

Northern Nevada and Eastern Mountain Region of California Solid Waste Management Assessment

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Vedauwoo resources, LLC (VRL) is consulting firm focused exclusively on municipal solid waste services, specializing in management of MRF project development, commissioning and performance testing; municipal solid waste and recycling composition studies; solid waste system planning, procurement and operational assessments; economic feasibility and rate studies; and, municipal solid waste program strategic planning and infrastructure analysis.

The firm was founded by Joe Sloan in 2000. With offices in Southern California, VRL provides solid waste and recycling advisory services to both public and private sector solid waste and recycling enterprises throughout the United States and beyond. Our firm offers a unique perspective, as all of our staff members have worked in the industry and possess hands-on expertise and working knowledge of solid waste and recycling program management and service delivery.

VRL provides a wide array of waste management and recycling consulting services for public and private sector clients throughout the United States.

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EXECUTIVE SUMMARY

Vedauwoo Resources, LLC (VRL) conducted a Regional Municipal Solid Waste (MSW) Assessment to analyze the availability and composition of MSW within a geographic waste shed of Northern Nevada and the Eastern Mountain Region of California. All tonnage discussed in this report is net of recycling, as disposed values, unless otherwise stated.

Total MSW

Summary of MSW in Region

- Approximately 1.75 million tons per year of MSW is currently disposed of in landfills within the study radius in the eastern California mountain area and northern Nevada.
- The per capita waste generation rate for the Eastern California Area and Nevada is 5.15 pounds per person and 6.98 pounds per person, respectively. The Nevada average is higher than California. This is primarily due to the significant impact of tourism on Nevada waste generation, and the smaller population over which the additional tonnage generated at casinos and other tourist destinations is spread.
- Approximately 192,232 tons per year of the MSW is disposed of in Nevada from California jurisdictions into the Lockwood Landfill.
- The capacity of California landfills located in the eastern mountain region, which already have significantly less capacity and shorter lifespans than landfills located in all other California regions, will continue to decrease, resulting in both higher tipping fees and an increased demand for alternative options for MSW. Concurrently, as California's diversion requirements escalate, jurisdictions will place a higher value on disposal alternatives. Regional opportunities to reduce disposal costs and increase diversion rates could serve as a strong incentive for both public and private entities to transport additional tonnage out of California. In addition, the effect of the enacted California Assembly Bill (AB) 11383, requiring most businesses to divert organics (e.g. food waste and yard waste) from the MSW stream, should increase the proportion of materials with carbon-rich materials (e.g. paper, cardboard, wood, textiles, and plastics) in the waste stream and reduce the processing costs for the production of feedstock for the biorefinery.

Summary of Waste Hauling Contracts and Franchises

- Approximately 1/3 of the MSW in the California portion of the study radius is secured under long-term disposal commitments with private companies. Another 1/3 is currently flow-controlled by regional waste management authorities to public landfills in Lassen and Placer counties that require the ongoing influx of MSW in order to generate the revenues necessary to cover current and future landfill operation and closure costs.
- In the City of Reno, WM built a MRF, the EcoCenter, and features a single-stream sort line, which began operations in 2017. The recyclables collected in Washoe County are sent to the EcoCenter for initial processing to separate, cardboard and glass, and mixed containers for

recovery. Carboard is baled and sold into recycling markets. Glass is recovered and used as landfill cover. Residual materials are sent to the Lockwood Landfill. The mixed containers separated from the single stream material are transported to WM facilities in Sacramento, California for further processing and recovery.

- An added benefit of the EcoCenter is that the residual and contaminated materials extracted from the recycling stream during processing will become part of the local, Washoe County waste stream.

