



To: Peter Slote, City of Oakland
From: Richard Tagore-Erwin
Date: April 1, 2010
Subject: Phase 2 System Design Rough Draft Outline

Executive Summary

To be done:

Background

The City of Oakland approved Resolution #80286 C.M.S. on December 5, 2006 which adopted the Zero Waste Strategic Plan (Plan). The Plan calls for a 90 percent reduction of annual tons sent to the landfill from 400,000 tons per year to 40,000 tons per year by 2020. The City has an opportunity to address these goals in its solid waste franchise agreements.

The City of Oakland's Franchise Agreement of Solid Waste and Yard Waste Collection and Disposal Services (Franchise Agreement with Waste Management of Alameda County (WMAC)) expires on December 31, 2012 as does the Agreement for Residential Recycling Services with California Waste Solutions (CWS). These two agreements form the backbone of the City's solid waste management system and their upcoming expiration has allowed the City to begin the design of a Zero Waste system to implement.

In developing the Zero Waste system, models have been developed to depict the five service scenarios described later in this report. All five scenarios relate to the structure of contracting services and have been tested against the Evaluative Criteria that were approved at the March 10, 2010 City Council meeting. The evaluation criteria consist of the following:

- | | |
|------------------------|-------------------|
| ▪ Customer benefits | ▪ Financial |
| ▪ Health and safety | ▪ Innovation |
| ▪ Environmental | ▪ Regulatory; and |
| ▪ Economic development | ▪ Viability. |

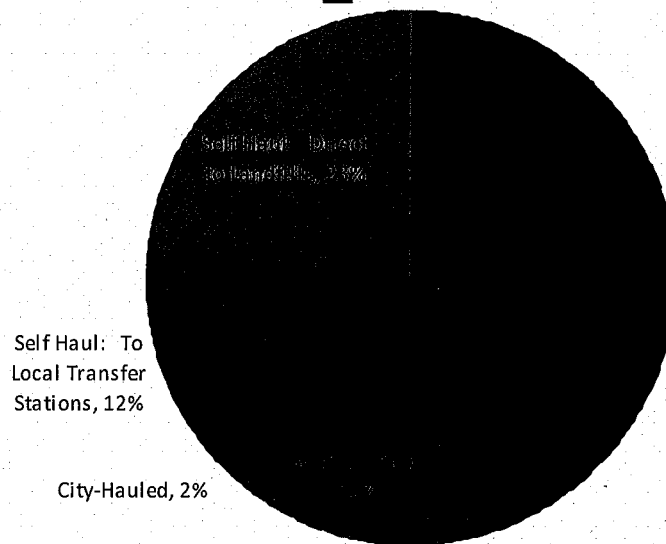
In assessing the possible scenarios and the evaluation criteria, it is important to recognize that the achievement of 90 percent waste reduction will only occur if the focus of programs and requirements are equally shared by residential, commercial, multi-family residential and self-haul sectors. Of these sectors, single-family residential services are the most comprehensive and thus will have a less significant impact on disposal and waste reduction when compared to the other sectors.

Existing Conditions

NOTE TO PETER- DATA NEEDS TO BE CHECKED/UPDATED

Figure 1 shows the major sources of Oakland's solid waste landfilled for 2008, divided into sectors (e.g., single-family residential, multi-family residential, commercial, self-haul). It includes all waste from Oakland that is disposed in landfills, including waste collected by WMAC under the Franchise Agreement, and waste disposed in landfills that is self-hauled by contractors, businesses and residents or hauled directly to local transfer stations, including Waste Management's Davis Street Transfer Station in San Leandro, the City of Berkeley Transfer

Figure 1
Oakland Solid Waste to Landfill
All Sectors 2008



Station.

