitable items enter the compost stream, there are few effective options in place to remove them. For example, glass and plastic mixed with organic materials will be shredded during processing and nearly impossible to separate. Compost contaminated with these materials is less usable and increases the spread of litter throughout the urban and rural landscapes and waterways. In order to meet SB 1383's intent, the compost must be used; and low quality compost is less useful than high quality compost. Solutions, such as equipment upgrades can help, but are expensive.

Procurement Requirements

SB 1383 requires jurisdictions to procure organic materials, including compost, mulch, electricity from bio-gas, and renewable natural gas. Since purchases will be required by law, market forces incentivizing higher quality product may be disrupted. In an attempt to comply with the law in a budget-conscious way, low-quality compost may be incentivized, thereby exacerbating the problem of environmental litter.

Applicable goals:

- **GOAL 1: DISPOSAL CAPACITY.** Maintain Adequate Disposal Capacity and Minimize Landfill Impacts.
- **GOAL 2: RESPONSIBLE INFRASTRUCTURE.** Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.
- **GOAL 3: MATERIALS MANAGEMENT.** Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.
- **GOAL 4: PUBLIC ENGAGEMENT**. Inform and Engage the Public in Waste Reduction Activities.
- **GOAL 5: REGIONAL COLLABORATION**. Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.

3. COLLABORATING AND DEFINING ROLES IN RESPONSE TO STATE MANDATES

The State of California has enacted several significant laws that affect the member agencies and the WMA:

- **SB 1383**, the 2016 Short-Lived Climate Pollutant Act discussed above, establishes targets to achieve 75 percent waste reduction in organics landfilled by 2025, and further requires that currently disposed edible food is recovered for human consumption. Jurisdictions are responsible for enforcing the law, including the provision of collection service to organics generating homes and businesses, proper use of bins, meeting contamination thresholds, diversion of edible food to food rescue programs, and procurement of organics.
- **AB 341**, the 2012 Mandatory Commercial Recycling Law, requires businesses with four or more cubic yards of weekly garbage and multifamily properties with five or more units to arrange for recycling service. Jurisdictions are required to implement a commercial recycling program that includes education of, outreach to, and monitoring of businesses within their jurisdiction.
- **AB 1826**, the 2014 Mandatory Commercial Organics Recycling Law, requires businesses and multifamily properties to recycle their organic waste. As of 2019, businesses with four or more cubic yards of total weekly collection service are covered by the law and, if CalRecycle determines that statewide disposal of organics has not been reduced by 50 percent, the threshold could go down to two or more cubic yards of total weekly collection service. Jurisdictions are required to implement a commercial organics recycling program that includes education of, outreach to, and monitoring of businesses.

Member agencies typically look to the WMA for assistance in understanding, implementing, and complying with State mandates. This may result in the creation of model ordinance language or enforcement mechanisms. As a regional agency, consistency across the county has benefits to the public, waste haulers, businesses, and other groups who do not need to learn separate laws or procedures for each city. It also provides the opportunity for member agencies to collaborate on shared solutions. The WMA has the power to advocate for or against, and to comment on, legislation that may affect the county. However, the response of the WMA to State laws will vary based on numerous factors, including funding, resources, and expertise.

The most pressing state requirements facing member agencies in the near term are coming from SB 1383, which adds significant and potentially expensive responsibilities to cities. The system of enforcement laid out in the regulations is cumbersome and costly. Inspections, outreach and education, notifications to violators, enforcement, route reviews, recovery of edible food, and reporting are staff-intensive. Some of these responsibilities are entirely new to member agencies, such as facilitating recovery of edible food.

The legislation prohibits the State from funding any of the provisions of SB 1383, directing jurisdictions to cover costs through their solid waste franchises and rates. Each member agency therefore must revisit existing contracts, renegotiate services and terms, and almost certainly increase rates charged to households and businesses.

Finding the best role for the WMA, in the specific context of SB 1383, is important. While existing programs such as Mandatory Recycling may meet some of the requirements, other requirements are not currently addressed by any WMA programs. Certain activities will naturally be undertaken on a countywide level—for example, gathering information regarding food donation options—while other responsibilities are less clearly assigned. Given expense, expertise, roles, funding sources, and similar or competing responsibilities, other obligations will need to be delegated between the WMA and the member agencies.

Applicable goals:

- **GOAL 5: REGIONAL COLLABORATION**. Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.
- **GOAL 6: FUNDING.** Manage Facilities, and Revenues and Expenditures to Implement Countywide Priority Programs and to Achieve the Goals Outlined in the CoIWMP.

4. CONNECTING CLIMATE IMPACTS AND WASTE REDUCTION

Consumption behavior, including choices about how people buy, use, and dispose of materials, makes a significant difference in the amount of waste generated and managed, as well as the GHG emissions associated with these same materials. In Alameda County, about 400,000 metric tons of carbon dioxide equivalent (CO2e) is emitted in the form of methane from organic materials disposed in landfills and 10 million metric tons CO2e are from the production of goods and food consumed by Alameda County residents.

Consumption

The manufacture, distribution, and use of the goods and food, as well as management of the resulting waste, all require energy. This energy mostly comes from fossil fuels, which are the largest global source of heat-trapping GHGs. In addition, decomposing waste that is disposed of in landfills results in the release of both methane and carbon dioxide, which contribute to climate change. The amount of production and landfill methane emissions differ by material, which means the composition of our waste stream matters more than total tonnage. By focusing on inherent material attributes and their industrial, economic, and biological processes—in other words, "materiality" of the item—the link between waste reduction and climate change becomes more apparent.

Fortunately, a number of solutions contribute to both waste reduction and climate change objectives. By connecting the WMA goals to the most urgent environmental issue of our time, programs can reach more people and become more effective. For example, a resident that is very concerned about climate change can take action through their purchasing and disposal choices. Food (a priority even by traditional weight-based goals) also has a very high impact on climate throughout its lifecycle. Programs to reduce food waste in landfills can increase landfill capacity, reduce methane from decomposition, and, in the case of a waste prevention program, decrease the emissions resulting from production and transportation.

Additionally, finished compost or mulch has emerged as a promising carbon sequestration tool on a large scale. Carbon farming, a practice in which compost is applied to the soil to build soil and increase plants' ability to sequester carbon, can simultaneously support the diversion of waste, sustain the compost market, and directly benefit the climate.

Built Environment

The materiality approach also applies to the built environment, another WMA focus area. The built environment accounts for nearly half of the United States' total GHG emissions, through the combination of both operational emissions from energy usage and "embodied" emissions related to building materials. Embodied emissions are the sum impact of all the GHG emissions attributed to the materials throughout their lifecycle (extracting from the ground, manufacturing, construction, maintenance, and end of life/disposal). Considering lifecycle impacts of materials used in buildings and infrastructure can lead to more material efficient design, which eventually leads to less material to divert or dispose at end-of-life.

Although climate is not the primary driver in WMA programs, it can be used as a tipping point when choosing between different waste reduction strategies. WMA actions to reduce waste can be designed to directly deliver climate benefits, allowing the WMA to demonstrate the role of the material sector in solving the climate problem. By targeting materials with the highest production emissions *and* reduction opportunities, and promoting materials management practices that increase climate resilience, the WMA can develop the most effective strategies in support of its materials management goals.

Applicable goals:

- **GOAL 2: RESPONSIBLE INFRASTRUCTURE.** Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.
- **GOAL 3: MATERIALS MANAGEMENT.** Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.

5. ALIGNING PUBLIC INTERESTS AND WMA PRIORITIES

As a public agency made up of cities, a county, and sanitary districts, the WMA must respond to public interests. These often, but not always, line up with WMA priorities, funding, and larger industry trends. Alternatively, the public, member agencies, and the WMA may all have a common goal, but each entity's approach to the solution may be different. A current example of this is how to decrease, and ultimately eliminate, single-use food ware.

The use of disposable food ware and packaging, including plates, cutlery, cups, lids, straws, "clamshells," and other containers, has grown exponentially over the past few decades. These products have significant environmental impacts, including environmental contamination; consumption of energy, water, and fossil fuels; GHG emissions; litter on streets and in waterways; and increased litter clean-up and discard management costs. Because the environmental costs of these products is largely hidden from business operators and consumers, little attention is paid to the quantity of packaging consumed, and convenience-minded consumers commonly adopt wasteful consumption habits.

Community interest in reducing marine litter, combined with bans on single-use plastics in some cities and countries, have created momentum to change the way we consume food service packaging. Although plastic packaging is not the largest contributor to solid waste tonnage or GHG emissions, it connects to other priorities of the agency, such as source reduction and contamination minimization in recycling and composting streams.

The primary objective for the WMA, however, is not to switch from one single-use item to another that may be considered "less bad," or "friendlier to the environment," such as replacing plastic food ware with compostable fiber. Such a switch will not reduce consumption. Current "compostable" food packaging ends up as

contamination in organics, and fuels consumer confusion about what goes where.

In a scenario such as this, the WMA needs to have high confidence that it will be successful in achieving results consistent with its own priorities, and minimize unintended consequences, before moving forward with a mandatory ordinance advocated for by others. For a reusable food ware ordinance, the goal is to drive reduced consumption of single-use food ware. But the infrastructure to support mass-conversion to reusable food ware for all applications—dishwashing capacity, availability, and usability/convenience of reusable containers for to-go customers—is still nascent.

In this instance, WMA staff will partner with member agencies and businesses to initiate pilot projects that will help evaluate different approaches and better learn what solutions are most effective for different types of businesses and circumstances. These early projects will also help develop the reuse infrastructure in the county, so if an ordinance is implemented later, the residents and businesses will be better equipped to participate and comply with a law that reduces total food ware, instead of a simple switch from plastic to fiber.

Single use food ware is just one example of a topic that captures the public's interest. The discussion above illuminates the approach the WMA will take, with the key insight being how to approach a problem that responds to external priorities and pressure, while remaining consistent with the priorities contained in this document.

Applicable goals:

- **GOAL 3: MATERIALS MANAGEMENT.** Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.
- **GOAL 4: PUBLIC ENGAGEMENT**. Inform and Engage the Public in Waste Reduction Activities.
- **GOAL 5: REGIONAL COLLABORATION**. Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.
- **GOAL 6: FUNDING.** Manage Facilities, and Revenues and Expenditures to Implement Countywide Priority Programs and to Achieve the Goals Outlined in the CoIWMP.

6. FACILITATING THE TRANSITION TO CLOSED LOOP SYSTEMS

The regional waste system in Alameda County is much more than recycling facilities and garbage collection services. It includes the entire lifecycle of products that residents and businesses consume, from production to end of life.

Given market and contamination challenges, collection does not equal recycling. Even more importantly, true recycling involves "closing the loop," with positive impacts at each stage: product design to maximize material recovery and reuse; greatest use of recycled content in manufacturing; consumer choices and purchasing decisions to favor high recycled-content products; proper sorting of materials for collection; and processing that provides quality recovered material for manufacturing. Considering each of these stages on its own in a linear manner, in comparison to a comprehensive lifecycle approach, often leads to decisions with unintended outcomes, such as materials with high recycled content that are energy intensive to manufacture.

The majority of environmental impacts take place before a material is discarded, during the extraction, processing, design, manufacturing, and transportation stages. Focusing on disposal misses the opportunity to reduce significant impacts earlier in the process. The amount of material used, and the type of material, are often more important considerations than in which bin it is put at end-of-life.

The current waste management system is set up to facilitate the linear economy, catering to convenience, single-use, and discards. Frameworks such as Circular Economy or Sustainable Materials Management emphasize the shift from a "take-make-waste" linear economy to one that keeps materials circulating, through reuse and repurposing. The ultimate goal is for a product to have multiple lives, by contributing to natural cycles (composting) or industrial cycles (recycling, reuse, and re-manufacturing into new feedstocks) at the end of its useful life. An ideal materials system would be regenerative, naturally evolving to eliminate waste and benefit human health and the environment, through changes in materials and their uses. Structural changes, retooling, and rethinking the current approach are needed to help make this shift the rule rather than the exception.

As the economy transitions to a more closed-loop system, traditional waste management systems will need to transition as well. While landfill capacity will increase as disposal decreases, new facilities to collect, process, and reuse materials will be needed beyond the current recycling and organics infrastructure.

Applicable goals:

- **GOAL 2: RESPONSIBLE INFRASTRUCTURE.** Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.
- **GOAL 3: MATERIALS MANAGEMENT.** Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.
- **GOAL 6: FUNDING.** Manage Facilities, and Revenues and Expenditures to Implement Countywide Priority Programs and to Achieve the Goals Outlined in the CoIWMP.

3. SOLID WASTE MANAGEMENT SYSTEM

This section contains descriptions of key organizations that make up Alameda County's solid waste management system including their roles, facilities (landfills, transfer, and recovery facilities), jurisdiction collection and processing programs, and the countywide Household Hazardous Waste (HHW) program. It also describes the responsibility of participants and documents the flow of material throughout the system from collection to disposal or diversion.

BACKGROUND

The county's solid waste management system includes facilities and programs to collect and dispose of solid waste and to divert materials from landfills through source reduction, reuse, recycling, and composting. The system also includes the public, nonprofit organizations, private companies, and public agencies who produce waste, run diversion programs or processing facilities, move waste throughout the system, and operate landfills. An effective system helps the WMA to meet its goals by providing adequate capacity for recycling, organics, and disposal, developing successful programs to divert waste, and adhering to necessary laws and permitting requirements.

PARTICIPANTS

Public Agencies

Public agencies first became involved in waste management due to public concerns with the nuisances and health effects associated with solid waste collection and disposal. Initially, public agencies generally chose to regulate private firms versus providing the services and facilities themselves, though some public agencies did elect to operate collection and disposal facilities. However, as conditions changed, notably the loss of landfill space, other trends appeared, including in Alameda County:

- Public agencies started participating in long-term planning and program development, considering alternatives to landfilling.
- As it became clear that the scope of problems extended beyond city boundaries, county, regional, state, and federal agencies began to participate in planning, regulation, and program development.
- Public agencies began to see connections between waste management and other goals, such as resource conservation, methods of production, and greenhouse gas (GHG) reduction.

Local Government Agencies in Alameda County

The local agencies in Alameda County that are most active in waste management include the Alameda County Waste Management Authority (WMA), its member jurisdictions (the cities within Alameda County, along with the County, and two sanitary districts) and the Source Reduction & Recycling Board. The County of Alameda Department of Environmental Health is the Local Enforcement Agency (LEA) for all jurisdictions in Alameda County except the City of Berkeley. CalRecycle is the LEA for Berkeley. The LEAs' role in CoIWMP implementation and administration is shown in Table 3-1 and described below.

The Alameda County Waste Management Authority, the Source Reduction & Recycling Board, and the Energy Council Operating as one Agency – StopWaste

The WMA, Source Reduction & Recycling Board, and Energy Council are three separate organizations that function as one integrated agency collectively known as StopWaste. They share membership (most notably, elected officials from Alameda County jurisdictions), and have both overlapping and distinct responsibilities. In practice, the three organizations are integrated through a single budget and staff.

The WMA was established in 1976 to provide waste management planning and programs for Alameda County. The WMA's 17-member board is comprised of elected officials from each of the 14 city councils, the County Board of Supervisors, and two sanitary district boards. The WMA operates under a "Joint Exercise of Powers Agreement for Waste Management" (JPA) adopted by the member agencies. Initially, the JPA gave the WMA responsibility for the County Solid Waste Management Plan (CoSWMP). Later, it added the County Hazardous Waste Management Plan (CoHWMP) and, in 1990, the County Integrated Waste Management Plan (CoIWMP) and program development and planning to implement these plans.

In 1990, Alameda County voters approved the Alameda County Waste Reduction and Recycling Initiative and County Charter Amendment known as Measure D. Measure D created the Alameda County Source Reduction & Recycling Board to deliver programs that promote source reduction, recycled product procurement, market development, and grants to non-profit enterprises. The Recycling Board was established as a subsidiary body of the WMA. The 11-member Recycling Board is jointly appointed by the WMA (five members) and the County Board of Supervisors (six members) and operates pursuant to a Memorandum of Understanding (MOU) with the WMA.

The Energy Council was formed in 2013 to develop and implement programs and policies that reduce energy demand; increase energy efficiency; advance the use of clean, efficient, and renewable resources; and to help create climate resilient communities. The joint exercise of powers agreement establishing the Energy Council grants the entity greater flexibility to pursue these programs in areas that are not addressed in the CoIWMP. Its 15-member board is comprised of the same agencies that make up the WMA, with the exception of the two sanitary districts.

The WMA identifies desired countywide programs and facilities through the CoIWMP and the County Hazardous Waste Management Plan. The program development functions contained in the CoIWMP are largely implemented jointly by the WMA and the Recycling Board.

In addition, the WMA implements the following program components:

- Enforces CoIWMP siting criteria and siting related objectives and policies through a Conformance Process for every facility that requires a full Solid Waste Facility Permit (SWFP) from CalRecycle;
- Maintains WMA-owned property in the Altamont Hills;
- Implements and enforces WMA-adopted ordinances including, but not limited to, mandatory commercial recycling, reusable bag requirements, facility fee collection, and plant debris ban;
- Develops model programs and ordinances for use by member agencies;
- Coordinates with member agencies, especially concerning State mandates; and
- Provides funding and policy oversight for the County Household Hazardous Waste Collection Program.

The Recycling Board implements some programs jointly with the WMA. Programs are funded by the Recycling Board only to the extent to which the program activities fit the definition of eligible programs in the County Charter. The Recycling Board also administers pass through funding to member agencies, including direct payments to each municipality based on population, as well as funding for the County's environmentally preferable purchasing.

The Energy Council is funded by external grants and contracts rather than waste-related fees. It does not have any responsibilities or programs relating directly to waste reduction and diversion.

Table 3-1: Permitting Agencies

Level of Government	Agency	Permit and/or Approval
Local	Alameda County and City Planning Departments	CEQA, General Plan conformance, land use permits (conditional use, building, etc.), and any needed consistency determination from the Airport Land Use Commission
	Local Enforcement Agencies (LEAs) Alameda Co. Dept of Envtl. Health and CalRecycle	Solid Waste Facilities Permit
	WMA	Plan Conformance Determination
Regional	Bay Area Air Quality Management District	Permit to Operate
	Regional Water Quality Control Board	National Pollutant Discharge Elimination System Permit, Waste Discharge Requirements, 401 Certification
	Bay Conservation and Development Commission (BCDC)	BCDC Permit for projects within the Commission's jurisdiction
State	California Department of Resources Recycling and Recovery (CalRecycle)	Solid Waste Facility Permit, Facilities Permit Concurrence, Conformance Determination
	California Department of Fish and Game	Streambed Alteration Agreement, Endangered Species Review
Federal	U.S. Army Corps of Engineers	Wetlands Fill Permit (404 Permit), Navigable Waters Permit, National Environmental Policy Act (NEPA)
	U.S. Fish and Wildlife Services	Endangered Species Review, NEPA
	U.S. Environmental Protection Agency	Prevention of Significant Deterioration Permit, Subtitle D Regulations, NEPA

Table 3-2: CoIWMP Implementation and Administration

Function	Agency	Role
Planning	WMA	Responsible for the preparation, administration, policy-making, planning, and implementation of the CoIWMP Countywide Element.
	Cities	Responsible for the preparation, planning, administration, policy-making, and implementation of the SRREs, HHWEs, and NDFEs.
Budgeting	WMA	In conjunction with Recycling Board, responsible for regional programs.
	Alameda County, Cities, and Sanitary Districts	Responsible for financing local programs indicated in the SRREs.
Enforcement	LEA	Responsible for proper operation and closure of solid waste facilities and guaranteeing proper storage and transportation of solid waste. The Alameda County Department of Environmental Health is the LEA for most of Alameda County, with the exception of the City of Berkeley, for which CalRecycle has assumed LEA responsibility.
	Member Agencies	Enforce state local recycling and source reduction requirements, such as Construction and Demolition debris recycling, product bans, and green building codes.
	WMA	Enforce its ordinances, including mandatory recycling, plant debris landfill ban, reusable bag ordinance, and facility fee collection.
Program Implementation	WMA	Responsible for countywide programs in conjunction with the Recycling Board. Provides model ordinances, outreach, technical assistance, and other program elements for use by member agencies.
	Alameda County, Cities, and Sanitary Districts	Responsible for local programs as indicated in each jurisdiction's SRRE. Administer contracts for various solid waste, recycling, and composting services as well as direct services to their residents and businesses.
	Recycling Board	Provides funding directly to local jurisdictions in accordance with Measure D.