Assessment MSW Supply

- The competitive landscape for the MSW generated within the region is limited. While there are landfills located throughout Nevada and California, most sites within the study radius, with the exception of Lockwood Regional Landfill, have limited capacity. MRF's designed and equipped for the processing of MSW to extract recyclables, which is commonly known as "dirty MRFing", has become less popular in recent years as the commodity markets have lost significant value and the exportation of commodities to China has stalled. Not only is there less demand for recyclables in China, but the quality standards for material have also increased after the exporting of commodities with significant contamination levels resulted in regulations widely known as the "Green Wall" of China and more stringent requirements for the export of non-contaminated commodities.
- Typically, a private company like WM seeks to internalize MSW tonnage collected through its hauling operations into company owned landfills, as this is the most profitable approach. However, this model assumes that landfilling is the only option available for the MSW, and that the only alternative to internalizing the material is to pay a competitor or municipality for disposal. Diverting MSW from the Lockwood Regional Landfill to the Feedstock Processing Facility will not result in the added costs typically associated with non-company landfill disposal; rather, this creates the potential for increasing the profitability of the company's own landfill asset, which is achieved through the ability to accept additional third-party hauled MSW volume at premium rate that is typically much higher than intercompany rates (the per-ton rate charged by the WM landfill to the WM hauler). Even if WM is unable to secure an equivalent volume of third party hauled MSW to replace the diverted WM tonnage, the company benefits by extending the useful life of the landfill asset through the reduction in daily throughput.
- In addition to the Lockwood Regional Landfill operational benefits, there may be company-wide benefits for WM by increasing available capacity within their landfill network. For example, there could be an advantage to diverting MSW from WM collection operations beyond the study radius to the Lockwood Regional Landfill in order to increase the availability of valuable capacity at other WM landfills. California's disposal rates have increased considerably over the past twenty years.

- It is important to note that in some California regions where there is significant landfill density and capacity coupled with mature recycling programs (e.g. 75 percent diversion rates, mandated recycling for commercial and residential customers, and robust organics recycling), a phenomena has occurred where landfill tipping rates have reduced in response to the significantly increased diversion and subsequently reduced demand for disposal. While the new C&D processing system planned for El Dorado and the EcoCenter featuring a single-stream recycling sortline may have a small impact on MSW volume, VRL does not anticipate the region located within the study radius to experience this type of phenomena, as driving factors such as legislated goals of 75% diversion in California, mandated recycling participation and extensive organics recycling programs are not in place in Reno, NV. There are significant and escalating costs associated with each incremental increase in diversion. After achieving the low-hanging-fruit of C&D processing and residential, curbside, commingled-recyclables collection and single-stream processing, and it is highly unlikely that WM would independently implement additional recycling programs and services that exceed Nevada’s requirements. The capital and operating costs required for initiating an organics program, including both the collection and the processing infrastructure, is cost prohibitive and is rarely initiated without the impetus of local ordinances or state legislation. Catching up with California’s recycling laws and infrastructure would require an enormous amount of political will and public/private financing. Although many of the major corporations doing business in Nevada (primarily vacation/resort and gaming enterprises) have adopted sustainability policies, public sentiment has not supported the addition of costly, large-scale environmental services. Without the space constraints and land use issues unique to California, it is highly unlikely that Nevada will replicate California’s diversion levels in the near or distant future.

MSW Composition:

Estimated Baseline MSW Composition Profiles

- Waste characterization studies conducted by CalRecycle in 2021 and by the U.S. Environmental Protection Agency in 2018 are shown in a comparison depicted in Figure 1.