As shown in Figure 1, the single-family residential sector, where most of the City's recycling programs and resources have been focused to date, constitutes only 16 percent of Oakland's total landfill disposal tonnage. **The remaining 86 percent of solid waste is generated in sectors that do not have the same universal access that single-family residents have to recycling and organics diversion services.**

Table 1 below provides a summary of the disposal trends from 2000 – 2008 and groups the tonnage into the categories of franchised (WMAC) and non-franchised haulers. Non-franchised haulers include:

- Generator self-hauled solid waste collection, transfer and disposal;
- Commercial recycling collection and processing;
- Commercial organics collection and processing
- Construction and demolition (C&D) processing; and
- Non-generator solid waste haulers (i.e., 1-800-got-junk)

Please note that when reviewing Table 1, 2004 and 2008 appear to be anomalies and incorrectly indicate a significant downward trend in disposal; however, the 2000 – 2008 average disposal tonnage of 405,500 tons is only 3,000 tons lower than the average disposal tons when 2004 and 2008 excluded for this same time period. The anomalies in 2004 and 2008 may be due to:

- In 2004, the City experienced a peak in construction projects and had strong growth in business activities. This resulted in above average disposal because diversion programs for commercial and construction sectors were underserved and did not keep pace with the increased economic activity.
- In 2008, the City was in the first full year of the current economic recession with a significant decline in construction projects, and decline in business activities. This resulted in a significant drop in disposal not attributed to diversion programs. This disposal drop is likely to be reversed as the economy rebounds from the recession.

TABLE 1
City of Oakland
Landfill Disposal Tonnage 2000-2008

Year	Franchised		Non-Franchised		Total	
	Tons	%	Tons	%	Tons	%
2000	303,572	72%	119,623	28%	423,195	100%
2001	303,512	73%	114,757	27%	418,269	100%
2002	279,593	69%	125,385	31%	404,978	100%
2003	286,663	70%	122,846	30%	409,509	100%
2004	260,290	56%	202,602	44%	462,892	100%
2005	238,406	57%	178,417	43%	416,823	100%
2006	235,925	60%	159,442	40%	395,367	100%
2007	227,765	58%	163,384	42%	391,149	100%
2008	228,448	70%	98,918	30%	327,366	100%
Total 2000-2008	2,364,174		1,285,374		3,649,548	
Average 2000-2008	262,686	65%	142,819	35%	405,505	

TABLE 1 City of Oakland Landfill Disposal Tonnage 2000-2008						
Year	Franchised		Non-Franchised		Total	
	Tons	%	Tons	%	Tons	%
Average 2000-2003 & 2005-2007	267,919	66%	140,551	34%	408,470	

Table 1 illustrates under the current waste management system even if 100 percent of the current franchised tonnage is diverted from landfill by 2020, the City will fall short of its goal of 40,000 tons disposed. Accordingly, if the 40,000 ton disposal goal by 2020 is to be achieved, continuing with the current system of solid waste management mainly focused on residential generation is not a viable option and significant changes to how the solid waste system is structured, managed and implemented will have to be undertaken.

The sections below highlight the major provisions of the existing solid waste contracts and municipal code that promote and regulate diversion activities.

Exclusive Franchise Agreement with WMAC through 12/31/2012

- a. Residential solid waste collection
- b. Residential solid waste transfer
- c. Residential solid waste disposal including guaranteed landfill capacity for the duration of the franchise
- d. Residential recycling collection (for south/east half of City only)
- e. Residential recycling processing (for south/east half of City only)
- f. Single-family dwelling organics collection and transfer
- g. Single-family dwelling organics processing (Grover, for WMAC)
- h. Commercial solid waste collection (excluding "self-haul")
- i. Commercial solid waste transfer
- j. Commercial solid waste disposal

Residential Recycling Agreement with CWS through 12/31/2012

- a. Residential recycling collection (for north/west half of City only)
- b. Residential recycling processing (for north/west half of City only)

Municipal Code

1. All dwellings (residential and commercial) required to have weekly garbage collection service provided by WMAC
 - a. All tons collected under franchise disposed at Altamont Landfill per franchise
2. Waste generators may self-haul own material to permitted landfill or transfer station
3. Provides that commercial source-separated recyclable materials are excluded from Franchise
 - a. Allows non-franchised operators to:

- i. Haul commercial recyclable materials (including C&D debris and organics)
 - ii. Charge a fee for service to haul commercial recyclable materials
4. Construction and demolition debris recycling ordinance requires affected projects to recycle 100 percent of all asphalt and concrete materials and 65 percent of all other materials.