Local Enforcement Agencies

Local Enforcement Agencies (LEAs) are responsible for enforcing CalRecycle regulations for solid waste facilities. The key enforcement vehicle is the Solid Waste Facilities Permit (SWFP), which is approved by CalRecycle as required by the tiered permit structure. In addition to CalRecycle requirements, LEAs may incorporate the requirements of other permits, such as local land use permits, Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements, and the CoIWMP policies and facility conditions. The LEA enforces the SWFP through site inspections, monitoring, and a permit violation and correction process. CalRecycle monitors the LEA's performance for compliance with State regulations. LEA functions are funded through a separate per ton fee imposed at each solid waste facility.

Alameda County Department of Environmental Health is the LEA and is therefore responsible for enforcing solid waste management laws and regulations and for reviewing and issuing SWPs for facilities within the county. The only exception is the City of Berkeley, for which CalRecycle is the LEA.

Under separate divisions, the County Department of Environmental Health also oversees the enforcement of hazardous waste laws and regulations in the county (except for the City of Berkeley) and the operation of a countywide Household Hazardous Waste (HHW) program. CalRecycle oversees the enforcement of hazardous waste laws and regulations in Berkeley.

WMA Member Agencies

As WMA member agencies, each city in Alameda County, and the County for unincorporated areas, is responsible under the State Integrated Waste Management Act (also known as AB 939) for planning and implementing waste management and related programs at the local level. Pursuant to their land use powers, each agency also performs environmental review and issues land use permits for solid waste projects. Additionally, all member agencies provide solid waste collection and disposal services, as well as recycling and composting services. In Alameda County, all jurisdictions have franchise agreements and/or contracts with private haulers, processors, and landfill operators.

Castro Valley and Oro Loma sanitary districts have assumed responsibility for implementing AB 939 waste reduction programs in their jurisdictions. Their service areas are primarily in unincorporated Alameda County. Although the sanitary districts participate fully as WMA members, they do not have local land use powers.

WMA Advisory Bodies

The WMA seeks input on its planning and program activities from several advisory bodies, shown in Table 3-3.

Table 3-3: WMA Advisory Bodies

Board/Committee	Members	Role
Local Task Force (LTF)	The WMA has designated the Recycling Board as the LTF. The Recycling Board includes the following: an environmental organization representative, an environmental educator, a representative from the recycling materials processing industry, a representative from recycling program operations, a solid waste industry representative, and a source reduction specialist, as well as five representatives from the WMA.	Created pursuant to AB 939, this entity assists in the development of city and county Source Reduction and Recycling Elements (SRREs), Household Hazardous Waste Elements (HHWEs), and reviews the Countywide Element.
Recycling Board/Planning Committee (RB/PC)	Pursuant to Measure D is comprised of six Board of Supervisors appointees and five WMA Board members.	Approves the Recycling Board budget, and provides oversight of the grants-to-non-profits program and the five year audit required by Measure D. The Recycling Board serves as the WMA's advisory Planning Committee and as the Local Task Force.
Programs & Administration Committee (P&A)	Comprised of twelve members of the WMA Board.	Advises on WMA programmatic efforts and makes recommendations to the WMA Board on matters of human resources, employee benefit programs, the annual financial audit, and administrative policies and procedures.
Technical Advisory Committee (TAC)	Staff from each member agency	Shares information between member agencies and WMA staff on technical and other matters related to the coordination of WMA and member agency programs.

Facility Permitting Agencies

The most common facility permitting agencies are shown in Table 3-1. The permits required for a given facility depend on project-specific circumstances, particularly applicable environmental concerns. All proposed facilities require local land use approval by the city where the facility is located, or the County if located in unincorporated areas. Land use and appropriate California Environmental Quality Act (CEQA) approvals are required for projects prior to consideration of any needed conformance finding by the WMA.

Private Companies

Private firms have traditionally performed the majority of solid waste activities in Alameda County, including waste diversion programs and waste collection and disposal. All of the processing and disposal facilities in Alameda County are owned and operated by private entities, with the exception of the Berkeley Transfer Station, owned and operated by the City of Berkeley.

In addition to the large companies currently providing comprehensive waste management services in Alameda County, there are a substantial number of large and small firms and nonprofit organizations that provide waste diversion services. These include materials recovery facilities (MRFs), drop-off and buy-back centers, donated goods and resale merchandise stores, industries specializing in processing of secondary materials such as wood wastes, and entities that have become proficient in the use of secondary materials.

WASTE MANAGEMENT FACILITIES

The County's solid waste management system consists of an extensive system of facilities for waste diversion and disposal. As detailed in Chapter 4, these existing system components provide the minimum 15 years of landfill disposal capacity countywide required by State law.

Waste disposal consists of four basic elements: collection, transfer, processing (recycling and/or organics composting), and landfilling. Each element, as well as its related infrastructure, is detailed below. Figure 3-A shows the waste management facilities in or serving Alameda County.

Waste Collection

Local governments and the two sanitary districts are responsible for municipal solid waste (MSW) collection and disposal in Alameda County. Most residential and commercial/industrial collection is provided through individual franchise agreements and contracts between the provider and the local government or sanitary district. The flow of waste collection, disposal, and diversion in each jurisdiction is provided in tables 3-5, 3-8, and 3-9. An interactive map of the flow of materials can also be found online at www.StopWaste.org/materials-map. Appearing in order of population served, with the highest first, the providers are:

- **Waste Management of Alameda County (WMAC):** WMAC is the largest waste collector in Alameda County. WMAC has franchises with four cities (Albany, Emeryville, Hayward, and Oakland) and one sanitary district (Oro Loma) serving approximately 44 percent of the county by population. WMAC provides collection services for residential, commercial and industrial customers, as well as public facilities (i.e. parks, public buildings).
- **Republic Services:** The second largest hauler in Alameda County is Republic Services. Republic holds the collection franchises for the cities of Fremont, Newark, Piedmont, and Union City, representing approximately 22 percent of the county's population.
- **Alameda County Industries (ACI):** collects solid waste in the City of Alameda, the Castro Valley Sanitary District, and the portion of the City of San Leandro that is not within the Oro Loma Sanitary District. These service areas account for approximately 13 percent of the county's population.
- **City of Berkeley:** The City of Berkeley, which contains about seven percent of the county's total population, provides its own collection service and accepts self-haul at the Berkeley Transfer Station.
- **Livermore Sanitation Inc. (LSI):** The City of Livermore, which contains about five percent of the County's total population, contracts with Livermore Sanitation Inc. for the collection of refuse, recyclables, and compostables.

- **Pleasanton Garbage Service (PGS):** The City of Pleasanton, which contains about five percent of the county's total population, contracts for collection with the Pleasanton Garbage Service and accepts self-haul at the Pleasanton Transfer Station.
- **Amador Valley Industries (AVI):** The City of Dublin, which contains about four percent of the county's total population, contracts for collection with Amador Valley Industries, (AVI).

Most of the County's unincorporated residents are within either the Oro Loma Sanitary District or Castro Valley Sanitary District. These two districts franchise for waste collection. However, about one percent of the county's population is in unincorporated areas outside these two districts; including small areas surrounding cities in unincorporated communities such as Sunol, or in remote ranching and farming areas. Since the County of Alameda only franchises for a small part of the unincorporated area, residents and businesses in these areas generally self-haul or contract for collection service with the nearest provider.

Table 3-5 provides a more complete picture of local MSW collection activities, indicating the collection and disposal service provider for each jurisdiction and the term of each agreement.

Figure 3-A: Waste Management Facilities Serving Alameda County

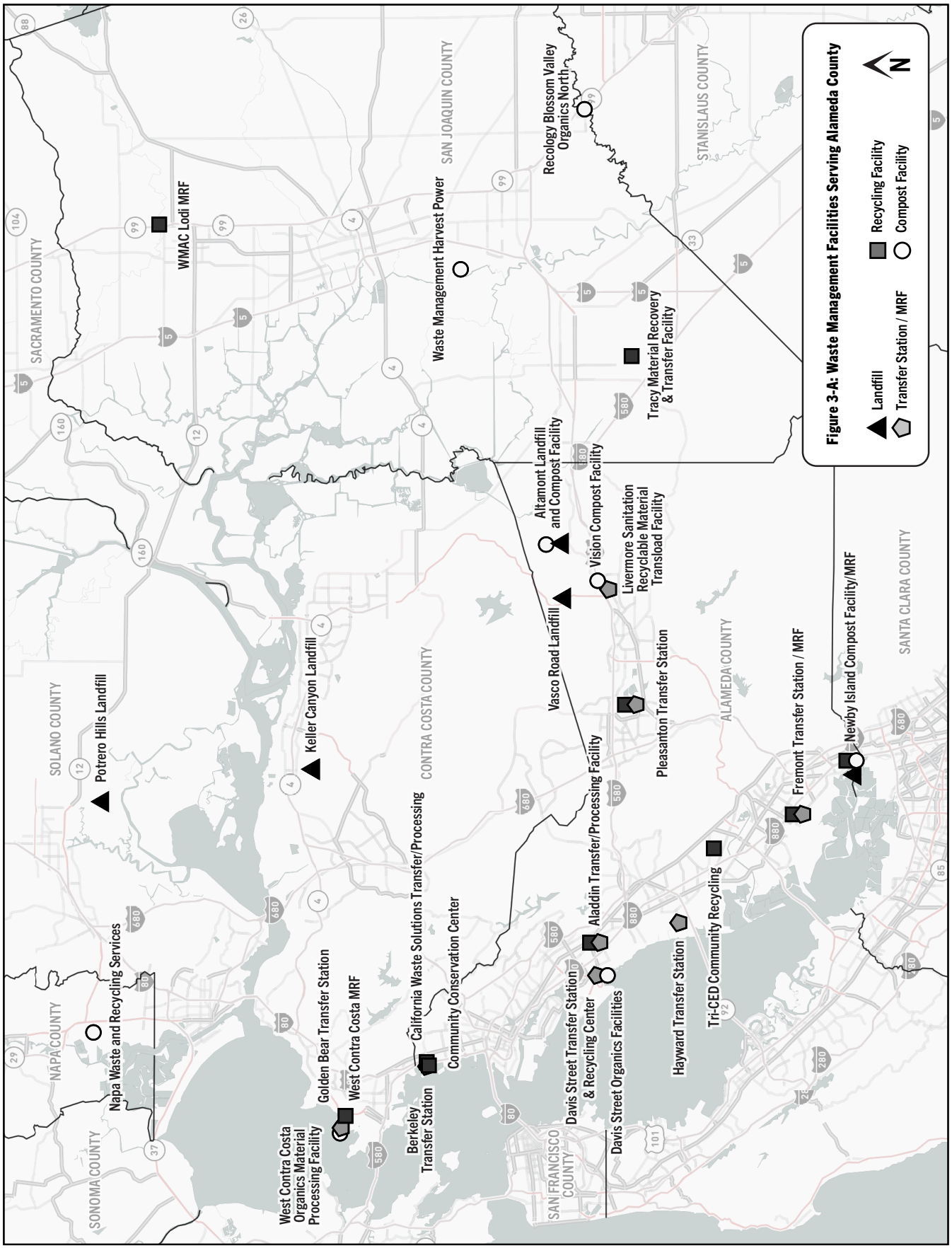


Table 3-5: Waste Service Provider Contract Information, 2018

Jurisdiction	Service Provider	Contract Expiration Date	Transfer Station	Landfill
Alameda	ACI	September 30, 2022	Davis Street	Altamont
Albany	WMAC	October 31, 2021	Davis Street	Altamont
Berkeley	City of Berkeley	June 30, 2020	City of Berkeley	Altamont
Castro Valley Sanitary District	ACI	June 30, 2029	ACI	Altamont
Dublin	AVI	June 30, 2020	N/A[1]	Altamont
Emeryville	WMAC	December 31, 2020	Davis Street	Altamont
Fremont	Republic Services	June 30, 2029	Fremont TS/BLT	Altamont
Hayward	WMAC	February 28, 2022	Davis Street	Altamont
Livermore	LSI	July 1, 2020	N/A[1]	Vasco Road
Newark	Republic Services	May 31, 2023	Fremont TS/BLT	Altamont
Oakland	WMAC	June 30, 2025	Davis Street	Altamont
Oro Loma Sanitary District	WMAC	August 31, 2024	Davis Street	Altamont
Piedmont	Republic Services	June 30, 2028	Golden Bear	Keller Canyon
Pleasanton	PGS	July 30, 2029	Pleasanton	Vasco Road
San Leandro	ACI	January 31, 2025	ACI	Vasco Road
Union City	Republic Services	June 30, 2025	Fremont TS/BLT	Altamont

Notes:

1. Waste is hauled directly to the landfill without passing through a transfer station.

Source: Measure D reports and Electronic Annual Reports, 2019.

Types of Waste Facilities

Non-Disposal Facilities (NDFs)

Non-disposal facilities (NDFs) are primarily transfer stations, MRFs, and compost facilities that require a solid waste facility permit (SWFP). They may also include recycling centers, drop-off centers, and HHW facilities. Jurisdictions are required to report diversion achieved through publicly sponsored programs and through NDFs. NDFs and landfills within Alameda County are shown in Figure 3-A. Detailed descriptions of NDFs within Alameda County can be found in Appendix C.

Transfer Station

Transfer stations are facilities that receive, handle, separate, convert, or otherwise process solid waste. Transfer stations, in comparison to landfills, are often located near population centers. Their function is to receive waste delivered by local solid waste trucks and by public self-haul vehicles. Such facilities typically transfer solid waste directly from one container to another or from one vehicle to another for transport, or temporarily store solid waste prior to final disposal at a CalRecycle-permitted landfill or transformation facility. There are several benefits to this transfer operation:

- Reduced transportation costs;
- Convenient local "disposal" sites for the public;
- An opportunity to inspect loads and remove hazardous materials;
- An opportunity to divert materials for recycling or reuse; and
- Reduced traffic and air pollution impacts from consolidating the hauling of waste into larger capacity and therefore fewer vehicles.

In addition, transfer stations are often logical sites to sort and/or process recyclable and compostable materials.

Materials Recovery Facility

More commonly called a MRF (pronounced "Murf"), this is an intermediate processing facility designed to remove recyclables and other valuable materials from the waste stream. MRFs typically separate comingled recyclables collected from residential or commercial curbside programs into separate streams that can be marketed to specific material processors. Some MRFs remove recyclable materials from unseparated municipal solid waste; these are known as "dirty MRFs."

Organics Processing Facility

An organics processing facility is an operation that handles compostable material. Handling of compostable materials results in controlled biological decomposition, and includes composting, screening, chipping/grinding/shredding, and storage activities related to the production of compost. CalRecycle establishes the regulations for composting, and the LEA enforces the regulations.

Table 3-6: Alameda County Non-Disposal Facilities with Full Solid Waste Facility Permits

Name	Address	Type	Owner/Operator
Aladdin Transfer/ Processing Facility	610 Aladdin Ave. San Leandro, CA 94577	Transfer Station, MRF	ACI
Altamont Compost Facility	10840 Altamont Pass Rd. Livermore, CA 94551	Compost Facility	WMAC
Berkeley Transfer Station	1201 Second St. Berkeley, CA 94710	Transfer Station	City of Berkeley
CWS Transfer/ Processing Facility (10th St.)	1820 10th St. Oakland, CA 94607	Transfer Station, MRF	California Waste Solutions
CWS Transfer/Processing Facility (Wood St.)	3300 Wood St. Oakland, CA 94607	Transfer Station, MRF	California Waste Solutions
Davis Street Transfer Station	2615 Davis St. San Leandro, CA 94577	Transfer Station, Compost Facility, MRF	WMAC
Fremont Transfer Station/MRF	41149 Boyce Rd. Fremont, CA 94538	Transfer Station, MRF	BLT
Hayward Transfer Station	3458 Enterprise Ave. Hayward, CA 94545	Transfer Station	Hayward Transfer Station, LLC
Livermore Sanitation Recyclable Material Transload Facility	7050 National Dr. Livermore, CA 94550	Transfer Station	LSI
Pleasanton Transfer Station	3110 Busch Rd. Pleasanton, CA 94566	Transfer Station	PGS
Vision Compost Facility	30 Greenville Rd. Livermore, CA 94550	Compost Facility	Tom DelConte and Roberto Aguirre

Notes:

1. Design capacity is the maximum amount of material that a facility could handle and/or store. Permitted capacity is how much a facility is allowed to handle/store based on their SWFP.

Source: Transfer Stations

Solid Waste Landfilling

Landfills are the most strictly regulated component in the waste management system. Multiple factors, including high landfill construction costs, stringent federal, state, and local standards, and frequent opposition from residents to proposed sites, have made landfill development an extremely difficult and time-consuming process. There are four categories of landfills:

- Class I: A facility that can accept all types of MSW, including putrescible waste (waste that can cause foul odors when decomposing), household waste, construction and demolition waste (C&D), household hazardous waste, special waste, and some industrial wastes.
- Class II: An un-lined landfill designed to accept putrescible and inert wastes.
- Class III: A scientifically engineered facility built into or on the ground that is designed to hold and isolate waste from the environment. Federal and state regulations strictly govern the location, design, operation, and closure of Class III landfills in order to protect human health and the environment.
- Class IV: Landfills that allow disposal of brush, C&D waste, and/or rubbish that are free of putrescible and household wastes.

Currently, there are two operating landfills in Alameda County: Altamont Landfill and Vasco Road Landfill. Each of these is privately owned and operated. In addition, the WMA has acquired property in the unincorporated county and adopted a Conceptual Plan and Environmental Impact Report for an Integrated Waste Management Facility in 1995 that includes, as one of its components, reserve landfill capacity. The WMA has decided not to move forward with any facility on the site at this time.

Some solid waste generated in Alameda County flows to out-of-county landfills. Potrero Hills Landfill is the largest recipient of Alameda County origin waste (130,000 tons in 2018). Landfills receiving over 5,000 tons of Alameda County origin waste in 2018 (in descending order) are: Monterey Peninsula Landfill, Keller Canyon Landfill, Recology Hay Road Landfill, Newby Island Sanitary Landfill, Fink Road Landfill, Redwood Landfill, John Smith Road Landfill, North County Landfill and Sacrament County Landfill (Kiefer). Destinations for all Alameda County solid waste for all years and all destinations can be found in the CalRecycle Disposal Reporting System.