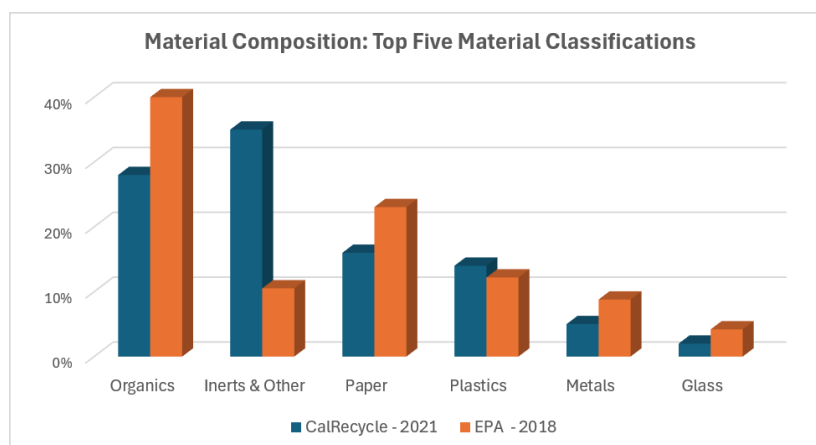


Figure 1: Material Composition Comparative Summary

Recycling Program Implementation

- Diversion results are significantly different in California and Nevada. This variance is due to the long-term implementation of a comprehensive recycling mandate in the State of California that has, over time, generated diversion rates among the highest in the nation. Nevada's recycling programs feature minimal requirements, with varying requirements that correspond to the size of a county's population.
- California's AB 939, which was passed in 1989, mandated 50 percent diversion from landfills, and included monetary penalties for municipalities failing to implement programs and demonstrate progress resulting in significant and sustained levels of diversion throughout the state. According to California's 2014 State of Recycling report, California achieved a consistent 65 percent statewide diversion rate equivalent. However, the report also states that "it is also important to consider the total amount of waste generated in California in addition to the diversion rate. The total tons of diverted waste has increased in the last 25 years at roughly the same rate as increases in the amount of generated waste. In contrast, the total tons of disposed material has only moderately decreased.
- The Nevada legislature passed AB 320 in 1991 to establish a state-wide recycling goal 25 percent. Nevada first achieved that rate in 2011 recycling 25.3 percent and again in 2012 and 2013 with a 28.8 percent and 25.1 percent recycling rate, respectively. In 2011, Washoe County adopted Regulation 062.200 - Diversion of Solid Waste to a Materials Recovery Facility, requiring that by 2015 at least 35 percent of the solid waste generated or disposed within Washoe County must be recycled or diverted from disposal at a municipal solid waste landfill. In 2013, Washoe County achieved a recycling rate of 36.5 percent.
- The recycling rate of the Reno-Sparks region will likely continue to outpace the State of Nevada with the Reno EcoCenter, which features sorting equipment and supports WM's curbside single-stream recycling program in the City of Reno. WM reports that there is currently a 75 percent participation rate, and in 2014, the EcoCenter processed approximately 15,000 residential recycling. The mixed containers are separated into cardboard, glass, residual and mixed containers from the single stream materials. Cardboard is sold into recyclable material markets and recovered glass is used for cover at the Lockwood Landfill. Residual is separated and transferred for disposal. Mixed containers are transported to WM's MRF facility in Sacramento, California for processing.
- The recycling commodities markets have seen fluctuations over the years. The changes in the Chinese economy also impacts recyclable materials. With any commodity, this trend will continue to vacillate, depending on other global economic factors, improved technologies for the processing and use of recyclable materials, and the initial generation of materials at the source. Market prices will continuously rise and fall, but the timing is unpredictable. The commodity market will continue to be influenced by market changes including increased scrutiny of exported recyclables and commodity values that offset the processing costs. Yet, the demand for recycled commodities will continue to grow due to the rising costs of producing virgin feedstock.

- When the processing of recyclables is not highly lucrative, private companies tend to more carefully scrutinize the diminishing returns associated with achieving the highest percentages of recyclable material extraction through processing. As a result, they are more likely to favor quality over quantity of processed recyclables, which results in higher percentages of residual material. Additionally, when recycling commodity returns are low, and there is not a legislated mandate for diversion, private companies are more likely to consider, simply leaving such materials in the MSW disposal stream.

MSW SUPPLY

Summary of MSW Supply in Region

The radius study includes the California counties of El Dorado, Lassen, Nevada, Placer, Plumas, Sierra and Yuba and the Nevada counties of Carson City, Churchill, Douglas, Humboldt, Lyon, Pershing, Storey and Washoe. Combined, these counties represent 1.7 million population and together, they conservatively dispose of over 1.7 million tons of post-recycled municipal solid waste annually.

Table 1: Total Combined Population and Tonnage in Study Radius

Jurisdiction	Population	Disposal Tonnage
El Dorado, Lassen, Nevada, Placer, Plumas, Sierra, and Yuba Counties	973,737	821,812
Carson City, Churchill, Douglas, Humboldt, Lyon, Pershing, Storey and Washoe Counties	730,830	930,341
Total	1,704,567	1,752,153

The per capita waste generation rate for California and Nevada is 5.15 pounds per person and 6.98 pounds per person, respectively. Waste generation in Nevada is higher than California on a per-person basis. This is primarily due to the significant impact of tourism on Nevada waste generation, and the smaller population over which the additional tonnage generated at Casinos and other tourist destinations is spread. This additional waste is typically organics (food and green waste) and recyclables (paper, cardboard and plastic).