Do we want to mention existing conditions for revenues and finances?

Overall System Design Considerations

Need to tie to scenarios as "overlay"

In developing the chosen scenario, consideration should be given to creating diversion and waste reduction incentives to customers and haulers through rates and some form of mandates. A brief description of the options is provided below.

Rates, revenues and incentives

In developing the desired structure of contracts, rates, revenue, and incentives; and the regulatory/municipal code must be considered. The aspects of these categories are explored below.

Generators

Rate incentives can be presented in a variety of ways to help influence customers to generate less waste. In most cases the rate the customer pays is tied to the volume of solid waste generated and recycling and organics collection service is provided for a free or reduced cost. Another more direct correlation would be tying the weight of material generated to the service rate paid. This type of program has not been implemented for solid waste, but Recyclebank has developed a similar program to incentivize recycling. The range of incentives for generators include flat rates, progressive/regressive rate structure, fixed base and tiered variable rate structure, self-haul fee at disposal facilities, and "free" recycling and organics collection. Annually adjusting these rates could be based on CPI and refuse rate indices. DO YOU WANT MORE NARRATIVE ON THE VARIOUS RATE STRUCTURES?

Service Providers

Any incentives for the collection-processing service providers should be part of the franchise agreement structure. While incentives can be financial, the strength of the incentives and enforcement revolve around minimum standards. For example, having minimum diversion requirements and tiers for exceeding the requirement can have financial rewards or penalties if the level(s) are not met. In most cases, this type of incentive is included as part of the rate adjustment. A variation of this incentive includes using the diversion requirement achievement as a qualifier for contract extensions. DO YOU WANT MORE DETAIL?

Non-Franchised Haulers

Encouraging diversion from these service providers depends on incentives to promote "highest and best use". Ways of promoting this can be including provisions in permits or applicable ordinances (e.g., construction and demolition). Specific aspects of "highest and best use" can include reuse/repair, deconstruction, local remanufacturing, start-up funding/help with siting, tiered/discounted business licenses, local Extended Producer Responsibility/take-back, etc.

Regulatory/Municipal Code

Mandates

Mandates can be used to promote waste reduction in all sectors. The range of applicability can also be applied to collection services and be City-specific or tied to state mandates. Depending on the types of mandates developed, additional compliance monitoring/enforcement resources and strategies may be required. DO YOU WANT TO LIST SPECIFIC MANDATES?

Commercial Recycling Permit

The permit system can be implemented to regulate the non-franchised commercial recycling and give the City more influence in encouraging diversion of collected materials. As part of the permit, the City can define the insurance and diversion requirements, and establish fees paid to the City based on collection and/or diversion. DO YOU WANT MORE DETAIL?

Self-Haul/Direct-Haul

Collection and disposal by this sector is not part of the franchise system and likely currently does not have any incentive to divert material besides tipping fees at transfer stations and landfills. The City can set minimum requirements for diversion and insurance, establish fees paid to the City based on collection and/or diversion, and establish the types of material to be covered and exclusions (i.e., source-separated recyclables).

Scenario Descriptions

In conjunction with Overall System Design Considerations as introduced above, there are five scenarios that have been developed to achieve the City's disposal reduction objectives and have greater diversion impact on the non-residential waste streams. Each scenario consists of different contract structures. The categories of service are described below and the designation of contracts managing them is described in each scenario.