A summary description of key operating characteristics of the two Alameda County disposal facilities is contained in Table 3-7. A map of the two East County landfills is contained in Figure 3-A. The bulk of waste is delivered to Alameda County landfills in transfer vehicles from the Davis Street, Berkeley, Fremont, and Pleasanton transfer stations. In addition, the Altamont Landfill receives direct haul by collection trucks from the City of Dublin. Vasco Road Landfill receives waste directly hauled by collection trucks from the City of Livermore. Vasco and Altamont landfills also receive self-haul deliveries from the public. Due to its more remote location, Altamont Landfill receives much less self-haul waste than Vasco Road Landfill.

The landfills in Alameda County also receive waste from out-of-county origins. Altamont had contracted with the City and County of San Francisco to accept franchised MSW, however, this agreement ended in 2015. San Francisco is still the largest non-Alameda County source of MSW to Altamont, though its tonnage disposed at Altamont has decreased 90 percent since its peak in 2000. From 2016 to 2018, out-of-county waste made up approximately 25 percent of total disposal.

Vasco Road accepts non-franchised C&D debris and non-hazardous waste that can pose special disposal problems (designated waste) and receives out-of-county disposal. The largest sources of out-of-county waste for Vasco Road are the City of San Ramon and the West Contra Costa Integrated Waste Management Authority. From 2016 to 2018, out-of-county waste made up approximately 22 percent of total disposal.

For additional information on landfill capacity, please see Chapter 4: Countywide Needs.

Table 3-7: Alameda County Landfills

Landfill Name	Owner/ Operator	LEA	Site Area (Acres)	Permitted Landfill Area (Acres)	State Classification[1]	Maximum Permitted Quantity[2]
Altamont	WMAC	County of Alameda Department of Environmental Health	2,170	480	II/III	11,150 TPD
Vasco Road	Republic Services	County of Alameda Department of Environmental Health	644	246	II/III	2,518 TPD

Notes:
1. State Water Resources Control Board Classification.
2. Based on full SWFP.

Sources: CalRecycle SWIS Database, 2020.

Altamont Landfill

Altamont Landfill (01-AA-0009) is located at 10840 Altamont Pass Road in unincorporated Alameda County on a 2,034 acre site, of which 480 acres are permitted for landfill. Landfill operations began in 1980. The Facility is owned and operated by WMAC, a subsidiary of Waste Management Incorporated (WMI).

In 1990, the landfill was designated as Class III and allowed to accept primarily MSW. However, design changes, including the addition of a composite clay and synthetic liner to a portion of the landfill, were made in 1993 in order to meet federal Subtitle D requirements. In 1994, this portion of the landfill was re-designated a Class II facility. In 2000, WM received a permit to expand the Altamont. The new landfill cell was opened in March 2019, providing additional disposal capacity.

Altamont's permit was last reviewed on December 28, 2015 and will be up for its 5-year review in 2020. Daily disposal at Altamont is limited to a maximum of 11,150 tons per day (TPD). Actual input averaged approximately 3,013 TPD.[1] Approximately 75 percent of this flow originates from Alameda County.

Through franchise and contractual agreements, Altamont currently receives MSW from 12 Alameda County jurisdictions (Alameda, Albany, Berkeley, Castro Valley, Dublin, Emeryville, Hayward, Fremont, Newark, Oakland, the Oro Loma Sanitary District, and Union City) as well as some out-of-county jurisdictions, as previously discussed. The cities of Fremont, Newark and Union City began directing waste from the Fremont Transfer Station/ MRF to Altamont in 2010.

Permitted materials for disposal at Altamont include agricultural, asbestos, ash, auto shredder, C&D waste, contaminated soil, industrial, inert waste, liquids, MSW, sewage sludge (dewatered), tires, treated wood waste, and high liquid content waste. In 2019, Altamont Landfill received an estimated 1.7 million tons of waste. Of this amount, approximately 1.1 million tons[2] represented waste disposal, including 961,203 tons of MSW. The

1 Based on Altamont's air-space utilization factor, the permitted 11,150 TPD is approximately 12,154 cubic yards per day (CYD) and input of 3,013 TPD is approximately 3,285 CYD.

2 Approximately 1,199,000 CY.

remainder were materials recovered for uses on site, such as C&D materials, clean and/or contaminated soils, and other approved alternative daily cover (ADC) materials.

As of 2018, the estimated remaining refuse capacity for the Altamont Landfill was 65.4 million cubic yards (60 million tons). The permitted capacity at Altamont is 87 million cubic yards. At the average rate of fill from 2014-2018, and adjusting for projections for waste declines through 2023 (held steady after 2023 due to uncertainty), the facility has more than 30 years of capacity remaining and an estimated closure date of 2049.

Vasco Road Landfill

Vasco Road Landfill (01-AA-0010) is located on 246 acres of a total 435-acre site at 4001 North Vasco Road, east side, approximately three miles north of Interstate 580, northeast of the City of Livermore, in unincorporated Alameda County. Landfill operations at the site began in 1963. Currently, Republic Services owns and operates Vasco Road Landfill. Vasco Road is a Class II/III designated facility.

The landfill currently accepts franchised MSW from the cities of Livermore, Pleasanton, and San Leandro in Alameda County, as well as San Ramon in Contra Costa County, and operates under a SWFP which allows a maximum of 2,518 TPD.[3] Vasco Road's last permit review occurred on May 9, 2017 and would be due for a 5-year permit review in 2022.

Vasco Road is permitted to receive the following types of waste: asbestos, ash, auto shredder, C&D, contaminated soils, dead animals, industrial, inert, MSW, sewage sludge, and tires. In 2018, Vasco Road received an estimated 684,596 tons of waste. Of this amount, the landfill received approximately 286,575 tons (1,500 TPD) of waste disposal,[4] including 251,273 tons of MSW, with the remainder materials used for alternative daily cover, third party recycling, special waste, and soils. In 2018, Vasco Road also received about 21,209 tons of recyclable materials (20 TPD). Approximately 79.4 percent of this flow is from Alameda County.

As of 2018, Vasco Road reported remaining capacity for about 6.0 million cubic yards (5.5 million tons) of waste. The estimated closure year for Vasco Road is 2035. Vasco Road Landfill's permitted capacity per its SWFP is 32.97 million cubic yards.

WMA Facility

In 1993 and 1994, the WMA acquired land suitable for development of a public multi-purpose waste management facility in the Altamont Hills. Depending upon need, the facility could include various diversion facilities in conjunction with a landfill with sufficient capacity to provide additional reserve disposal capacity.

A Program EIR for Landfill Acquisition of an 86-square-mile area in the Altamont Hills (Altamont Hills Landfill Acquisition EIR) was conducted in 1989. In 1994, the WMA approved an Integrated Waste Management Facility (IWMF) Conceptual Plan and EIR that called for five short-term activities including composting, co-composting, public recreation, public education, and habitat protection. The Plan also included long-term activities including reserve landfill capacity, and identified three potential landfill sites. The environmentally superior site, "Canyon B," contains 98 million cubic yards of landfill capacity. The WMA has determined not to proceed with permitting and development of a landfill at this time. The WMA will continue to hold the IWMF landfill site property as a potential reserve.

Currently the WMA continues habitat protection, cattle grazing, conservation easements, and wind energy leases as part of its stewardship of the land. The WMA has completed a Carbon Farm Plan for this property, and is

3 Based on Vasco Road's air-space utilization factor, the permitted 2,518 TPD is approximately 2,745 CYD.

4 Approximately 312,367 CY (1,635 CYD).

managing associated pilot applications of organics on portions of the property in conjunction with the Alameda County Resource Conservation District. The land also includes some telecommunications cell towers.

Exempt and Unpermitted Solid Waste Facilities

Present regulations require SWFPs for sanitary landfills, transfer stations, and any other processing facilities or MRFs that generate residual waste in the amount of 15 cubic yards or more per day. Facilities that does not fall into the above-mentioned categories are currently exempt from the SWFP requirement.

State regulations require that facilities located within the county that are exempt from a SWFP or have received an exclusion must be identified in the Siting Element with: 1) reason for exemption/exclusion; 2) amount and type of materials recovered/processed; and 3) operator/owner name.

As of 2018, the LEA reported no active exempt solid waste facilities within Alameda County.

Closed or Inactive Facilities

A list of closed and inactive facilities can be found on the Solid Waste Information System (SWIS) maintained by CalRecycle: https://www2.calrecycle.ca.gov/SWFacilities/Directory/

Inter-County Waste Export

While the majority of franchised waste generated within the county continues to be landfilled in Alameda County, one jurisdiction does export its waste. The City of Piedmont franchised waste is trucked to the Golden Bear Transfer Station and the West Contra Costa County Organics Processing Facility in Contra Costa County before being transferred to Keller Canyon Landfill.

Pursuant to WMA Resolution No. 33, 1989, Contra Costa County has guaranteed that capacity for 550,856 tons of Alameda County waste is available at Contra Costa County landfills at a cost not to exceed the 1989 disposal cost at Altamont Landfill, adjusted for inflation and government-mandated fees. Additionally, in emergency situations, reciprocal emergency disposal agreements with adjacent counties may be made, as allowed by the California Code of Regulations Title 14 Section 17909 for facility contingency plans.

Inter-County Waste Import

Each landfill and transfer station in Alameda County has a designated geographic wasteshed. The wasteshed for franchised waste is identified in Table 3-7. In addition, the Vasco Road Landfill wasteshed includes franchised and non-franchised (self-haul) MSW from anywhere in Alameda County and, since 1993, includes out-of-county C&D debris and contaminated soils. The Vasco Road wasteshed includes two Contra Costa County cities, San Ramon and Brentwood. The Altamont Landfill wasteshed includes franchised and non-franchised waste from anywhere in Alameda County and non-franchised wastes from San Francisco. It may also allow franchised waste from San Ramon.

Altamont may also accept minor amounts of out-of-county inert waste and special waste, consisting of 130,000 tons annually from San Francisco, and 75,000 tons from elsewhere out-of-county, decreasing to 25,000 tons after the 2000 Altamont expansion began. Altamont may also receive minor non-franchised deliveries from Alameda County and San Francisco, and up to 25,000 tons annually from Contra Costa County.

Contra Costa County and San Ramon

The CoIWMP provides for waste importation from Contra Costa County and the City of San Ramon. An agreement in 1994 provides for disposal of waste from San Ramon and Brentwood at Vasco Road Landfill. However, after April 1996, most wastes that were previously disposed of in Alameda County were disposed of at the Keller Canyon Landfill in Contra Costa County. Pursuant to the expansion approved in 2000, Altamont Landfill may enter into a contract to receive franchise waste generated in the City of San Ramon, subject to advance notification of the WMA, but such approval will have a condition that at a minimum requires San Ramon to demonstrate it is achieving a recycling rate at least equal to that achieved by the cities of Livermore and Pleasanton.

WASTE DIVERSION PROGRAMS

Residential Curbside Recycling Programs

All jurisdictions have weekly curbside recyclables service, with the exception of some portions of the unincorporated County, which have bi-weekly recycling service.

Table 3-8 provides an overview of the service provider, frequency, and method of collection for residential recycling programs in Alameda County as of 2018.

Organics Diversion Programs

All jurisdictions have organics diversion programs, which consist of residential plant debris (also referred to as “yard” or “green” waste) co-collected with food scraps. Table 3-9 summarizes organics diversion programs.

Table 3-8: Summary of Residential Recycling Programs, 2019

Jurisdiction	Service Provider(s)	Frequency	Container	Collection	Recycling Processor	Contract Expiration
Alameda	ACI	Weekly	32-, 64-, and 96-gallon	Single-stream	ACI Aladdin Transfer/ Processing	October 1, 2022
Albany	WMAC	Weekly	32-, 64-, and 96-gallon	Single-stream	ACI Aladdin Transfer/ Processing	October 31, 2021
Berkeley	Ecology Center	Weekly	64 gallon split carts	Dual-stream	Community Conservation Center	June 30, 2020
Castro Valley Sanitary District	ACI	Weekly	64- and 96-gallon	Single-stream	ACI Aladdin Transfer/ Processing	April 30, 2029
Dublin	AVI	Weekly	32- ,64-, and 96-gallon	Single-stream	Tracy Material Recovery and Transfer Facility	June 30, 2020
Emeryville	WMAC	Weekly	35-gallon	Single-stream	ACI Aladdin Transfer/ Processing	December 31, 2020
Fremont	Republic Services	Weekly	32-,64-, and 96-gallon	Single-stream	Republic Services Fremont TS/MRF	June 30, 2029
Hayward	Tri-CED (sub to WMAC)	Weekly	32- and 64-gallon	Single-stream	Tri-CED Community Recycling	February 28, 2022
Livermore	Livermore Sanitation Inc.	Weekly	20, 32, 64- and 96-gallon	Single-stream	ACI Aladdin Transfer/Processing	June 20, 2020
Newark	Republic Services	Weekly	64- and 96-gallon	Single-stream	Republic Services Fremont TS/MRF	May 31, 2023
Oakland	CWS	Weekly	20-, 32-, 64-, and 96-gallon	Single-stream	CWS CWS Transfer/Processing	June 30, 2035

Table 3-8: Summary of Residential Recycling Programs, 2019 (cont'd)

Jurisdiction	Service Provider(s)	Frequency	Container	Collection	Recycling Processor	Contract Expiration
Oro Loma Sanitary District[1]	WMAC	Bi-weekly	64- and 96-gallon	Single-stream	WMAC Lodi MRF	August 31, 2024
Piedmont	Republic Services	Weekly	35-gallons	Single-stream	Republic Services West Contra Costa MRF	June 30, 2028
Pleasanton	PGS	Weekly	35- and 90-gallon	Single-stream	PGS	January 1, 2029
San Leandro	ACI	Weekly	20-, 32-, 64-, and 96-gallon	Single-stream	ACI Aladdin Transfer/Processing	January 31, 2025
Union City	Tri-CED	Weekly	64-gallon	Single-stream	Tri-CED Community Recycling	June 30, 2025

Notes:

1. WMAC provides residential recycling through the Oro Loma Sanitary District for the unincorporated areas of the district (Areas L1 and L3), while TriCED provides services in the incorporated area of Hayward (Area L2).

Source: Measure D reports and rate sheets (WMA), 2019.

Table 3-9: Summary of Organics Diversion Programs, 2019

Jurisdiction	Service Provider	Frequency	Container	Organics Transfer Station	Organics Processor	Contract Expiration
Alameda	ACI	Weekly	32-, 64-, and 96-Gallon	ACI	Republic Services Newby Island MRF	October 1, 2022
Albany	WMAC	Weekly	32-, 64-, and 96-Gallon	Davis Street	WMAC Altamont CASP	October 31, 2021
Berkeley	City of Berkeley	Weekly	32-, 64-, and 96-gallon & 45 gallon paper bags	City of Berkeley	Recology Blossom Valley Organics	2024
Castro Valley Sanitary District	ACI	Weekly	32-, 64-, and 96-Gallon	ACI	Napa Waste and Recycling Services	April 30, 2029
Dublin	AVI	Weekly	32-, 64-, and 96-Gallon	Pleasanton	Waste Management Harvest Power	June 30, 2020
Emeryville	WMAC	Weekly	32-, 64-, and 96-Gallon	Davis Street	WMAC Altamont CASP	December 31, 2020
Fremont	Republic Services	Weekly	64- and 96-gallon	Fremont TS/MRF-BLT	Republic Services Newby Island MRF	June 30, 2029
Hayward	WMAC	Weekly	64- and 96-gallon	Davis Street	Recology Blossom Valley Organics	2022
Livermore	LSI	Weekly	95-gallon	Livermore	Recology Blossom Valley Organics	June 30, 2020
Newark	Republic Services	Weekly	64-gallon	None	Republic Services Newby Island MRF	May 31, 2023

Table 3-9: Summary of Organics Diversion Programs, 2019 (cont'd)

Jurisdiction	Service Provider	Frequency	Container	Organics Transfer Station	Organics Processor	Contract Expiration
Oakland	WMAC	Weekly	64-gallon	Davis Street	WMAC Altamont CASP	June 30, 2025
Oro Loma Sanitary District	WMAC	Weekly	32-, 64-, and 96-Gallon	Davis Street	WMAC Altamont CASP	August 31, 2024
Piedmont	Republic Services	Weekly	32-gallon	N/A	Republic Services West Contra Costa Organics Material Processing Facility	June 30, 2028
Pleasanton	PGS	Weekly	96-gallon	Pleasanton	Waste Management Harvest Power	January 1, 2029
San Leandro	ACI	Weekly	32-, 64-, and 96-gallon	ACI	Republic Services Newby Island MRF	January 31, 2025
Union City	Tri-CED (subcontract to Republic)	Weekly	96-gallon (add'l sizes upon request	N/A	Republic Services Newby Island MRF	June 30, 2025

Source: Measure D Reports and EARs, 2019.

Commercial Recycling Programs

A summary of commercial recycling arrangements for each jurisdiction is presented in Table 3-10.

In most jurisdictions, the franchised hauler also provides commercial recycling service. In Alameda County, franchised haulers generally retain the exclusive right to collect commercial recyclables from larger businesses, at a rate lower than the refuse rate. Some include recycling service as part of the refuse fee for the smaller commercial generators. However, several cities contract with private collection companies to pick up their recyclables from municipal facilities. Many commercial and industrial businesses in the county have their recyclables collected by private companies, or ship their recyclables to private recycling companies or processing facilities (e.g. paper companies or wood waste facilities). In addition, a robust infrastructure of hundreds of recycling and reuse businesses exists in Alameda County.

The WMA adopted the Mandatory Recycling Ordinance (MRO) in 2012, which requires businesses, institutions and multifamily properties with five or more units to sort their recyclables separate from waste. Multifamily property owners as well as businesses and institutions that generate food waste, such as restaurants and grocery stores, must also sort compostable materials separately from waste. These requirements are effective within participating areas of Alameda County. The MRO requires the recycling service to be sufficient to handle the amount of recyclable material and for the composting collection service to be sufficient to handle the amount of organic material generated at the location. This includes paper, cardboard, recyclable glass and metal food and beverage containers, and PET (#1) and HDPE (#2) plastic bottles, discarded food and compostable paper. The WMA provides technical assistance to support compliance with the ordinance as well as enforcement, as needed. Since the adoption of the MRO in Alameda County, the Staten has adopted several laws requiring recycling and composting statewide.

Alameda County Household Hazardous Waste Management Countywide Program

The Household Hazardous Waste (HHW) Program serves Alameda County residents and organizations and offers four permanent HHW collection facilities located in Oakland, Hayward, Livermore, and Fremont. The Fremont HHW facility is operated by BLT Enterprises, Inc. The County Department of Environmental Health operates the other three facilities. The program also puts on several one-day collection events per year in a number of other communities.

In 2018 over five million pounds of HHW were collected from residents and businesses in Alameda County. Over 75,000 households were served as well as over 1,020 small businesses, landlords, and organizations.

The program also offers countywide public education and information to increase awareness of toxic and other dangerous household chemicals, options for recycling or disposal, and the advantages of safe disposal practices.

The facilities are open weekly and, along with one-day collections, accept HHW on a drive-through “drop-off” basis. The program is publicized by the WMA. In addition, public education for hazardous waste minimization is provided at each facility and general program information is distributed at various events and schools.

The HHW program accepts most hazardous wastes generated by households, such as paints, household cleaners, garden pesticides and fertilizers, car fluids, batteries and various electronic devices. For the full list of accepted materials and collection sites, see www.StopWaste.Org/HHW. Similar wastes from qualifying businesses, landlords, and organizations are collected (by appointment only).

Table 3-10: Approaches to Providing Commercial Recycling, 2019

Jurisdiction	Number of Commercial Accounts	Commercial Refuse	Commercial Recycling
Alameda	1,040	Exclusive franchise	Exclusive franchise
Albany	272	Exclusive franchise	Exclusive franchise
Berkeley	2,461	Municipal collection Non-exclusive franchise for roll-off	Free recycling through City
Castro Valley Sanitary District	394	Exclusive franchise	Exclusive franchise Service offered through contractor
Dublin	501	Exclusive franchise	Exclusive franchise
Emeryville	297	Exclusive franchise	Exclusive franchise
Fremont	2,126	Exclusive franchise	Exclusive Franchise
Hayward	2,746	Exclusive franchise	Exclusive Franchise
Livermore	1,462	Exclusive franchise	Exclusive franchise
Newark	499	Exclusive franchise	Exclusive Franchise
Oakland	5,480	Exclusive franchise	Open competition Small business recycling through contractor
Oro Loma Sanitary District	945	Exclusive franchise	Exclusive franchise
Piedmont	15	Exclusive franchise	Exclusive franchise
Pleasanton	1,007	Exclusive franchise	Exclusive franchise
San Leandro	1,385	Exclusive franchise	Exclusive franchise
Union City	595	Exclusive franchise	Exclusive franchise

Source: Measure D Reports and Electronic Annual Reports, 2019. City of Oakland numbers provided by WMA.

Approximately 80 percent of all materials received at the HHW facilities are recycled or placed in "Swap Sheds" for resident use. Electronic items, paints, lamps, batteries, motor oil, and propane comprise the majority of materials collected from the program that are sent to off-site re-processors, remanufacturers, and refiners to be recycled. Paint is recycled through the statewide Paint Care Program.

Responsible Agencies

With funding and policy direction provided by the WMA, three of the four facilities are operated by the Alameda County Department of Environmental Health with the fourth facility privately operated by BLT Enterprises, Inc. under a contract with the City of Fremont. The facilities are monitored by appropriate local agencies such as the local fire departments, the County Department of Environmental Health, and the Cal EPA Department of Toxic Substances Control. The Department of Environmental Health tracks materials received by material type and city of origin and provides this information to the WMA and local jurisdictions for evaluation purposes.

Load Checking Programs

Load checking at a solid waste management facility is a process by which selected incoming loads of solid wastes are checked for the presence of HHW in order to prevent the disposal of HHW in solid waste landfills. Title 23 of the California Code of Regulations requires all solid waste management facilities to have a load checking program. Load checking occurs at all transfer stations and landfills in Alameda County and is performed by facility operators. Workers are trained to detect and remove HHW and other hazardous wastes from the waste stream. The landfill operators use load checking not only to retrieve inappropriately disposed of wastes, but also to identify the origin and notify the generator of proper disposal procedures for HHW. The HHW collected through load checking is directed to a HHW facility for proper recycling or disposal.

Recycling Market Development Zone (RMDZ)

The Recycling Market Development Zone (RMDZ) program, administered by CalRecycle, provides low interest loans and technical assistance to firms that use recycled materials to make new products or that prevent or reduce waste as part of the manufacturing process. To qualify for assistance, the facilities must be located within a CalRecycle-designated RMDZ and use postconsumer or secondary recovered waste feedstock generated in California.

The Oakland/Berkeley RMDZ encompasses West Berkeley between Interstate 80, San Pablo Avenue, the Oakland-Emeryville border, and the Albany border. In Oakland, the zone includes the central business district, major industrial areas in West Oakland and the Coliseum area, the Port of Oakland's facilities, and the Oakland International Airport.

4. COUNTYWIDE NEEDS

This section demonstrates the legally required 15-year minimum landfill capacity, the estimated landfill capacity and life, and the estimated organics processing capacity.

Under state law, the CoIWMP must demonstrate a minimum 15 years of landfill capacity for the county. Additionally, SB 1383 (2016) mandates a 75 percent reduction in organics disposal by 2025.

COUNTYWIDE WASTE DISPOSAL

Waste Diversion Needs

The Goal

Alameda County's overarching goal is to move in the direction of landfill obsolescence (Chapter 5, Goal 1, Objective 3). In order to achieve that goal, the WMA will focus both upstream (producing less waste in the first place) and downstream (diversion from landfill through reuse, recycling, and composting). The AB 939 goal of 50 percent waste diversion by 2000 is the legal *minimum* that applies to individual jurisdictions. As shown in Table 4-3, all Alameda County jurisdictions have met or surpassed this goal, despite population and economic growth in the past 30 years. Having achieved the 50 percent goal, the county must now work towards achieving the statewide goals of 75 percent waste diversion from landfills compared to 1990[1] and a 75 percent reduction in organics from landfills compared to 2014.[2]

Current Conditions

Table 4-1 summarizes the amount of waste delivered to transfer stations or landfills in Alameda County for disposal (referred to as "in-county disposal"). The 2017-18 Waste Characterization Study was designed to provide detailed information regarding in-county disposal of residential, commercial, roll-off[3], and self-haul waste streams. Of the total waste generated within Alameda County, about 93 percent is deposited in in-county landfills. Note that almost half of the total disposal is roll-off or self-haul in origin and that these two streams exceed the total commercial waste stream in every jurisdiction. Commercial waste is defined as waste generated by businesses having front-loader (bin) collection service. Some large businesses have roll-off service instead of, or in addition to, bin service. However, most roll-off service is used for non-scheduled clean up and construction and demolition projects.

Countywide Waste Diversion in 2017

Table 4-3 lists the calculated diversion rate for 2017 based on each jurisdiction's per capita disposal number, using the State's disposal-based methodology. Alameda County's overall waste diversion rate, calculated by converting a per capita average to a diversion percentage, was 67 percent in 2017.

Characteristics of Countywide Waste Diversion in 2016

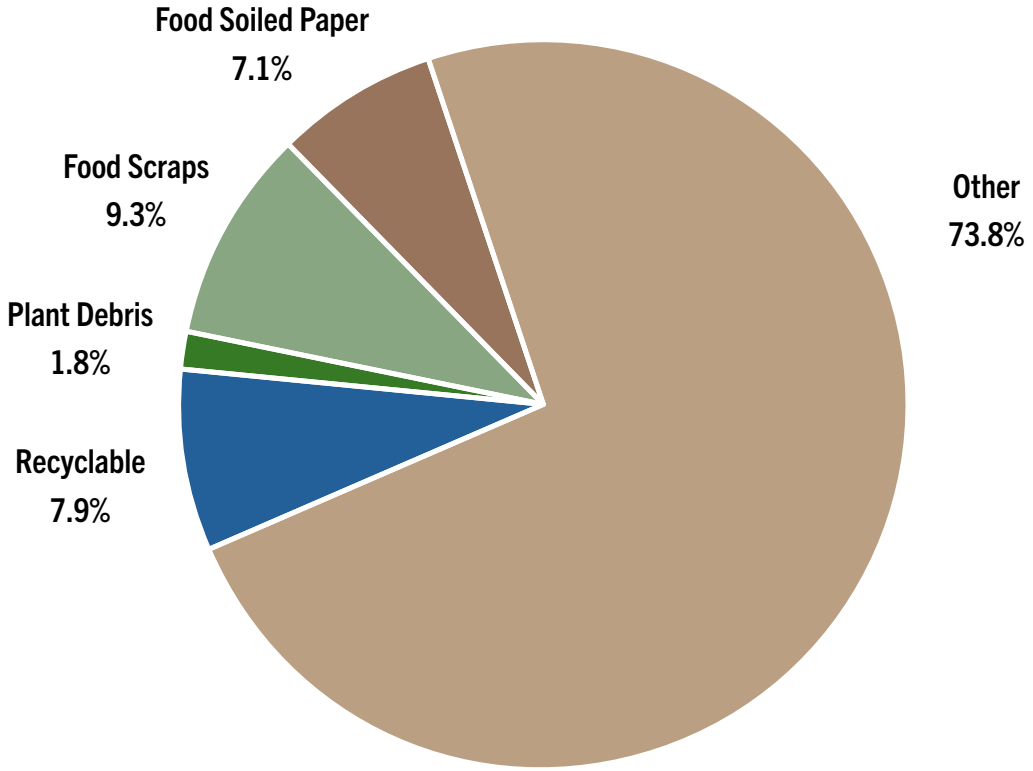
Waste diversion data for 2016 is provided in Tables 4-1 and 4-2. These data are compiled from the 2017-18 Waste Characterization Study. Countywide waste composition is found in Figure 4-A and shows that approximately

1 Estimated disposal for Alameda County in 1990 was 2,004,215 tons.

18 percent of waste are compostable materials, including food soiled paper, plant debris (e.g. branches, grass, leaves), and food scraps. Eight percent of waste are recyclable materials (e.g. clean cardboard and papers, plastic bottles/containers, glass, aluminum). The majority of waste in the county fall into the "Other" category. This category includes primarily garbage, but does contain some materials that could be diverted from landfill, including plastic bags, metals, clean wood, textiles, leather, carpet, crushable inerts (e.g., stone, rock, cement, tile, etc), electronics, HHW, and tires. It also includes materials such as other plastic film, treated wood, polystyrene, etc.

Table 4-4 shows disposal rates for each jurisdiction expressed in pounds per person per day. Municipal collection programs have been successful at channeling the targeted materials into diversion.

Figure 4-A: Countywide Waste Composition, 2016



Source: 2017-2018 Alameda County Waste Characterization Study, SCS Engineering

Table 4-1: In-County Solid Waste Disposal Tonnage by Jurisdiction, 2016

Jurisdiction	Total Residential Disposal	Total Commercial Disposal	Self-Haul and Roll-off[1]	Total In-County Disposal
Alameda	10,149[1]	11,254	4,181	25,583
Albany	2,290	1,106	1,560	4,956
Berkeley	12,182[1]	28,499	14,176	55,069
Dublin	7,816[1]	13,400	9,252	30,468
Emeryville	2,613	2,622	4,223	9,457
Fremont	52,978	33,565	71,967	158,510
Hayward	32,452	9,535	61,048	103,036
Livermore	13,844[2]	16,400	32,377	62,621
Newark	8,930	11,062	9,323	29,315
Oakland	89,744	27,596	72,100	189,441
Piedmont	2,803[3]	6633	269	269
Pleasanton	14,754[2]	16,588	65,403	96,744
San Leandro	9,554[1]	16,492	55,490	81,535
Union City	13,821	9,649	17,528	37,998
Unincorporated Alameda County	4,452	1,802	33,252	35,499
Total	271,572	199,783	449,149	920,503

Notes:

1. Multi-family residential disposal included in single family and commercial tonnages.
2. Multi-family residential disposal included in commercial tonnages.
3. Piedmont residential and commercial waste disposal was not recorded in the 2017-2018 WCS; therefore the source for these statistics is CalRecyle's waste characterization based on 2014 Statewide data.

Source: Alameda County 2017-18 Waste Characterization Study, SCS Engineers.

Table 4-2: 2018 Diversion Tonnage Tracked by Jurisdiction, 2018

Jurisdiction	Recyclables Tons	Compostables Tons
Alameda	11,572	13,504
Albany	3,081	2,882
Berkeley	13,652	22,428
Castro Valley Sanitary District	8,925	10,431
Dublin	7,418	9,659
Emeryville	6,607	3,216
Fremont	22,951	32,124
Hayward	46,042	21,544
Livermore	15,434	19,925
Newark	6,943	6,285
Oakland	42,593	56,831
Oro Loma Sanitary District	14,157	13,367
Piedmont	2,134	2,905
Pleasanton	10,360	14,889
San Leandro	8,925	11,518
Union City	10,092	10,966
Total	**232,129**	**249,086**

Source: Alameda County Measure D reports, 2019.

Table 4-3 AB 939 Diversion Rates, 2018

Jurisdiction	2018 Diversion Rate[1]
Alameda	77%
Albany	82%
Berkeley	68%
Dublin	71%
Emeryville	84%
Fremont	63%
Hayward	66%
Livermore	72%
Newark	67%
Oakland	63%
Piedmont	76%
Pleasanton	64%
San Leandro	58%
Union City	80%
Unincorporated Alameda County	76%
Countywide Weighted Average	**67%**

Notes:

1. Calculated based on Per Capita Disposal Rate.

Source: StopWaste Waste Disposal Tonnages and Diversion Rates for Alameda County Jurisdictions Report, 2020, based on 2019 CalRecycle reports

Table 4-4: Per Capita Disposal Rates by Jurisdiction, 2018

Jurisdiction	Population[1]	Per Capita Disposal (Lbs/Person/Day)	Recycling (Lbs/Person/Day)[2]	Green Waste (Lbs/Person/Day)[2]
Alameda	78,980	2.5	0.8	0.9
Albany	19,216	1.8	0.9	0.8
Berkeley	122,369	4.2	0.6	1.0
Castro Valley S.D.[3]	55,153	1.5	0.9	1.0
Dublin	61,874	3.4	0.7	0.9
Emeryville	11,871	5.2	3.1	1.5
Fremont	231,252	4.7	0.5	0.8
Hayward	158,693	4.8	1.6	0.7
Livermore	90,359	4.7	0.9	1.2
Newark	47,178	4.7	0.8	0.7
Oakland	431,373	4.3	0.5	0.7
Oro Loma S.D.	122,354	1.6	0.6	0.6
Piedmont	11,368	1.9	1.0	1.4
Pleasanton	79,483	7.2	0.7	1.0
San Leandro	89,552	7.3	0.6	0.7
Union City[4]	72,975	2.9	0.8	0.8
Countywide	**1,684,050**	**3.0**[5]	**0.8**	**0.8**

Notes:

1. Population as reported in CalRecycle Electronic Annual Reports (EAR).
2. Recycling and organics diversion estimated from 2018 Measure D report information listed in Table 4-2.
3. Population and disposal rate for Sanitary Districts based off Measure D reports as EAR is for entirety of unincorporated county.
4. Union City per capital disposal rates calculated using 2017 reports as 2018 were not available.
5. Countywide per capita waste disposal is not weighted by population for each city, but calculated by dividing total waste produced in the county by the County's population.
6. All pounds per person per day in this table includes commercial and residential waste.

Sources: CalRecycle EAR by jurisdiction, 2019; Measure D reports by jurisdiction, 2019.

Disposal Capacity Needs

Capacity Requirements

State law requires each CoIWMP to demonstrate sufficient permitted landfill capacity to meet the county's disposal needs for a minimum of 15 years. Thus, the CoIWMP for Alameda County must show enough landfill capacity to last through the year 2035, or provide a plan for securing such capacity. Based upon current and projected disposal rates, as well as remaining capacity reported by Vasco Road and Altamont landfills, it is projected that Alameda County has sufficient landfill capacity for at least 30 years.

Determining Long-Term Landfill Capacity

To calculate the long-term need for landfill capacity, certain assumptions are made regarding both the amount of currently available capacity and the future demand for that capacity. Historically, estimates of both capacity and usage have fluctuated widely due to changing conditions and numerous variables. This makes it difficult to estimate precisely long-term disposal needs.

Key variables affecting existing landfill capacity estimates:

- Landfill settlement: landfills densify with time under the weight of accumulated waste, thus increasing capacity. The amount of settlement varies with the waste composition, moisture content, initial compactive effort, depth-of-fill, and time.
- Technological, operational, and design changes: additional landfill space is created by reducing landfill cover, using thinner cover materials, new excavation, and by placing the waste at a higher initial density through additional compacting effort.

Key variables affecting landfill demand or usage:

- Waste reduction: programs that divert waste from landfills by reducing, reusing, or recycling/composting the materials.
- Economic cycles: increased waste is often a by-product of the increased production and consumption that comes with economic growth. Thus, the volume of waste can rise and fall with the normal business cycle.
- Changes in population growth: while diversion efforts can reduce waste per capita, as population grows, total waste disposed is likely to increase.
- Lifestyle changes: waste increases with greater demand for take-out or pre-packaged foods for example.
- Import of waste: local jurisdictions have limited control over import to privately-owned landfills.
- Rates charged by landfills: higher rates, including government fees, can disincentivize disposal and increase diversion.

Existing Fully-Permitted Landfill Capacity

Estimated remaining landfill capacity as of the end of 2018 at the two Alameda County landfills (see Table 4-5) is:

- Altamont Landfill: 65.4 million cubic yards (approximately 60 million tons)
- Vasco Road Landfill: 6.0 million cubic yards (approximately 5.5 million tons)

The Altamont Landfill has 60 million tons of municipal solid waste (MSW) capacity remaining out of the total 87 million permitted. Altamont Landfill's expected closure date is 2049. The Vasco Road Landfill has approximately

5.5 million tons of capacity remaining of approximately 30 million tons of permitted capacity with the expected closure date of 2035.[4]

Projected Waste Tonnages

Table 4-5 projects demand for Alameda County landfill capacity through the year 2050. No adjustments are made for the variables affecting landfill capacity and landfill demand listed above. There is an estimated reduction in Alameda County waste disposal of 2.1 percent per year from 2019 to 2023. This reduction assumes progress toward the goal of 75 percent diversion and the goal to reduce the amount of readily recyclable and compostable materials deposited in landfills. Waste tonnages are held steady after 2023 for the purpose of conservatively estimating landfill capacity. Meeting and exceeding waste reduction goals will increase landfill capacity accordingly.

Current and projected disposal includes out-of-county waste. The majority of out-of-county disposal at Vasco Road originates from the City of San Ramon and the West Contra Costa Integrated Waste Management Authority. San Francisco is the largest source of out-of-county disposal at Altamont Landfill, though their tonnage has significantly decreased since the expiration of their disposal agreement in 2015.[5] However, out-of-county waste disposal at Altamont and Vasco Road is a small percentage of total waste disposed (see Chapter 3 for more detailed information on out-of-county waste disposal). If the WMA's ability to provide at least 15 years of disposal capacity were to be jeopardized, the WMA could consider how to best discourage out-of-county disposal, thereby increasing landfill capacity. As indicated in Table 4-5, the WMA projects in excess of 30 years of landfill capacity for Alameda County.

4 Permitted capacity in tons was estimated by converting the cubic yards of permitted capacity into tons using an air-space utilization factor.

5 San Francisco disposal at Altamont Landfill peaked in 2000 at 734,483 tons. In 2015, the final year of the disposal agreement, San Francisco disposed of 396,620 tons at Altamont Landfill. In 2018, San Francisco's disposal at Altamont decreased to 70,514 tons.