Areas of Service and Description

1. **Single-Family Dwellings (SFD).** Collection of recycling, organics, and msw (garbage); and Processing of recyclables and/or Material Recovery Facility of waste (MRFing).
2. **Multi-Family Dwellings (MFD).** Collection of recycling, organics, and msw; and Processing of recyclables and/or MRFing of waste.
3. **Commercial.** Collection of recycling, wet/dry collection routes, dusty/rich loads (i.e. loads with less than 10 percent msw), other services to be determined, organics and msw and Processing of the different collected material.
4. **MSW Transfer and Landfill (TS, LF).** Includes the MSW transfer of waste and landfilling of msw.

Scenario 1: Services by Sector

In this scenario, there could be four contracts:

Table 2 Scenario 1		
Sector	Number of Contracts	Type of Service Included

SFD	1	All services
MFD	1	Two or three services (could be recycling, organics, msw; or recycling and MRFing MSW)
Commercial	1	All services (5 or more)
TS, LF	1	Both services

Scenario 2: Services by Sector with Small Business Coupled with MFD

In this scenario, there could be four contracts:

Table 3 Scenario 2		
Sector	Number of Contracts	Type of Service Included
SFD	1	All services
MFD	1	Same as Scenario 1, but includes small businesses
Commercial	1	Same as Scenario 1, but excludes small businesses
TS, LF	1	Both services

Scenario 3: Service by Sector with Separate Citywide Residential Recycling

In this scenario, there could be six contracts:

Table 4 Scenario 3		
Sector	Number of Contracts	Type of Service Included
SFD	2	One for organics and msw, and separate contract for recycling service (includes MFD recycling service)
MFD	2	Same as Scenario 1, but recycling service would be a separate recycling contract (includes

Table 4 Scenario 3		
Sector	Number of Contracts	Type of Service Included
		residential recycling service)
Commercial	1	Same as Scenario 1
TS, LF	1	Both services

Scenario 4: Services Across all Sectors

In this scenario, there could be four following contracts:

Table 5 Scenario 4		
Sector	Number of Contracts	Type of Service Included
SFD	3	Contract 1: Recycling service for all sectors
MFD		Contract 2: Organics service for all sectors
Commercial		Contract 3: MSW service for all sectors
TS, LF	1	Both services

Scenario 5: Status Quo All services, Two Contracts

In this scenario, there are the two following contracts:

Table 6 Scenario 5		
Sector	Number of Contracts	Type of Service Included
SFD	2	Contract 1: Recycling, organics, msw, TS and disposal
MFD		
Commercial		Contract 2: Recycling service at SFD and MFD

TS, LF		
--------	--	--

PETER—do we want to introduce this concept before the general scenario descriptions?

Unbundling Transfer/Disposal from Collection and Processing

In Scenarios 1-4, the transfer/disposal contract is unbundled from collection and processing of materials. This means that the City would direct its franchised hauler(s) to utilize the transfer/disposal facility(ies) it has under contract. The City could utilize this “unbundling” of collection from disposal to provide financial incentives to the City's franchised hauler(s) to indirectly **improve diversion performance** from the commercial and multi-family sectors. This could be done by the use of disposal fees that significantly increase the cost of disposal in comparison to processing. This would also support the policy goal of **discontinuing landfilling as the default** option.

Unbundling disposal from collection would also provide financial incentives to support Zero Waste Goals by:

- **Limiting landfill as the default option** for all sectors through strong financial incentives to dissuade the use of disposal as the first primary option;
- **Influencing local recycling and organic processors** to build new or expanded existing processing capacity in anticipation of receiving increased recyclables, organics, or mixed waste to processes; and
- Providing limited **incentives** to the **self-haul sector** to adopt more aggressive diversion programs by requiring the contracted transfer/disposal facilities to charge a disposal rate to Oakland originated disposal tons that is higher than the “open market” disposal rates. However, the effectiveness of this would hinge on 1) accurate and honest reporting of tonnages by Oakland's self-haul sector and the contractor transfer/disposal facility, 2) adopting a City ordinance that would require Oakland's self-haul sector to only use the contracted transfer/disposal facilities, and 3) aggressive enforcement by Oakland for the self-haul sector and the contracted transfer/disposal facility to comply with the ordinance and/or contract.