Table 4-5: Alameda County Solid Waste Disposal and Capacity Needs Projection Based on Achieving Countywide Waste Reduction Goals as Specified by CoIWMP Policies

Year[1]	Vasco Rd. Disposal (Tons)[2]	Vasco Rd. Capacity (Tons)[3]	Altamont Disposal (Tons)[2]	Altamont Capacity (Tons)[4]	Total Disposal (Tons)[2]	Total Capacity (Tons)	Total Capacity (Cu Yd)
2018	286,575	5,508,781	983,248	56,059,037	1,269,823	61,567,818	67,108,921
2019	280,557	5,228,224	962,600	55,096,437	1,243,157	60,324,661	65,753,880
2020	274,665	4,953,559	942,385	54,154,052	1,217,050	59,107,611	64,427,296
2021	268,897	4,684,662	922,595	53,231,457	1,191,492	57,916,119	63,128,570
2022	263,250	4,421,412	903,221	52,328,236	1,166,471	56,749,648	61,857,116
2023	257,722	4,163,690	884,253	51,443,983	1,141,975	55,607,673	60,612,364
2024	257,722	3,905,968	884,253	50,559,730	1,141,975	54,465,698	59,367,611
2025	257,722	3,648,246	884,253	49,675,477	1,141,975	53,323,723	58,122,858
2026	257,722	3,390,524	884,253	48,791,224	1,141,975	52,181,748	56,878,105
2027	257,722	3,132,802	884,253	47,906,971	1,141,975	51,039,773	55,633,353
2028	257,722	2,875,080	884,253	47,022,718	1,141,975	49,897,798	54,388,600
2029	257,722	2,617,358	884,253	46,138,465	1,141,975	48,755,823	53,143,847
2030	257,722	2,359,636	884,253	45,254,212	1,141,975	47,613,848	51,899,094
2031	257,722	2,101,914	884,253	44,369,959	1,141,975	46,471,873	50,654,342
2032	257,722	1,844,192	884,253	43,485,706	1,141,975	45,329,898	49,409,589
2033	257,722	1,586,470	884,253	42,601,453	1,141,975	44,187,923	48,164,836
2034	257,722	1,328,748	884,253	41,717,200	1,141,975	43,045,948	46,920,083
2035	257,722	1,071,026	884,253	40,832,947	1,141,975	41,903,973	45,675,331
2036			1,141,975[5]	39,690,972	884,253	39,690,972	43,263,159
2037			1,141,975	38,548,997	884,253	38,548,997	42,018,407
2038			1,141,975	37,407,022	884,253	37,407,022	40,773,654
2039			1,141,975	36,265,047	884,253	36,265,047	39,528,901
2040			1,141,975	35,123,072	884,253	35,123,072	38,284,148
2041			1,141,975	33,981,097	884,253	33,981,097	37,039,396
2042			1,141,975	32,839,122	884,253	32,839,122	35,794,643
2043			1,141,975	31,697,147	884,253	31,697,147	34,549,890

Table 4-5: Alameda County Solid Waste Disposal and Capacity Needs Projection Based on Achieving Countywide Waste Reduction Goals as Specified by CoIWMP Policies

Year[1]	Vasco Rd. Disposal (Tons)[2]	Vasco Rd. Capacity (Tons)[3]	Altamont Disposal (Tons)[2]	Altamont Capacity (Tons)[4]	Total Disposal (Tons)[2]	Total Capacity (Tons)	Total Capacity (Cu Yd)
2044			1,141,975	30,555,172	884,253	30,555,172	33,305,137
2045			1,141,975	29,413,197	884,253	29,413,197	32,060,385
2046			1,141,975	28,271,222	884,253	28,271,222	30,815,632
2047			1,141,975	27,129,247	884,253	27,129,247	29,570,879
2048			1,141,975	25,987,272	884,253	25,987,272	28,326,126
2049			1,141,975	24,845,297	884,253	24,845,297	27,081,374
2050			1,141,975	23,703,322	884,253	23,703,322	25,836,621

Notes:

1. Disposal tonnages are actuals for 2018. Remaining capacity numbers are estimates with disposal declining by 2.1 percent annually through 2023 and then held constant thereafter to be conservative.
2. Tons include out-of-county waste disposed of in-county.
3. Remaining capacity reported by Vasco Road in June 2019.
4. Remaining Altamont Landfill capacity taken from CalRecycle SWIS database for 2014 and estimated for 2018 using actual disposal tonnages from 2014-2018.
5. After project closure of Vasco Road in 2013, disposal demand is shifted to Altamont Landfill.

Sources: Vasco Road and Altamont Road landfills; StopWaste

ORGANICS PROCESSING CAPACITY NEEDS

Capacity Requirements

State law currently requires counties to demonstrate 15 years of organics processing capacity. When SB 1383 takes effect, counties will be required to report sufficient organics processing capacity in ten-year increments, after the initial capacity study that will be done for 2022-2024. Based on the analysis below, Alameda County has sufficient organics capacity to meet the current and projected volumes of organics in the County.

Determining Long-Term Organics Processing Capacity

Unlike solid waste that is landfilled, organics materials flows are highly dynamic, with importing and exporting of organics across county lines the rule rather than the exception. Most of the processing and processing planning is handled by private entities, rather than the county or cities.

Many variables affect organics processing demand:

- State and local requirements, such as SB 1383, AB 1826, and the Mandatory Recycling Ordinance. Enforcement of these programs should increase capacity needs.
- Food waste reduction programs, including the edible food recovery provisions of SB 1383.
- Changes in population.
- Consumer behavior, which can increase or decrease total quantities of food waste and food soiled paper.
- Feedstock quality, which affects site operations by requiring more time for pre- and post-processing to remove contamination, the amount of area needed on a site to operate processing equipment, and the amount of materials sent to landfills instead of processing.
- Competition for existing and new capacity with other jurisdictions.
- More inclusive definition of organics in SB 1383, such as biosolids and digestate.

Key variables affecting existing organics processing capacity estimates include technological, operational, and design factors, such as aerated static piles vs. windrows, and the number and size of facilities. Existing facilities, as well as anticipated development of new facilities due to SB 1383, will affect capacity.

Existing Fully-Permitted Organics Processing Capacity

The estimated capacity for processing organics by existing composting, and chip and grind facilities is shown in Table 4-6. In addition to the facilities below, Alameda County jurisdictions also direct their organics to out of county facilities, as shown in Table 4-9.

Table 4-6: Alameda County Organics Processing Capacity, 2019

Facility	Permitted Throughput	Permitted Capacity	Type
Altamont CASP	500 TPD	370,000 CYY	Composting
Vision Recycling		50,000 CYY	Composting
Davis St. OMRF	350 TPD	350 TPD	Composting
Vision Recycling	400 TPD	162,400 TPY	Chip & Grind
Bee Green	199 TPD	60,000 TPY	Chip & Grind

Source: CalRecycle Solid Waste Information System

Projected Organics Tonnages

Projected new countywide organics to be diverted in 2033 is 275,000 tons per year, not including organic waste that is currently being diverted.

This number is based on:

- Projected population growth (provided by CalRecycle for AB 876 reporting);
- CalRecycle reports for waste;
- 50 percent reduction in food waste over 15 years (food waste makes up 9.3 percent in 2018); and
- 20 percent organics currently in waste stream per 2017-2018 Alameda County Waste Characterization Study.

The permitted capacity of existing facilities serving Alameda County exceeds the sum of both current and projected new amounts of organics under SB 1383.

5. GOALS, OBJECTIVES, AND POLICIES

The following section includes a set of goals, objectives, and policies that form the underpinnings of this document. It takes into consideration existing State and regional policies and solid waste management systems. It reflects the desire to emphasize the upstream waste reduction focus while considering overall environmental impact. The terms as used in this document are defined below:

- **Goal** – A goal is a statement of what the WMA wants to accomplish in Alameda County through implementation of the CoIWMP. A goal is long term, broad in scope, and represents a global vision. It establishes the general direction for objectives and policies.
- **Objective** – An objective is a narrower and more specific aspect of a broader goal. It acts as an intermediate step towards meeting a goal.
- **Policy** – A policy is a general rule for action derived from a goal and an objective. Policies are the specific means to achieve outcomes.
- **Program** – Programs are projects and activities, with a specified set of resources directed to the achievement of the goals, objectives, and policies in the CoIWMP. (Programs are contained in Chapter 7: Implementation.)

GOAL 1: DISPOSAL CAPACITY

Maintain Adequate Disposal Capacity and Minimize Landfill Impacts.

GOAL 2: RESPONSIBLE INFRASTRUCTURE

Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.

GOAL 3: MATERIALS MANAGEMENT

Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.

GOAL 4: PUBLIC ENGAGEMENT

Inform and Engage the Public in Waste Reduction Activities.

GOAL 5: REGIONAL COLLABORATION

Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.

GOAL 6: FUNDING

Manage Facilities, and Revenues and Expenditures to Implement Countywide Priority Programs and to Achieve the Goals Outlined in the CoIWMP.

GOAL 1: DISPOSAL CAPACITY

Maintain Adequate Disposal Capacity and Minimize Landfill Impacts.

Objective 1.1 Alameda County jurisdictions have a minimum of 15 years of disposal capacity available.

Policies:

1.1.1 Monitor disposal facilities and material flows, both in county and out-of-county.

1.1.2 Evaluate needs for landfill capacity before reaching 15-year minimum.

1.1.3 Maintain WMA-owned property for contingency landfill space if additional cost effective disposal capacity is needed. Consider acquiring additional land from willing sellers in order to advance the objectives of the CoIWMP.

1.1.4 Plan for contingency landfill capacity in the event of emergencies that generate large quantities of debris.

Objective 1.2 Negative environmental impacts of landfills are mitigated.

Policies:

1.2.1 Plan for the mitigation of environmental impacts due to wasteshed changes and/or new landfills.

1.2.2 Except under emergency conditions as determined by the WMA, solid waste that is collected by municipal or franchised collectors and hauled more than 15 miles from the point of collection to the landfill must be transported in vehicles carrying a minimum payload of 14 tons. This requirement may be waived if the WMA determines waste is transported in clean air/ clean fuels vehicles or transported in equivalent capacity transfer vehicles.

1.2.3 Oversee HHW collection programs, increase public access to HHW facilities, and promote use of non-toxic alternatives.

1.2.4 Test and demonstrate regenerative and sustainable property management practices on WMA-owned land and buildings.

1.2.5 Ensure all WMA actions related to WMA-owned property are consistent with applicable laws and permitting processes, including the Save Agriculture and Open Space Lands Alameda County charter amendment.

Objective 1.3 Landfills become obsolete as a means of managing materials, replaced by circular material flows that minimize the use of non-renewable resources that have traditionally been landfilled, elimination of landfill waste through redesign of products and systems, and effective recovery of materials.

Policies:

1.3.1 WMA will develop programs to achieve this objective, taking into account infrastructure, economics, technology, public awareness, cost, partners, diversity of program approaches, and current issues.

1.3.2 Benchmarks to assess progress towards landfill obsolescence will be: 75 percent reduction of total materials deposited in landfills compared to 1990 and 75 percent reduction of organics in landfills compared to 2014.

Objective 1.4 When setting goals and targets for programs, use a systems perspective, selecting metrics to ensure effective program implementation and use of funds, while also advancing systemic changes which are difficult to measure.

Policies:

1.4.1 Recognizing that, at the system scale, many external variables influence progress towards overarching goals, the WMA will focus its measurements and studies primarily on evaluating program effectiveness. This evaluation will be based on specific, measurable, and actionable outcomes.

1.4.2 Environmental "scans" of progress towards landfill obsolescence will be used to identify key issues to investigate and set priorities.

1.4.3 The WMA will set more specific and narrower targets within its planning, priority setting, and budget processes, which are responsive to emergent issues and current data, and which reflect a diversity of programmatic approaches.

1.4.4 Units of measurement for evaluation shall be appropriate to both the activity type (e.g., disposal v. consumption), material type (e.g., organic v. construction materials) and desired impacts (e.g., simple material tonnage to landfill v. overall environmental impact).

GOAL 2: RESPONSIBLE INFRASTRUCTURE

Maximize Environmental Benefits by Balancing High Volume of Recovery with Related Considerations Such as Quality of Commodities, Operating Impacts of Facilities, and Other Environmental Impacts of Programs.

Objective 2.1 Member agencies have efficient, adequate, and environmentally-sound infrastructure for managing reuse activities and recyclables, organics, and other discards.

Policies:

2.1.1 Monitor recycling and composting facilities and Alameda County discarded materials flows, both in county and out-of-county.

2.1.2 Conduct periodic studies of type, quantity, quality, and other attributes of materials handled through three streams (disposal, recycling, composting) and through other means such as source reduction and reuse.

2.1.3 Periodically survey infrastructure and identify gaps.

2.1.4 Support member agency efforts to secure comprehensive materials handling and processing operations at landfills and transfer stations by:

- Providing a list of issues for consideration by member agencies during franchise procurement and negotiation.
- Considering grant requests to support development of new infrastructure.
- Prioritizing reduction of organic waste sent to landfills to support 75 percent reduction

from 2014 levels and in support of climate goals. Programs should consider highest and best use.

Objective 2.2 Direct and indirect environmental impacts of infrastructure, facilities, and related transportation are kept to a minimum.

Policies:

2.2.1 Provide input through the local land use approval, CEQA, and WMA conformance finding processes to reduce or mitigate adverse environmental impacts.

2.2.2 Consider climate and other environmental impacts, including equity, when analyzing or designing recovery systems and programs.

2.2.3 Except under emergency conditions as determined by the WMA, solid waste that is collected by municipal or franchised collectors and hauled more than 15 miles from the point of collection to the landfill must be transported in vehicles carrying a minimum payload of 14 tons. This requirement may be waived if the WMA determines waste is transported in clean air/clean fuels vehicles or transported in equivalent capacity transfer vehicles.

Objective 2.3 Member agencies and processing facilities have reliable markets for commodities produced, including new markets or other beneficial uses.

Policies:

2.3.1 Support development of healthy markets and/or other beneficial uses for materials recovered from the waste stream.

2.3.2 Convene stakeholder groups, including participants, such as service providers, member agencies, and the reuse/repair industry, to share information on market issues.

Objective 2.4 Materials processed at facilities have minimal contamination, both from the source and post processing, and end products are suitable for their intended use.

Policies:

2.4.1 Work with haulers and member agencies to identify sources, types, and impacts of contamination, and share information with all stakeholders.

2.4.2 Coordinate with member agencies on outreach and education materials to promote proper sorting.

2.4.3 Work with facility operators and member agencies to ensure that end products from processing facilities are suitable for their intended use.

Objective 2.5 Facilities are managed and periodically upgraded, and/or new facilities developed, to maximize both the recovery of materials and the value of end products.

Policies:

2.5.1 Consider incentives to support upgraded or new facilities.

2.5.2 Encourage projects to take advantage of the Recycling Market Development Zone.

GOAL 3: MATERIALS MANAGEMENT

Shift from Managing Discards to Reducing Consumption, Managing Materials at Their Highest and Best Use, and Addressing Environmental Impacts Across the Full Life Cycle of Materials and Products.

Objective 3.1 The materials management system is regenerative, constantly evolving to eliminate waste and to benefit human health and the environment.

Policies:

3.1.1 Provide education and outreach that leads people away from the "take, make, waste" model to a system which minimizes the disposal of waste and the need for raw materials by keeping existing materials and assets flowing in the production cycle.

3.1.2 Promote and incentivize materials that benefit human health and the environment.

3.1.3 Support the development of new markets and/or other beneficial uses for materials recovered from the waste stream (e.g. building deconstruction, reuse, and recycled market development).

3.1.4 Foster local demand and a robust infrastructure for reuse, repair, and redistribution solutions to reduce waste, and ensure it is accessible to all residents of Alameda County.

3.1.5 Engage with industry and other stakeholders to develop holistic and systemic interventions that will increase the health and viability of the materials management system.

Objective 3.2 Understanding of climate impacts informs and influences WMA programs.

Policies:

3.2.1 Develop WMA programs and policies that reduce GHG emissions and consider the full life-cycle impacts of materials.

3.2.2 Emphasize reduction of food waste and elimination of organics from landfills.

3.2.3 Target materials with the highest GHG emissions reduction opportunities.

3.2.4 Promote materials management practices that increase climate resilience.

3.2.5 Assist and encourage member agencies to include materials management activities in Climate Action Plans.

3.2.6 Test and demonstrate climate-friendly property management practices on WMA-owned land.

3.2.7 Offer grants and financial incentives in support of waste reduction and prevention projects.

3.2.8 Prioritize waste reduction and prevention projects that have beneficial climate impacts.

GOAL 4: PUBLIC ENGAGEMENT

Inform and Engage the Public in Waste Reduction Activities

Objective 4.1 Member agencies and the public are informed of WMA activities and waste reduction opportunities.

Policies:

4.1.1 Prepare an annual budget that clearly conveys WMA priorities, revenue sources and amounts, and expenditures at the project level.

4.1.2 Respond in a thorough and timely manner to inquiries from the public and news media. Keep state legislators (East Bay Delegation) and policy makers properly informed of waste-related issues to inform sound decisions and policy.

4.1.3 Prepare and distribute electronic newsletters and website content to keep member agency staff, the public, and other stakeholders up to date on WMA activities.

Objective 4.2 Alameda County residents, schools, and businesses have easy access to information on how to reduce, reuse, repair, recycle, and, when needed, dispose of an item.

Policies:

4.2.1 Maintain and keep up to date content that provides "how-to" information on waste reduction topics. Engage directly with the public.

4.2.2 Maintain and keep up-to-date information that easily identifies how to reduce, reuse, repair, recycle, and, when needed, dispose of an item.

4.2.3 Develop marketing collateral and distribute information in a manner that is easily accessible and inclusive of Alameda County's diverse communities.

Objective 4.3 The public in Alameda County is educated and motivated to take action and adopt positive waste reduction habits aligned with WMA priorities.

Policies:

4.3.1 Engage Alameda County students and their communities on topics aligned with WMA priorities.

4.3.2 Conduct community outreach to engage directly with the public on topics aligned with WMA priorities.

4.3.3 Conduct broad public outreach campaigns on topics tied to WMA priorities.

GOAL 5: REGIONAL COLLABORATION

Develop and Administer Programs and Address Emerging Issues in Partnership with Member Agencies, the Private Sector, and Other Key Stakeholders.

Objective 5.1 Organizational structures promote inter-jurisdictional cooperation, consistent with the Joint Powers Authority.

Policies:

5.1.1 Prepare and maintain the CoIWMP, including conformance findings and Plan amendments.

5.1.2 Undertake countywide planning efforts, such as initiating and acting as the lead agency on countywide CEQA analyses for model ordinances.

5.1.3 Support and coordinate with the WMA Board and the Alameda County Recycling Board to fulfill the joint aims of the two bodies.

5.1.4 Coordinate member agency and countywide programs in order to maximize economies of scale, reduce environmental impacts, strengthen marketing, and avoid unnecessary duplication.

Objective 5.2 Shared positions and policy demonstrate leadership related to local, regional, State, and federal legislation and regulations.

Policies:

5.2.1 Monitor legislation and proactively promote the interests of the WMA and its member agencies.

5.2.2 Support member agency compliance with and implementation of State and federal laws, including developing model ordinances with an emphasis on scalability and replicability.

5.2.3 Pilot innovative approaches to waste management and diversion in response to member agency and WMA priorities.

5.2.4 Build and convene a network of partners to elevate issues and find solutions

Objective 5.3 Member agencies and other organizations working, affecting, or serving Alameda County have opportunities for the exchange of information and ideas.

Policies:

5.3.1 Host regular meetings of member agency representatives, to share current waste reduction best practices.

5.3.2 Facilitate the formation of working groups and stakeholder meetings for shared ideas, information, and policy development.

5.3.3 Partner with local nonprofits, schools, businesses, and other potential stakeholders that reach under resourced areas of the county to share knowledge and resources.

GOAL 6: FUNDING

Manage Facilities, and Revenues and Expenditures to Implement Countywide Priority Programs and to Achieve the Goals Outlined in the CoIWMP.

Objective 6.1 WMA programs and facilities have consistent funding.

Policies:

6.1.1 Collect AB 939 per ton landfill facility fees, household hazardous waste fees, and import mitigation fees on out-of-county waste, pursuant to adopted resolutions and ordinances, to support WMA programs.

6.1.2 Pursue funding from sources other than tonnage fees, including but not limited to grants and fee-for-service contracts.

6.1.3 Consider revenue-generating opportunities at the WMA's property that do not interfere with current operations or conservation efforts.

6.1.4 Consider increases or changes to per-ton fees if the WMA determines that such changes or increases are necessary to attain this objective.

6.1.5 Conduct annual short- and medium-term fiscal projections to assess revenue collections, reserves, and fund balances, and adjust expenditures accordingly.

6.1.6 Maintain administrative overhead at the most efficient level necessary.

6.1.7 Review financial information, provide fiscal oversight of costs, and implement controls as necessary of programs and facilities that are owned or operated by the WMA, or other entities supported with WMA funds.

6.1.8 Explore options with both public and private funds to implement countywide capital-intensive programs or facilities.

6.1.9 Partner with other organizations to obtain or implement grants and other funds for projects that advance WMA goals.

Objective 6.2 Costs and benefits are distributed equitably.

Policies:

6.2.1 Ensure that costs and benefits of implementing countywide programs and facilities are equitably distributed among jurisdictions, based on criteria such as WMA priorities, program usage, tonnage of waste generated, environmental justice concerns, and population.

6.2.2 Adopt and update, as necessary, the formulas for distributing program benefits and costs among member agencies as part of program development and approval process.

6. SITING CRITERIA AND CONFORMANCE PROCEDURES

As part of the Siting Element of the CoIWMP, this chapter identifies siting criteria for proposed solid waste facilities, outlines the process for obtaining conformance determinations from the WMA Board when required, and describes the process for updating the Solid Waste Facilities Siting Map and revising descriptions of solid waste facilities.

GENERAL SOLID WASTE FACILITY SITING CRITERIA

The following criteria is provided to guide future solid waste facility siting throughout Alameda County. The siting criteria is to be used as follows:

- By local jurisdictions when reviewing solid waste facilities for land use approval. Local jurisdictions are expected to incorporate the siting criteria into their local review and CEQA processes.
- By the WMA when reviewing solid waste facilities that require a full solid waste facility permit (SWFP) from CalRecycle for a conformance determination.

These criteria in no way supersede or supplant facility siting standards, criteria, or conditions of approval which may be imposed by local jurisdictions through the local permitting (land use and/or California Environmental Quality Act (CEQA) review) process or state or federal agencies. For example, the State Water Resources Control Board sets additional criteria for siting as specified in Title 23, Section 2531 and Title 27 sections 20250 and 20260 of the California Code of Regulations.

The WMA Siting Criteria are based on a broad spectrum of environmental public health, safety, and land-use factors, and existing federal, state, and local regulations, including: hydrogeological, geological, and seismic characteristics (structural stability); water quality; air quality; environmentally sensitive land-uses; and land-use compatibility.

The following criteria will be used to assess conformity with the CoIWMP:

- Table 6-1: General Solid Waste Facility Siting Criteria; and
- Relevant siting related goals, objectives, and policies included in Goals 1, 2, and 3 of the CoIWMP.

Table 6-1: General Solid Waste Facility Siting Criteria[1]

Siting Factor	Transfer and Processing Facilities	Compost Facilities	Landfills
Seismic	No facilities shall be placed within 200 feet of an active or recently active fault unless mitigated.		
Floodplains. 100 year floodplains and areas subject to flooding by dam or levee failure and tsunamis, seiches, and coastal flooding.	May be built in areas subject to 100 year flooding if protected by engineered solutions designed to preclude failure, such as berms, platforms or elevations above flood levels.		Landfills may not be located in areas subject to 100 year flooding unless protected in accord with State standards.
Wetlands. Saltwater, freshwater and brackish marshes, swamps and bogs inundated by surface or groundwater with a frequency to support a prevalence of vegetative or aquatic life which requires saturated soil conditions for growth and reproduction, as defined in adopted regional or state policies.	No facilities shall be located in wetlands, unless mitigated to the satisfaction of responsible federal, state and local agencies.		
Endangered Species Habitat. Rare and endangered plant and animal species and critical habitat areas.	No facilities shall be located within critical habitats of endangered species, defined as areas known to be inhabited permanently or seasonally, or known to be critical at any stage in the life cycle of any species of wildlife or vegetation identified or being considered for identification as "endangered" or "threatened" by the U.S. Department of the Interior or the State of California, unless mitigated to the satisfaction of responsible agencies.		
Unstable Soils. Steep slopes and areas subject to liquefaction and subsidence due to natural causes.	Facilities located in these areas should have engineered design features (i.e. containment structures) to assure structural stability.		Landfills may not be located in areas with 25% slope or greater or in areas subject to liquefaction or subsidence, unless mitigated.
Major Aquifer Recharge Areas. Areas supplying principal recharge to a regional aquifer, as defined by adopted general, regional or state plans.	If located in these areas, facilities should provide properly designed, constructed and maintained engineering spill containment features, inspection and monitoring measures, and other environmental protection controls to prevent runoff from the facility. Landfills should be discouraged from locating in watershed areas of public reservoirs to the extent feasible.		
Depth to Groundwater	Facilities may be located in high groundwater areas if engineered in accord with local and State requirements.		

Table 6-1: General Solid Waste Facility Siting Criteria[1]

Siting Factor	Transfer and Processing Facilities	Compost Facilities	Landfills
Permeable Strata and Soils	Facilities should avoid locating on highly permeable soils or sediment. Facilities located in areas where surficial soils are principally permeable materials such as sand and gravel should provide for containment and monitoring measures.	Landfills and compost facilities shall conform to the requirements of the State Water Resources Control Board.	
Non-Attainment Air Quality Areas. Areas not in compliance with national air quality standards for one or more measured air pollutants.	All facilities shall comply with permitting requirements of the Bay Area Air Quality Management District.		
PSD Air Areas. Prevention of significant deterioration areas are those in compliance with national air quality standards.	Facilities should not be sited to preclude extraction of minerals necessary to sustain the economy of the State or County.		
Mineral Resources Area. Defined as Sand and Gravel in the Alameda County General Plan.	Facilities should not be sited to preclude extraction of minerals necessary to sustain the economy of the State or County.		
Prime Agricultural Lands/Open Space. Areas designated as prime agricultural lands in the applicable general, regional, or state plan. Areas designated as open space in the applicable local general plan.	Prime cultivated agricultural lands should not be used for solid waste facilities/ purposes unless an overriding public need is demonstrated by the applicant and suitable mitigation provided. Solid Waste Facilities may be compatible uses in open space areas, provided that the impacts to open space values are mitigated.	Composting facilities are compatible with prime agricultural land uses and can provide beneficial agricultural inputs when sited on or in close proximity to Prime Agricultural Lands.	Prime cultivated agricultural lands should not be used for solid waste facilities/ purposes unless an overriding public need is demonstrated by the applicant and suitable mitigation provided. Solid Waste Facilities may be compatible uses in open space areas, provided that the impacts to open space values are mitigated.
Military Lands	Consideration may be given for siting solid waste facilities on military lands pursuant to DOD policy and local General Plans and/or Base Reuse Plans which may incorporate CoIWMP Siting Criteria.		

Table 6-1: General Solid Waste Facility Siting Criteria[1]

Siting Factor	Transfer and Processing Facilities	Compost Facilities	Landfills
Other Federal, State, and Indian Lands	No specific prohibition, provided that the Siting Criteria, environmental review, applicable requirements of federal, state, regional and local agencies, and the permitting processes and policies of the local jurisdiction and native nation are satisfied.		
Proximity to Major Transportation Routes	Should be located to minimize distances to major transportation routes which are designed to accommodate heavy vehicles.		Should have good access to major transportation routes, but may have to be distant from waste generation sites because of the significant areal requirements of landfills.
Proximity to Development	Road networks leading to major transportation routes should not pass through residentially developed areas, and should be demonstrated to be safe with regard to capacity, design and construction, and operations (accident rate; excessive traffic, etc.).		
Residential Development	Proximity is desirable to encourage use and minimize traffic and transportation (energy, air) impacts. However, a residential buffer zone of at least 500 feet is recommended, unless the developer can demonstrate as part of the permitting process that a smaller zone provides adequate protection for the public. Facility distribution should be balanced geographically.	Facility distribution should be balanced geographically. Proximity is desirable to encourage use & minimize transportation and other impacts (energy, air). A buffer of 200 feet is desirable.	Landfills shall provide a land buffer of at least 2,000 feet between the site boundaries of its permitted landfill area and any area zoned to allow any permanent residence or occupied facility, unless the developer can demonstrate as part of the permitting process that a smaller zone provides adequate protection for the public.
Institutional Facilities	Facilities should be located, designed, constructed and operated to minimize nuisance, public health or safety impacts to the public, relative to noise, litter, disease vector, dust, odors, and visual/aesthetic impacts.		
Public Facilities: Schools, Churches, Hospitals, Civic Buildings, Libraries	Appropriate treatment within the buffer zone shall include a combination of vegetation and structures for screening and to improve the visual amenities of the site.		

Table 6-1: General Solid Waste Facility Siting Criteria[1]

Siting Factor	Transfer and Processing Facilities	Compost Facilities	Landfills
Proximity to Public Services. Public utilities (water, sewer), protective services (police and fire) and emergency services (medical). Also, corporation yards.	Lack of available and adequate public services may preclude facility siting in some areas. Self-sufficient services may be appropriate and necessary in remote rural areas. Emergency services should be readily available, with a minimal response time.	Emergency services should be readily available within reasonable response times.	Lack of available and adequate public services may preclude facility siting in some areas. Self-sufficient services may be appropriate and necessary in remote rural areas. Emergency services should be readily available, with a minimal response time
Proximity to Waste Streams	Small/medium scale facilities: Collection centers should be easily available close to residentially zoned areas to encourage use. Large scale facilities: May be located at a distance from waste sources because of the need for large sites and buffer zones to protect the public welfare.	May be located at a distance from waste sources because of the need for large sites and buffer zones to protect the public welfare.	
Conformance with Approved Countywide Siting Element of the Integrated Waste Management Plan	Solid Waste Facilities shall be consistent with the siting criteria and siting related objectives and policies of the approved Countywide Siting Element of the Integrated Waste Management Plan, and shall be specifically designed and sized to meet the County's capacity needs, including commitments under any interjurisdictional waste agreements. Solid waste facility shall be subject to the Authority CoIWMP plan conformance process as described in the CoIWMP.		

Table 6-1: General Solid Waste Facility Siting Criteria[1]

Siting Factor	Transfer and Processing Facilities	Compost Facilities	Landfills
Recreational, Cultural, or Aesthetic Areas. Historic preservation, Indian reservations, and other cultural and scenic areas, as defined in locally adopted general plans.	Small/medium scale facilities: May be allowed to handle wastes generated by visitors, workers or residents of these areas. Large scale facilities: Shall not be allowed in these areas unless suitable mitigation implemented.	Shall not be allowed in these areas unless suitable mitigation implemented.	
Airport Zones. As defined in the Alameda County Airport Land Use Policy Plan.	Small/medium scale facilities: Appropriate if consistent with ALUC Policy Plan criteria. Large scale facilities: No facility shall be located within a Federal Aviation Agency approach zone, air installation compatible use zone, or safety zone as described in any applicable Airport Land Use Policy Plan unless mitigated.	No facility shall be located within a Federal Aviation Agency approach zone, air installation compatible use zone, or safety zone as described in the an applicable Airport Land Use Policy Plan unless mitigated.	
Gas Migration/Emissions	Should be designed and operated to minimize negative odor emissions consistent State composting regulations.		Landfills shall be designed to include a system to provide venting control, monitoring and re-use of landfill gas (Gas Management Plan) including a condensate collection system, pursuant to State regulations.
Contingency	Operators of solid waste facilities shall be required to develop Emergency Contingency Plans to provide for continuity in services in the event of disruptions caused by natural or man-made events.		

Notes:

1. Large scale transfer and processing facilities, unless otherwise noted.

CONFORMANCE PROCEDURES FOR SOLID WASTE FACILITIES

The following section identifies which solid waste facilities require a conformance determination and details the steps for processing a conformance determination and an amendment to the CoIWMP Countywide Solid Waste Facilities Map and facility description.

Applicability

The California Department of Resources Recycling and Recovery (CalRecycle) regulates solid waste handling, processing and disposal activities. These include the operation of landfills, transfer-processing stations, material recovery facilities, compost facilities and waste to energy facilities.

All solid waste facilities that are required to obtain a *full* SWFP from CalRecycle must conform to the siting criteria and relevant siting related objectives and policies established in the Countywide Element, and must apply to the WMA for a Determination of Conformance with the CoIWMP.

The following types of facilities are currently required to obtain a full SWFP prior to commencing operations[1]:

- Solid waste landfills;
- All compost facilities with feedstock other than green material (Title 14, Section 17854);
- Green Material Composting Facilities with more than 12,500 cubic yards of feedstock, compost, or chipped and ground material on-site at any one time (Title 14, Section 17857.1);
- Chipping and Grinding Operations handling more than 500 tons per day (Title 14, Section 17862.1);
- Large volume transfer/processing facilities (Title 14, Section 17403.7) receiving 100 tons or more of solid waste per operating day;
- Transformation (a.k.a. "waste-to-energy" or "co-generation") means incineration, pyrolysis, distillation, or biological conversion of mixed municipal waste (including biosolids). "Transformation" does not include composting, gasification, or biomass conversion (Public Resources Code Section 40201);
- Certain large-volume construction and demolition/inert debris facilities; and
- Large-volume in-vessel digestion facilities that receive greater than 100 tons of solid waste per operating day or greater than 700 tons per week of solid waste for digestion in an in-vessel digester (Title 14, Section 17896.13).

A local jurisdiction is required to update its Nondisposal Facility Element (NDFE) when siting a new non-disposal facility (NDF) within its jurisdiction that was not previously identified in its NDFE or in the Countywide Siting Element. See Chapter 3 for a more in-depth description of NDFEs.

Please consult CalRecycle's website for the latest requirements.

Conformance Determination Procedures

The project proponent (Applicant) is responsible for obtaining all local land use permits, preparing all documents and reports required for WMA's conformance review, and ensuring its project has received appropriate review under CEQA.

The following summarizes the steps for processing a conformance determination and CoIWMP amendment.

Prior to the receipt of an application for a conformance determination:

1. WMA staff consults with the city or county considering approval of the Applicant's project (the Lead

Agency) and participates in the CEQA process as a Responsible Agency.

2. If requested by the Applicant, the WMA staff will conduct an initial review of Applicant's application for conformance with the CoIWMP.

After the application is submitted:

1. WMA staff collects a deposit from the Applicant for all estimated costs of completing the conformance review.
2. WMA staff determines if the Applicant has submitted all the documents and information required by the CoIWMP and CEQA and requests any missing information.
3. WMA staff evaluates the CEQA review that has occurred and determines what, if any, additional review is required.
4. WMA staff reviews the application for conformance with the CoIWMP Siting Criteria Table 6-1 and relevant siting related goals, objectives, and policies included in Goals 1, 2, and 3 of the CoIWMP.
5. WMA drafts the needed changes to the CoIWMP text, diagrams, and figures.
6. WMA staff drafts a staff report with its findings and recommendations.
7. WMA staff drafts a proposed resolution to amend the CoIWMP and make the required conformity determinations.
8. WMA staff summarizes in a chart the proposed project's conformance with the CoIWMP's siting criteria.
9. WMA staff prepares the conditions of approval needed to ensure consistency with the CoIWMP.
10. WMA staff obtains an indemnification agreement from Applicant.
11. WMA staff submits the application and staff report to the Local Task Force (LTF), i.e. the Recycling Board and WMA Planning Committee. The LTF reviews and provides comments on the CoIWMP amendment. The Planning Committee considers and makes a recommendation to the WMA Board regarding whether to approve the amendment and conformance determination. Both the LTF and Planning Committee meet at the same time as one body.
12. WMA staff provides the notice and posting of the WMA Board meeting and proposed resolution required by applicable statutes and regulations.
13. WMA Board votes on whether to adopt the proposed resolution.
14. WMA staff files a Notice of Determination with the Alameda County Clerk's office.
15. WMA staff amends the CoIWMP.

SOLID WASTE FACILITIES SITING MAP AND FACILITY DESCRIPTIONS UPDATES

The Countywide Siting Element includes a brief description of all solid waste disposal facilities as required by CalRecycle. In order to provide a comprehensive picture of the solid waste infrastructure, the Countywide Siting Element also includes a brief description of solid waste NDFs that require a full SWFP. In addition to the description, all of these solid waste facilities are identified on the Solid Waste Facilities Map, which shows the general locations of solid waste disposal facilities, and solid waste non-disposal facilities that are identified in local jurisdictions' NDFEs.

The description of the solid waste facilities and the Solid Waste Facilities Siting Map are included in Chapter 3 and Appendix C.

Updates to the Countywide Facilities Siting Map and the facility descriptions will be made by WMA staff, who will coordinate with the cities and the LEA to update the Solid Waste Facilities Siting Map annually. In addition, WMA staff will maintain an online mapping tool of waste management infrastructure in Alameda County at www.StopWaste.org/materials-map.

7. FRAMEWORK FOR IMPLEMENTATION

This chapter outlines the processes by which the CoIWMP will be updated and implemented, contains summaries of countywide programs, and lists programs included in the locally-adopted Source Reduction and Recycle Elements (SRREs). The last section of this chapter discusses funding options for implementation.

IMPLEMENTATION PROCESS

Five Year Reviews

CalRecycle requires reviews of the Countywide Element every five years, including updated estimates of landfill capacity. During this review, the WMA will assess the accuracy, consistency, and relevance of the Countywide Element and update as needed.

Bi-Annual Priority Setting

The WMA uses an adaptive approach to strategic planning, focusing its efforts to achieve the greatest results in support of its goals and mission. Every two years, the WMA will assess progress towards overarching goals, review results of program evaluation or other studies, and analyze current issues. It will set the guiding principles for budget development, and adopt interim numeric targets.

If issues arise during the priority setting that necessitate changes to the Countywide Element, the WMA may consider an amendment at that time (see Chapter 6 for amendment process).

Annual Budget

Each year, the WMA will adopt a budget to implement the goals, objectives, and policies in the Countywide Element. The WMA annual budget may be found online at www.StopWaste.org. This document, called the StopWaste Annual Integrated Budget, also contains the budgets for the Recycling Board and the Energy Council. Recycling Board programs are funded by fees collected through Measure D and also support many of the goals, objectives, and policies in the Countywide Element. The Energy Council programs are solely externally funded.

Annual Updates to SRREs

Updates to local programs are made through the Electronic Annual Reports (EARs) to CalRecycle, which also update the local jurisdiction's SRREs and report on their progress.

Periodic Amendments

As needed, the WMA may update or amend the CoIWMP. Often, these are factual changes, such as adding new facilities in the county. Other times, they may be more substantive, such as changes made pursuant to strategic planning processes or bi-annual priority setting. Some changes will not require a CoIWMP amendment. For example, updates to the descriptions of facilities in Appendix C can be made by staff and incorporated into the CoIWMP at the next five-year review.

SUMMARY OF WMA PROGRAMS

The WMA implements its own programs to support the Countywide Element. Since local programs, as outlined in the SRREs, focus on collection and diversion programs, the WMA prioritizes "upstream" activities that target "reduce" and "reuse" in the waste reduction hierarchy, as well as those programs more appropriately implemented on a countywide scale.

The major programmatic areas of the WMA are: Organics, Packaging, Built Environment, and Communications.

Upstream Organics programs primarily focus on food waste reduction for residents, institutions, and schools, while downstream programs include enforcement of the Mandatory Recycling Ordinance[1] (MRO), and promotion of compost and mulch use. The WMA carbon farming project is both upstream and downstream. In addition, the WMA provides support to member agencies' implementation of SB 1383, the Short Lived Climate Pollutant Act.

Upstream Packaging programs include technical and grant assistance for packaging redesign; grant support for implementation of reusable packaging efforts, such as shipping and transport packaging and food service ware; and enforcement of the Reusable Bag Ordinance. The MRO is the primary downstream program.