Unbundling collection from disposal would also provide a more competitive environment for procuring any new collection services because:

- All potential collection service providers would know with 100% certainty the cost for transfer/disposal and this would be the same cost for all service providers;
- Potential collection service providers that do not own/operate landfills or transfer stations would be on the same competitive footing with those companies that are able to subsidize their collection costs through ownership/operation of such facilities; and
- Award of contracts to provide collection services would be based on the qualifications, technical and financial merits of a company that provides only collection services.

Application of Evaluative Criteria to Scenarios

The adopted evaluative criteria by which the five scenarios are compared against are identified in Table 7. For each category, the scenario is ranked 1-10, with 10 meaning the scenario has the strongly aligns with the adopted criteria. The results of the evaluation are presented in Table 8.

PETER-YES OR NO ON INCLUDING THE FOLLOWING TABLE??

Table 7 Evaluative Criteria Adopted by City Council	
Category	Evaluative Criteria
1. Customer Benefits	High quality, reliable and convenient services
	Universal access to recycling services, including organics recycling
	Opportunity for residents and businesses to reduce greenhouse gas emissions through the use of recycling services
	Value to ratepayers
2. Health and Safety	Enhances public health and safety
	Sanitary management of all discarded materials
	Air quality impacts
3. Environmental	Reduction in tons to landfill
	Adheres to <i>Environmental Hierarchy</i> of resource conservation established in <i>Zero Waste Strategic Plan</i>
	GHG emissions reductions/carbon footprint (local and outside of community inventory)
4. Economic Development	Job creation – net employment gain
	Compatibility with existing commercial recycling market
	Supports development of diverse employment opportunities associated with processing, manufacture, and sales by discards-based businesses
5. Financial	Revenue to City
	Cost to City to administer system
	Avoid future City liabilities
	Cost to ratepayers
	Clear, consistent and progressive pricing signals to customers/ratepayers and service providers to incentivize waste reduction and increased recycling
	Resilient to recycling commodities markets fluctuations
6. Innovation	Allows for and encourages system innovation and evolution over time
	Utilizes local, available, capitalized public or private infrastructure
	Ability to meet current and future market needs for recycled materials
	Ability to incorporate reuse
7. Regulatory	Ability to accommodate mandatory recycling and landfill material bans
	Ability to meet current and future market needs, conditions, applicable laws, ordinances, regulations, and permit requirements
8. Viability	Ability of waste and recycling services industry to provide services as envisioned

WE NEED TO DISCUSS HOW BEST TO APPLY THE CRITERIA AND HOW MUCH DETAIL IS NEEDED

Table 8
Application of Evaluative Criteria to Scenarios

Scenario 1: Services by Sector							
Customer Benefits	Health & Safety	Environmental	Economic Development	Financial	Innovation	Regulatory	Viability
Scenario 2: Services by Sector with Small Business Coupled with MFD							
Customer Benefits	Health & Safety	Environmental	Economic Development	Financial	Innovation	Regulatory	Viability
Scenario 3: Service by Sector with Separate Citywide Residential Recycling							
Customer Benefits	Health & Safety	Environmental	Economic Development	Financial	Innovation	Regulatory	Viability
Scenario 4: Services Across All Sectors							
Customer Benefits	Health & Safety	Environmental	Economic Development	Financial	Innovation	Regulatory	Viability
Scenario 5: Status Quo							
Customer Benefits	Health & Safety	Environmental	Economic Development	Financial	Innovation	Regulatory	Viability

Total points:

Results and Analysis

Need to have results from models

COMPARISONS

PROJECTED DIVERSION

PROJECTED COST

PROJECTED REVENUE

MARKET ACCEPTANCE

TIMING

Recommended Preferred ZW System Design Conclusion

PROJECTED RESULTS

PROJECTED RATE IMPACT ON CUSTOMERS

NEXT STEPS

ROUGH OUTLINE DRAFT 4-1-10