Built Environment upstream programs support innovative approaches to building, including design for deconstruction, while downstream efforts focus on regional support for construction and demolition debris recycling.

Communications programs support all the programs noted above, through general media campaigns, the WMA's website, and social media channels. Schools and community-based outreach and education programs provide direct education to Alameda County school children and residents.

In addition, the WMA provides a number of other important functions, such as planning, support for its member agencies, legislative advocacy, grants, and innovative pilot programs.

Details and specific programmatic activities on all WMA programs may be found in the Annual StopWaste Integrated Budget, found online at www.StopWaste.org.

SUMMARY OF LOCAL SOURCE REDUCTION AND RECYCLING ELEMENTS

Each local jurisdiction in Alameda County has an adopted SRRE, as required by State law. The original SRREs were prepared in 1991-1992. Over time, individual jurisdictions modified program characteristics and size in order to meet changing needs, conditions, and opportunities.

The SRREs describe each jurisdiction's waste stream and its existing waste management system. The SRREs contain proposed waste diversion programs needed to reach or surpass the waste diversion goals mandated by AB 939 and continue to help meet the state and countywide goals of 75 percent diversion.

The SRREs include five program-specific components: Source Reduction, Recycling, Composting, Special Wastes, and Education. Information on targeted materials, diversion percentages, marketing approaches, transportation, and storage is provided in the adopted SRREs themselves.

SRRE Local Program Selection and Schedule

Table 7-1 below summarizes the source reduction programs identified in local SRREs and included in the EARs to CalRecycle. Definitions of the programs elements are described at www.CalRecycleCA.gov.

Table 7-1: SRRE Programs Summary, 2018

Programs	Alameda	Alameda Co.	Albany	Berkeley	Dublin	Emeryville	Fremont	Hayward	Livermore	Newark	Oakland	Piedmont	Pleasanton	San Leandro	Union City
Source Reduction															
Xeriscaping/ Grasscycling	x		x		x		x	x		x	x		x		x
Home/On-Site Composting/Mulching	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Business Waste Reduction Program	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Procurement	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
School Source Reduction Programs	x	x		x		x	x		x		x	x	x		
Government Source Reduction Programs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Material Exchange, Thrift Shops	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Other Source Reduction	x									x			x		
Recycling															
Residential Curbside	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Residential Drop-off	x	x	x	x	x	x	x	x	x	x	x	x		x	x
Residential Buy-back	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commercial On-site Pickup	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commercial Self-haul	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
School Recycling Programs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Government Recycling Programs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Special Collection Seasonal (Regular)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Special Collection Events	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Other Recycling													x		x
Composting															
Residential Curbside Greenwaste Collection	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Residential Self-haul Greenwaste	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commercial On-site Greenwaste Pickup	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commercial Self-haul Greenwaste	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Food Waste Composting	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
School Composting Programs	x	x	x	x	x		x				x	x			x
Government Composting Programs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Table 7-1: SRRE Programs Summary, 2018

Programs	Alameda	Alameda Co.	Albany	Berkeley	Dublin	Emeryville	Fremont	Hayward	Livermore	Newark	Oakland	Piedmont	Pleasanton	San Leandro	Union City
Special Waste Materials															
Sludge (sewage/industrial)	x	x						x	x		x			x	x
Tires	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
White Goods	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Scrap Metal	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Wood Waste	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Concrete/Asphalt/Rubble	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rendering	x	x	x				x		x	x	x		x		
Other Special Waste	x	x		x		x	x	x			x	x			
Public Education															
Electronic (radio, TV, Web, Hotlines)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Print (brochures, flyers, guides, news articles)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Outreach (tech assist., presentations, awards, other)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Schools (education and curriculum)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Policy Incentives															
Product and Landfill Bans	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Economic Incentives	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ordinances	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Other Policy Incentive	x						x	x			x		x		
Facility Recovery															
MRF	x	x		x	x	x	x	x	x	x	x		x	x	x
Landfill							x	x	x		x				
Transfer Station	x	x	x	x		x	x	x	x		x	x	x	x	
Composting Facility	x	x	x	x	x	x	x	x	x		x	x	x	x	x
Alternative Daily Cover						x	x	x	x						
Transformation															
Biomass								x		x	x				
Tires															x

Source: CALRECYCLE Planning Annual Report Information System (PARIS), Jurisdiction Waste Diversion Program and Diversion Rate Summary, 2019 - www.Cal Recycle .ca.gov/LGTools/PARIS/jurgmsu.asp

NON-DISPOSAL FACILITIES (NDFS)

Non-disposal facilities (NDFs) are primarily materials recovery facilities, compost facilities, and transfer stations that require a solid waste facility permit (SWFP). They may also include recycling centers, drop-off centers, and HHW facilities. Jurisdictions are required to report diversion achieved through publicly-sponsored programs and through NDFs.

Non-Disposal Facilities Element

One of a jurisdiction's planning documents, the Non-Disposal Facilities Element (NDFE), identifies CalRecycle-permitted NDFs used by a jurisdiction to help reach diversion mandates.

Each jurisdiction is required to prepare, adopt, and submit to CalRecycle an NDFE, which includes a description of new facilities and expansion of existing facilities (except disposal and transformation facilities). Guidelines for what is included in an NDFE may be found at: https://www.calrecycle.ca.gov/lgcentral/library/policy/ndfeguide. The NDFE must also be consistent with the implementation of a local jurisdiction's SRRE.

More information on NDFs is provided in Chapter 3 and a list of NDFs appears in Appendix C. Please refer to respective Alameda County jurisdictions for NDFEs.

FUNDING MECHANISMS

The following section includes a description of the various funding sources that enable the implementation of the goals, objectives, and policies of the CoIWMP.

AB 939 Funding Provisions

AB 939 legislation allows jurisdictions to collect funds to finance programs. Specifically Public Resources Code Section 41901 permits cities, counties, or city and counties to impose fees in amounts sufficient to pay the costs of preparing, adopting, and implementing an integrated waste management plan pursuant to AB 939.

The JPA that created the WMA provides that the WMA may levy fees as authorized by Public Resources Code sections 41901 and 41902 for the purpose of preparing and adopting the CoIWMP and the programs and facilities identified in the document.

Revenue Sources for Countywide Programs and Facilities

Countywide programs are funded primarily through the facility fees and waste import mitigation fees. Table 7-2 summarizes fees levied by the WMA on waste disposed at landfills.

The WMA also generates revenue from interest on its fund balances and reserves. In addition, the WMA owns 1,600 acres of land in the Altamont Hills as reserve landfill capacity. This property provides revenue from residential rent, wind power leases, and communications towers. The WMA also received a one-time payment of $1.9 million for a conservation easement on one of the parcels.

The Household Hazardous Waste Collection and Disposal Program is supported by a separate fee on all Alameda County households.

Table 7-2 Summary of WMA Landfill Fees

Fee Name	Amount	Authoritative References	Applicable to	Who Pays
Facility Fee (AB 939 Fee)	$4.34/ ton	WMA Ordinance 2009-01 WMA Resolution 2010-01	All solid waste tons disposed within Alameda County.	Landfill
			All Alameda county-origin solid waste tons transferred through a county solid waste facility that are eventually disposed out-of-County.	In-County facility
			Alameda County-origin Franchise waste direct-hauled out-of-County and eventually disposed out-of-County.	Hauler
			All (non-franchise) solid waste tons generated in Alameda County, direct hauled out-of-county and eventually disposed out-of-county.	Hauler
Household Hazardous Waste (HHW) Fee	$2.15/ ton	WMA Resolution 93-A (1990) WMA Resolution 140 (1991) WMA Resolution No. 97-28 WMA Ordinance 2001-01	All solid waste tons disposed within Alameda County.	Landfill
			All Alameda County-origin solid waste tons transferred through a County solid waste facility that are eventually disposed out-of-County.	In-County facility
			Alameda County origin Franchise waste direct-hauled out-of-County and eventually disposed out-of-County.	Hauler
Measure D Fee[2]	$8.23/ ton	Recycling Board Resolution 2003-10	All solid waste tons disposed within the unincorporated County of Alameda.	Landfill
			Also applies to "municipally controlled" discards (wastes for which the municipality establishes the rates for collection or disposal) landfilled outside unincorporated Alameda County, or else allocation of Measure D funds to municipality is proportionally reduced.	Municipal contractor
Waste Import Mitigation Fee	$4.53/ ton	WMA Resolution No. 94-6	Any solid waste originating outside the County of Alameda disposed within Alameda County.	Landfill

Notes:

1. "Disposed" for the purposes of fee applicability aligns with the definition of "disposal" used by CalRecycle for the purposes of the Recycling and Disposal Reporting System (i.e. does not include landfill beneficial reuse or cover.
2. This fee is imposed by the Recycling Board pursuant to the County Charter. Revenues from the fee are used to support many of the goals, objectives, and policies of the Countywide Plan.

Contingency Planning for Funding

The funding sources identified above are used to finance the costs associated with the Countywide Element. Should these revenues be insufficient to meet costs, there are several actions that the WMA may undertake in order to ensure adequate revenue for the activities in this CoIWMP, including:

- Seeking funding from outside organizations, not limited to grants or fee for service contracts;
- Funding projects of limited duration from reserves and/or available fund balances;
- Considering various options to decrease fixed costs;
- Pool money from local funding mechanisms and administer for countywide programs; and
- Raise fees under the provisions of Proposition 26 and/or Proposition 218.

The WMA may also consider alternative sources of funding including borrowing and private financing. The JPA gives the WMA the power to incur debts and liabilities, to levy and collect fees and charges, and to issue bonds. These funding sources are also available to member agencies.

The WMA program management is the responsibility of WMA staff, overseen by the appropriate WMA committees and by the Board. For local programs funded by the WMA, the recipient agencies are required to demonstrate the purposes for which the funds are used and report on results.

Funding Mechanisms to Implement SRREs

Policy decisions regarding the recovery of municipal program costs will generally take place at the local level. Identification of adequate funding sources is essential for implementation of the programs proposed in the SRREs. Each SRRE contains a Funding Component that identifies the options available to the jurisdictions for raising funds for waste diversion programs. Most jurisdictions levy franchise fees to cover municipal recycling program costs. Fees range from a percentage of total review to designated fees for specific activities or staffing.

Additionally, jurisdictions can use local funding mechanisms to contribute to countywide programs.

APPENDIX A: COUNTYWIDE DESCRIPTION

GENERAL

Alameda County is located on the east side of the San Francisco Bay. Composed of 14 cities, the county encompasses approximately 737.5 square miles of land and 83.7 square miles of bay. While the majority of the county's land area (~ 444 square miles) is unincorporated area, the majority of the population resides in incorporated cities. The county is approximately 32 miles in length in a north-south direction and 45 miles in width in an east-west direction. Elevations range from sea level to 3,817 feet in the Diablo Range south of Livermore.

In addition to the 14 cities, two sanitary districts exist in Alameda County. The Castro Valley Sanitary District serves approximately 5.5 square miles of unincorporated area. The district is bounded by unincorporated Alameda County to the north and east, the City of Hayward to the south, and Oro Loma Sanitary District to the southwest and west.

The Oro Loma Sanitary District serves approximately 16.3 square miles of unincorporated area, which include portions of the City of San Leandro and the City of Hayward.

Unincorporated area outside of city and sanitary district boundaries include Castlewood, Sunol, Kilkare, and numerous urban areas adjacent to city limits. Unincorporated area in the east County is generally characterized by an open, rural landscape.

Alameda County has a varied geography and a diverse combination of land types and forms including salt water marshes along the Bay to moderately high uplands. The county is bounded on the north by Contra Costa County, on the south by Santa Clara County, on the east by San Joaquin County, and on the west by the San Francisco Bay.

CLIMATE

The climate of Alameda County is of two main types, oceanic and subhumid mesothermal. The oceanic type is characterized by cool, moist winters and cool summers with frequent sea breezes and early morning fog. The subhumid mesothermal type is characterized by cool, moist winters and hot, dry summers. The boundary between the two types runs roughly in a southeast-northwest direction from the Calaveras Dam to the City of Dublin. Climate conditions vary depending upon the mean sea level, altitude, topography, and the distance from the ocean and the Bay.

Differences in annual rainfall are associated with differences in relief and vary widely over short distances. Mean annual precipitation ranges from 12.8 inches (at the Patterson Plant station in Livermore) to 26.3 inches (at the Albany station).

The average annual temperature for the county ranges roughly between 58º F in Berkeley and 60º F in Livermore.

TRANSPORTATION

Alameda County is served by an extensive and well-developed transportation system, including major highways, rail, port, and airport facilities, as well as local streets, rail rapid transit, and local and interurban buses.

The major network of freeways in Alameda County includes Interstate Highway 880, which forms the major north/south connection in the county. Interstates 80, 580, and 680 also provide easy access for residents and businesses to major ports, rail heads, and other Bay Area communities.

The rail system is served by three major railroads: Southern Pacific, Santa Fe and Union Pacific. Passenger rail service is provided by Amtrak.

A vital transportation asset within Alameda County is the Port of Oakland, which provides 90 percent of the shipping cargo delivered in the Bay Area. Being one of the nation's major containerized shipping facilities, it provides indispensable connection to international market areas. The Port occupies over 550 acres of marine terminal facilities and is physically the largest Pacific Coast facility. The Port is one of the top 20 shipping facilities in the nation and serves as a loading point for large quantities of secondary materials that are targeted for the Pacific Rim markets. The Port acts as a major gateway for intermodal transit to and from the Pacific Rim, the Eastern and Midwestern States, and other parts of Northern California.

Oakland International Airport provides the county with air cargo and passenger services for businesses and individuals. Additional air transportation is also available at the Hayward and Livermore general aviation airports.

Public transportation in the county primarily includes the Bay Area Rapid Transit (BART) rail system and the Alameda-Contra Costa (AC) Transit bus system, which provide a practical and efficient means of transportation throughout the Bay Area and within Alameda County.

POPULATION

Most of the county's population is concentrated in the narrow area between the East Bay Hills and the Bay. Alameda County is currently the seventh most populous county in California, with a 2018 population of 1,656,884. Table A-1 illustrates the population in Alameda County based on the most recent 2018, 2010, and 2000 data from the California Department of Finance.

The population in Alameda County is ethnically diverse. The county population, according to the 2018 American Community Survey (ACS) data (the most recent available), was made up of 38.6 percent White, 30.8 percent Asian, 10.3 percent Black, 0.6 percent American Indian and Alaska Native, 0.9 percent Native Hawaiian and Pacific Islander, and 6.6 percent two or more races. Additionally, 22.4 percent of the County's population is of Hispanic ethnicity.

The median age of the county's population was 37.6 in 2018, with 22.9 percent of the population 19 years old or younger, 63.4 percent between 20 and 64 years, and 13.9 percent in the 65 years and over category.

INCOME

According to the 2018 ACS, the median household income for Alameda County is $92,574. The family median income is $111,231. The per capita income for the county is $44,238.

HOUSING

According to the 2018 California Department of Finance data, the number of housing units in Alameda County (including single family, multiple family, and mobile homes) is 601,967 units, a 3.5 percent increase since 2010. The average household size for the County is 2.84.

The estimated number of single family units (including detached and up to four attached) is 429,681, of which 74 percent are detached units. There are approximately 164,428 multifamily units (properties with five or more units) and 7,858 mobile homes in the county.

Table A-1: Alameda County Population

Jurisdiction	2000	2010	2018
City of Alameda	72,259	73,812	78,980
City of Albany	16,444	18,539	19,216
City of Berkeley	102,743	112,580	122,369
City of Dublin	30,023	46,036	61,874
City of Emeryville	6,882	10,080	11,871
City of Fremont	203,413	214,089	231,252
City of Hayward	140,030	144,186	158,693
City of Livermore	73,464	80,968	90,359
City of Newark	42,471	42,573	47,178
City of Oakland	399,566	390,724	431,373
City of Piedmont	10,952	10,667	11,368
City of Pleasanton	63,654	70,285	79,483
City of San Leandro	79,452	84,950	89,552
Union City	66,869	69,516	74,058
Total Incorporated	1,308,22	1,369,005	1,507,626
Total Unincorporated	135,717	141,266	149,258
COUNTY TOTAL	1,443,939	1,510,271	1,656,884

Source: California Department of Finance Tables E-4 and E-5

APPENDIX B: OVERVIEW OF METHODOLOGIES

BACKGROUND

Pursuant to AB 393, each city and the County for the unincorporated area were required to conduct an initial waste generation study, which quantified waste disposal, waste diversion, and waste generation within its political boundaries. Three studies were done: one each for the cities of Hayward and Berkeley, and a region-wide study for all 17 jurisdictions within Alameda County (1990). Subsequently, the WMA conducted waste characterization studies in 1995, 2000, 2008, and 2017-18.

In addition, CalRecycle developed reporting requirements to measure progress towards the 50 percent requirement under AB 939 and the 75 percent statewide goal.

The data used for the Countywide Element include:

- 2017-18 Alameda County Waste Characterization Study;
- Measure D Annual Reports from Member Agencies to the WMA;
- CalRecycle Disposal Reporting System; and
- CalRecycle Electronic Annual Reports.

2017-18 Alameda County Waste Characterization Study

The WMA conducts periodic waste characterization studies to better understand the types and quantities of materials disposed of in Alameda County. Using sampling techniques, this study measured the composition of the waste stream by generating sector and material type. This study provides a valuable snapshot in time of the materials that comprise our waste stream and can contribute to priority setting and evaluation of progress towards goals.

The previous waste characterization study for Alameda County, completed in 2008, focused on a statistically valid sampling of waste from each of the 14 cities, two sanitary districts, and unincorporated areas in the county. The 2017-18 study instead focused on a countywide characterization of the waste stream, rather than individual jurisdictions, and used data from existing in-house programs, where possible.

The 2018 study utilizes similar field methods that were used in the 2008 study. The objectives of the 2017-18 Waste Characterization Study were to:

- Quantify and characterize flow of waste to landfill for Alameda County as a whole;
- Measure progress towards WMA discard goals;
- Provide data and analyses to measure possible impacts of current programs, providing comparability with previous studies conducted by the WMA;
- Provide data and analyses that allow the WMA to readily use and/or adapt and apply the data to local conditions;
- Identify waste streams to be targeted for future waste reduction programs; and
- Be consistent with California statutory and regulatory requirements for performing waste characterization studies, understanding that material types are condensed for the Alameda County study as compared to the state study.

Multiple sources of information were used to estimate the annual waste quantity disposed within Alameda County by sector, which included the CalRecycle 2016 and 2017 Jurisdiction Quarterly Tonnages Reports and communication with each franchised hauler operating in Alameda County. Similar to the 2000 and 2008 waste characterization studies, this study classified waste generated and disposed of in Alameda County as originating from the following sectors: 1) Single Family Residential, 2) Multi-Family Residential, 3) Commercial, 4) Roll-Off Containers, and 5) Self Haul. Unlike the previous studies, this study added a sixth sector, MRF Residuals.

A variety of data was utilized and collected to estimate the types and quantities of municipal solid waste going to landfill for each of the waste sectors. Data from StopWaste's benchmark services (year-round waste characterization of individual carts and dumpsters located at single family residences and multi-family properties) was used to characterize residential waste. Field sampling and sorting activities were used to characterize waste disposed of by the commercial, roll off, self-haul, and MRF residuals sectors.

Residential waste was characterized into five material types: recyclable (through curbside collection programs), plant debris, food scraps, food soiled paper, and other (primarily municipal solid waste but also including other materials separately classified in the remaining sectors). Commercial, roll off, self-haul, and MRF residuals were characterized into 11 material classifications and 30 material types.

Fieldwork was completed at six host facilities (two landfills and four transfer stations) over two seasons. Season One fieldwork was conducted in August and September 2017; Season Two was conducted in January and February 2018. Manual sorting was used to characterize commercial waste samples and MRF residuals. Visual characterization of entire waste loads was used to characterize roll off containers and self-haul waste.

Measure D Annual Reports

Pursuant to Recycling Board reporting requirements, each jurisdiction submits annual reports to the Recycling Board and WMA. These reports include a range of data, including descriptions of programs, providers, and destinations for collected materials, tonnages and number of accounts by collection type (cart, bin, drop box, etc.), and customer type (residential, commercial, and multifamily).

CalRecycle Disposal Reporting System

The CalRecycle Disposal Reporting System (DRS) tracks the disposal quantities reported by counties. DRS also provides reports on disposal quantities by jurisdiction and on alternative daily cover (ADC) quantities by material types.

CalRecycle Methodology

CalRecycle instituted a per capita disposal measurement system in 2007, as a simplified measure of jurisdictions' performance. This system shifts from the historical emphasis on using calculated generation and estimated diversion to using annual disposal as a factor when evaluating jurisdictions' program implementation. The WMA has inferred "diversion rate" from this system by comparing target per capita disposal to reported per capita disposal.

APPENDIX C: NON-DISPOSAL FACILITIES IN ALAMEDA COUNTY

TRANSFER STATIONS

Aladdin Transfer/Processing Facility

Alameda County Industries' (ACI) Aladdin Transfer/Processing facility (01-AA-0290) on a 2.2-acre site located at 610 Aladdin Avenue in San Leandro. The Alameda County Department of Environmental Health acts as the Local Enforcement Agency (LEA). The facility operates under a Full solid waste facilities permit (SWFP) issued for 620 tons per day (TPD) total site capacity for the receipt of any combination of MSW, construction and demolition (C&D), food waste and food material (and residential and commercial co-collected organics) or other solid waste. In 2018, the facility processed approximately 3,225 tons of MSW (124 TPD), 4,071 tons of recyclable materials (156 TPD), and 1,733 tons of organics (67 TPD).

The Transfer/Processing Facility only receives municipal solid waste (MSW) from the portion of the City of San Leandro not served by Oro Loma Sanitary District, the City of Alameda, and Castro Valley Sanitary District service areas, and is permitted to receive MSW from other jurisdictions where ACI is the franchised service provider. The materials recovery facility (MRF) processes recyclables from Alameda, Castro Valley Sanitary District, San Leandro, and other jurisdictions. There is no acceptance of self-hauled MSW nor recyclables.

Berkeley Transfer Station

The CalRecycle permitted area of the Berkeley Transfer Station (01-AA-0029) is located on a 4.7-acre site at Second and Gilman streets. The facility assumed operations in 1985. The property and facility are entirely owned and operated by the City of Berkeley. CalRecycle is the LEA for the transfer station after assuming the responsibility from the City of Berkeley in 1993.

The City of Berkeley estimates an output of 78,509 tons of MSW or 252 TPD. Approximately 32,952 tons of organics (106 TPD) and 14,863 tons (48 TPD) of C&D waste were diverted for reuse or recycling in 2018. The Station's CalRecycle permitted capacity is 560 TPD.

Transfer station operations include both third party and route trucks to: 1) offload MSW and load residual waste into transfer trailers for off-site disposal; 2) salvage MSW for reusable items of approximately 800 tons annually; 3) collect miscellaneous recyclables of over 400 tons annually; 3) load residential and commercial green and food waste into transfer trailers for off-site composting; and 4) accept third party C&D waste and load it separately into transfer trailers for off-site recycling. This facility accepts residential used motor oil, treated wood waste, electronics, and Freon-containing appliances to be handled and/or recycled. Hazardous materials apart from those listed are not accepted at the transfer station.

All non-marketable and non-recoverable residues are hauled by transfer truck to Altamont Landfill. In addition, the transfer station, which is located on city-owned property, is adjacent to its third party vendor (Community Conservation Center) that operates a recycling drop-off and buy-back center and a dual-stream recycling MRF. The MRF processes approximately 15,807 TPY (51 TPD) of recyclables. The vendor also provides some drop-off options for universal waste, such as batteries, fluorescent bulbs, and residential cooking oil.

CWS Transfer/Processing Facilities

CWS operates two transfer/processing facilities in Oakland: one located at 1820 10th St. and the second at 3300 Wood St. The 10th Street facility (01-AA-0329) is a medium-volume transfer and processing facility on a 2.1-acre site, of which 0.8 acres are dedicated to this operation. It is permitted to transfer 100 TPD. The Wood St. Facility (01-AA-0323) is a medium-volume transfer and processing facility situated on adjacent parcels totaling 1.53 acres. It is permitted to transfer 100 TPD. The Alameda County Department of Public Heath acts as the LEA for both facilities.

The facilities receive and process mixed recyclables from the City of Oakland, and transfers residuals to Keller Canyon Landfill. CWS plans to consolidate and relocate transfer and processing activities to a new parcel at the former Oakland Army Base known as North Gateway.

Davis Street Transfer Station and Recycling Center

The Davis Street Transfer Station (01-AA-0007) is located at 2615 Davis Street in San Leandro, on a portion of the 53+ acre site of the former Davis Street Landfill which closed in 1980. Owned and operated by WMAC, this facility originally obtained a SWFP in 1980, and serves jurisdictions in the northern and central portions of the County. The Alameda County Department of Environmental Health acts as the LEA. The transfer station is permitted for Class II wastes (non-hazardous, inert and designated wastes), and is expressly prohibited from accepting hazardous wastes, including asbestos, infectious wastes, and pesticides or any liquid wastes.

Transfer operations at the Davis Street Transfer Station consists of receiving, weighing, compacting, and loading waste into long-haul semi-transfer trailers for transport to the Altamont Landfill. In 2017, the Station output was 525,203 tons of MSW. The Station's average daily outflow of 2,020 tons per day (TPD) is well below the permit limit of 5,600 TPD-6.

Recovery operations at the Davis Street Transfer Station include: 1) receiving and hauling out source-separated green waste from curbside programs and self-haul loads; 2) processing of curbside recyclables; and 3) receiving, consolidating, and transporting residential organics (green waste, food scraps, and food-contaminated paper) and commercial organics (food scraps and food-contaminated paper) to composting facilities. In 2017, the transfer station had an output of 125,963 tons of organic waste (484 TPD). The station also recovers clean loads of wood, dirt, and concrete. A MRF line began operation in August 2002 targeting recyclables-rich debris boxes and self-haul loads, including C&D waste materials. In 2017, this MRF processed approximately 135,476 tons of recyclables (521 TPD). (Davis Street Organics MRF is described later in this section).

Fremont Transfer Station/Materials Recovery Facility

The Fremont Transfer Station/Materials Recovery Facility (TS/MRF) (01-AA-0297) is located at 41149 Boyce Road in the City of Fremont on a 13.5-acre parcel. The TS/MRF was built to provide the City of Fremont with a long term municipal solid waste disposal/recycling option prior to the closure of the Tri-Cities Recycling and Disposal Facility. The Alameda County Department of Environmental health is the LEA for the Fremont TS/MRF. The TS/MRF is sized to handle waste and recyclables from Fremont, Newark, and Union City. The Facility also accepts recyclables from outside the Tri-Cities area (primarily from within Alameda County) and self-haul waste from the Tri-Cities only. The facility is permitted to handle 2,400 TPD of waste and recyclables.

The Fremont Transfer Station accepts MSW collected from the Tri-Cities, consolidating it into long haul trailers and transporting it to the Altamont Landfill. In 2018, the Fremont Transfer Station collected approximately 243,000 tons of MSW (779 TPD).

Operations of the MRF include accepting both recyclables and loads of MSW containing high percentages of recyclables, separating them into recyclable groupings, consolidating them for efficient transport, and transporting them to secondary materials processing facilities. In 2018, approximately 27,200 tons (75 TPD) of recyclables were processed at the MRF.

Hayward Transfer Station

The Hayward Transfer Station (01-AA-0318) is a medium-volume processing facility located at 3458 Enterprise Avenue in Hayward on a 3.4-acre site, of which 2.5 acres are dedicated to this operation. The transfer station is co-located with other commercial activities at this site.

The facility receives self-hauled construction, demolition, and inert materials. The facility is permitted to transfer 174 TPD. The Alameda County Department of Environmental Health is the LEA.

Livermore Sanitation Recyclable Material Transload[1] Facility

Livermore Sanitation Inc. (LSI) built a Recyclable Material Transload Facility (01-AA-0301) located at 7050 National Drive in the City of Livermore on a 4.3-acre site, of which the Transload Facility occupies 1.0 acre. The facility became operational in May 2010. The enclosed direct transfer station has a registration SWFP issued and enforced by the Alameda County Department of Environmental Health. The Recyclable Material Transload Facility operates as a direct transfer operation, and the City of Livermore has granted entitlements for the facility to handle up to 385 TPD of recyclable and compostable materials.

The facility processed approximately 44,648 tons of MSW (167 TPD), 15,617 tons of recyclables (60 TPD), and 20,519 tons of organics (80 TPD) in 2018. No self-haul materials are accepted at this site.

Pleasanton Transfer Station

The Pleasanton Transfer Station (01-AA-0003), located on a 7.6-acre site at 3110 Busch Road in the City of Pleasanton, is owned and operated by Pleasanton Garbage Service (PGS) and has been in operation since 1976. The Alameda County Department of Environmental Health acts as the LEA. In addition to Pleasanton, the transfer station serves portions of unincorporated Alameda County within a 15-mile radius, including Sunol Valley and Castlewood. The facility accepts residential, commercial and industrial franchise waste, and public self-haul deliveries and C&D waste.

Amador Valley Industries (AVI), a sister company to PGS, serves the City of Dublin. AVI delivers loads of source-separated recyclables and organics to the Pleasanton Transfer Station for consolidation and delivery to processors.

All franchised waste handled at the facility is collected by PGS. The Pleasanton Transfer Station has a three sort system for garbage, recyclables, and organics. Residual waste is disposed at the Vasco Road Landfill via transfer trailer trucks. Operations also include a hazardous waste screening program.

The transfer station output was 94,306 tons of MSW (266 TPD), 28,901 tons of green waste (81 TPD), and 10,646 tons of recyclables (30 TPD) in 2018. The permitted capacity of the facility is 720 TPD.

1 Transload facilities transfer material directly from truck to truck, without materials touching the ground or floor at any point.

COMPOST FACILITIES

Altamont Compost Facility

The Altamont Compost Facility (01-AA-0325) is located at 10840 Altamont Pass Road in the unincorporated area of Livermore on 90 acres dedicated to the organics facility. The facility has a planned maximum total organic feedstock receipts of 750 TPD and will include an aerated static pile composting area, pre-processing for the organic material feedstocks as necessary, and materials resale. (The Conditional Use Permit also allows for anaerobic digestion, which would require additional permits.)

The project will be constructed in phases. The first phase, completed in April 2018, is a Covered Aerated Static Pile (CASP) system on an approximately 10-acre pad and is permitted to process 346,700 TPY (500 TPD) and provide materials for resale. This phase operates under a Compost Materials Handling Facility permit enforced by the Alameda County LEA. Organics feedstocks may include green and wood waste, commercial and residential food waste, agricultural materials, the organic fraction from mixed waste MRFs, and digestate from other anaerobic organics processing which requires further composting to mature into a stable compost product.

These feedstocks will come from a variety of sources including direct haul from nearby cities; however the majority of feedstocks are anticipated to come from the Davis Street Transfer Station in San Leandro. Davis Street organics are primarily generated in Alameda County and consist of both commercial and residential organics, including residential curbside collection of comingled green and food waste.

Davis Street Organics Facilities

In 2017 and 2018, the WMAC Davis Street Transfer Station went through major changes to add three organics facilities to the site. The organics facilities will operate under an updated SWFP issued by CalRecycle and enforced by the Alameda County Department of Environmental Health. Existing Davis Street Transfer Station property that was previously used for container storage, outdoor green waste processing, and parking, will be converted into an approximately 260,000 square foot covered organics recovery facility.

The facility is being constructed in phases. Phase I of the facility, the 1.4-acre indoor facility Organics Materials Recovery Facility (OMRF), is operational. Phase II -- including the 3.0-acre in-vessel Organics Materials Composting Facility (OMCF) and the 1.5-acre Organics Digester Facility (Digester) that includes energy production -- is expected to be completed in 2021.

These operations will take place within the currently permitted 5,600 TPD solid waste facility permit.

Vision Compost Facility

Tom DelConte and Roberto Aguirre are co-owners/operators of the 3.0-acre Vision Recycling Compost Facility (01-AA-0322) located at 30 Greenville Road in the unincorporated area of Livermore. Commencing operations in 2019, the Vision Compost facility is permitted to handle a maximum of 50,000 cubic yards per year with a maximum throughput of 12,500 cubic yards per day. The Alameda County Department of Environmental Health acts as the LEA.

The facility takes green materials from Vision Recycling facilities, including its nearby chip and grind facility, and composts them in an aerated static pile system. Finished compost is sold directly to customers or brought back to the chip and grind facility, or one of Vision's other facilities, and sold there The facility does not accept, nor is it permitted for, food waste.

OTHER NON-DISPOSAL FACILITIES

Smaller facilities operating in Alameda County that are included in the NDFEs, adopted and maintained by the cities include the following:

- **Berkeley**: Community Conservation Center
- **Fremont Tri-Cities Landfill**[2]
- **Oakland**[3]: Commercial Waste & Recycling LLC (aka Bee Green Recycling & Supply)
- **San Leandro**: ACI, Davis Street Transfer Station, and Certified Blue Recycling

The cities of Albany, Emeryville, Livermore, and Piedmont have reported no additional NDFs within their jurisdictions. For more detailed descriptions of these facilities, please see the respective jurisdictions' NDFE.

2 Tri-Cities Landfill is still performing notable recovery of materials. Although the WMA-owned landfill facility has closed, grinding/chipping and blending of wood, mulch, compost, and soils to create garden products is still occurring on the site. Their permit must still be in effect during the final closure phase.

3 Oakland's NDFE was amended to include the former Smurfit-Stone Recycling which went out of business but was never removed from the NDFE. Additionally, Oakland's NDFE was amended to include the Recology East Bay Organics facility which was never built.

APPENDIX F: GLOSSARY

AB 341. The 2012 Mandatory Commercial Recycling Law (Chesbro, Chapter 476, Statutes of 2011) sets forth the requirements of the statewide mandatory commercial recycling program. It requires businesses with four or more cubic yards of weekly garbage and multifamily properties with five or more units to arrange for recycling service. Jurisdictions are required to implement a commercial recycling program that includes education of, outreach to, and monitoring of businesses within their jurisdiction.

AB 939. The California Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989 as amended [IWMA]) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year.

AB 1826. The 2014 Mandatory Commercial Organics Recycling Law, (Chesbro, Chapter 727, Statutes of 2014) requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that waste, and for jurisdictions to implement a recycling program to divert organic waste from businesses subject to the law, as well as report to CalRecycle on their progress in implementing an organic waste recycling program. As of 2019, businesses with four or more cubic yards of total weekly collection service are covered by the law.

ADC – Alternative Daily Cover is material other than earthen material that is placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. Federal regulations require landfill operators to use six inches of earth material as daily cover unless other materials are allowed as alternatives. CalRecycle has approved 11 ADC material types. Generally, these materials must be processed so that they do not allow gaps in the exposed landfill face.

CalRecycle. The California Department of Resources Recycling and Recovery, known as CalRecycle, is a department within the California Environmental Protection Agency. CalRecycle administers and provides oversight for all of California's state-managed non-hazardous waste handling and recycling programs, enforces AB 939 and other state legislation, supports local enforcement agencies (LEAs), and provides payments and grants to industry and local jurisdictions. It provides oversight and assistance to local governments.

CO2e. Carbon dioxide equivalent, used to measure metric tons of carbon dioxide in the atmosphere.

CY. Cubic Yards

CYY. Cubic Yards per Year

EAR. The CalRecycle Electronic Annual Report is the legally required annual self-evaluation of solid waste diversion performance. Report demonstrates compliance with state law, including AB 939, AB 1826, AB 341, and others.

GHG. A greenhouse gas is any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect or atmospheric warming. Carbon dioxide, methane, and water vapor are the most important greenhouse gases.

HHW. Household Hazardous Waste are common products used in daily life that contain potentially hazardous material and require special care when disposed.

HHWE. The Household Hazardous Waste Element is a countywide planning document which identifies a program for the safe collection, recycling, treatment, and disposal of hazardous wastes that are generated by households.

Highest and Best Use. Highest and best use reflects a hierarchy of priorities in approaching solid waste, in which

activities are categorized from the most favorable to the least favorable. The most favorable or highest activity is prevention of waste, while the least favorable or lowest is disposal.

JPA. A Joint Exercise of Powers Agreement is the legal foundation of the Waste Management Authority. The JPA is an agreement among the County of Alameda, each of the 14 cities within the county, and the two sanitary districts that provide refuse and recycling collection services.

LTF. The Local Task Force, created pursuant to AB 939, is an entity that assists in the development of the city and County Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and reviews the Countywide Element. The Alameda County Recycling Board serves as the local LTF.

MRF. A Material Recovery Facility is a specialized plant that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers. Commonly pronounced "Murf."

MSW. Municipal Solid Waste – more commonly known as trash or garbage – consists of everyday items used then thrown away.

NDF. Non-disposal facility, typically materials recovery facilities, compost facilities, and transfer stations. Recycling centers, drop-off centers and household hazardous waste facilities are also considered non-disposal facilities.

NDFE. One of a jurisdiction's planning documents, a Non-Disposal Facility Element identifies CalRecycle-permitted non-disposal facilities (NDFs) used by a jurisdiction to help reach diversion mandates.

Payload. Payload is the cargo capacity of a vehicle, exclusive of what is necessary for its operations.

Roll-Off. Roll-off containers are specialized, large capacity, open top dumpsters designed for use with special vehicles. Containers typically have between 10 and 40 cubic yards of capacity.

SB 1383. SB 1383 (Lara, Chapter 395, Statutes of 2016), establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025, and requires recovery of edible food for human consumption.

SRRE. A Source Reduction and Recycling Element is a local planning document that demonstrates how a jurisdiction will meet its AB 939 diversion goals. It includes a program for management of solid waste as well as source reduction, recycling and composting, and environmentally safe transformation and land disposal.

StopWaste. The WMA, Source Reduction & Recycling Board, and Energy Council are three separate organizations that function as one integrated agency collectively known as StopWaste. They share membership (most notably, elected officials from Alameda County jurisdictions), and have both overlapping and distinct responsibilities. In practice, the three organizations are integrated through a single budget and staff.

SWFP. Solid Waste Facility Permits are issued by CalRecycle to regulate the operations of landfills, transfer-processing stations, material recovery facility, compost facilities, and waste to energy facilities.

TPD. Tons per day. TPD-5 specifies that the tonnage based on five operational days, TPD-6 on six days.

TPY. Tons per year.

TS or Transfer Station. A transfer station receives solid wastes, temporarily stores, separates, converts, or otherwise process the materials in the solid wastes, or transfers the solid wastes directly from smaller to larger vehicles for transport.

WMA. The Waste Management Authority provides waste management planning and programs for Alameda County pursuant to the JPA adopted by the County, each of the 14 city councils, and two sanitary district boards.