California Regional Overview

California Population and Tonnage Identified within Study Radius

The current and ongoing availability of MSW tonnage in the California counties located within the study radius are based on a number of factors, including existing population and disposal trends. The following table provides the most recent data available: the population for 2024 as estimated by the U.S. Census, or each of the identified California counties that are required to submit disposal tonnage data to CalRecycle.

Table 2: California Tonnage and Population within Study Radius

California Jurisdiction	2024 Estimated Population	2024 Disposal Tonnage
El Dorado County	192,323	156,690
Lassen County	28,117	18,802
Nevada County	101,911	90,243
Placer County	442,081	334,371
Plumas County	18,583	22,366
Sierra County	3,098	4,480
Yuba / Sutter County	187,624	194,861
TOTAL	973,737	821,813

California Tonnage Exported to Nevada

Included within the total disposal tonnage data is the number of tons exported from California to Nevada for landfilling. The exported tonnage for the California counties within the study radius is almost exclusively sent to Lockwood Regional Landfill. Each year, material is exported to landfills out of the state of California for a variety of reasons including convenience, proximity and lower costs.

Table 3 details the tonnage sent from California to Nevada in 2024.

Table 3: Total 2013 Exported Tonnage from Study Radius (California to Nevada)

California Jurisdictions	2024 Exported Disposal Tonnage
El Dorado County	42,802
<i>El Dorado – Unincorporated County</i>	<i>11,247</i>
<i>South Lake Tahoe</i>	<i>31,555</i>
Lassen County	1,086
Nevada County	82,286
<i>Nevada – Unincorporated County</i>	<i>44,814</i>
<i>Grass Valley</i>	<i>12,450</i>
<i>Nevada City</i>	<i>2,706</i>
<i>Truckee</i>	<i>22,316</i>
Placer County	17,912
<i>Placer-Unincorporated</i>	<i>15,998</i>
<i>Portola</i>	<i>1,914</i>
Plumas County	20,011
Sierra County	4,464
Yolo / Sutter County	5
TOTAL	168,566

Breakdown of California Jurisdiction Population and Tonnage

El Dorado County

Table 4: Population Growth - El Dorado County

2020 Population	191,237
2024 Est. Population	192,323
Growth (%)	0.6%



Figure 2: El Dorado County, California

Table 5: Disposal Data - El Dorado County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
El Dorado	El Dorado Unincorporated	160,403	110,887
	Placerville	10,695	13,897
	South Lake Tahoe	21,225	31,700
	Total	192,323	156,484

Table 6: MSW Tonnage Exported to Nevada - El Dorado County

Jurisdiction	2021	2022	2023	2024
El Dorado Unincorporated	12,305	11,874	10,950	11,247
South Lake Tahoe	30,653	31,496	34,894	31,555
Total	42,958	43,370	45,844	42,802

Lassen County

Table 7: Population Growth - Lassen County

2020 Population	32,349
2024 Est. Population	28,117
Growth (%)	-15.1%



Figure 3: Lassen County, California

Table 8: Disposal Data - Lassen County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Lassen	Lassen Regional Solid Waste District	28,117	18,802
	Total	28,117	18,802

MSW Tonnage Exported to Nevada

Table 9: MSW Tonnage Exported to Nevada - Lassen County

Jurisdiction	2021	2022	2023	2024
Lassen County	1,055	1,020	1,312	1,086
Total	1,055	1,020	1,312	1,086

Nevada County

Table 10: Population Growth - Nevada County

2020 Population	102,280
2024 Est. Population	101,911
Growth (%)	-0.4%



Figure 4: Nevada County, California

Table 11: Disposal Data - Nevada County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Nevada	Grass Valley	14,085	16,044
	Nevada City	3,195	4,263
	Nevada Unincorporated	67,391	47,581
	Truckee	17,240	22,354
	Total	101,911	90,242

Table 12: Exported MSW Tonnage - Nevada County

Jurisdiction	2021	2022	2023	2024
Nevada - Unincorporated	39,744	38,516	47,864	44,814
Grass Valley	11,555	10,705	6,460	12,450
Nevada City	2,362	3,771	3,313	2,706
Truckee	22,063	21,721	31,406	22,316
Total	75,724	74,713	89,043	82,286

Placer County

Table 13: Population Growth - Placer County

2020 Population	405,971
2024 Est. Population	442,081
Growth (%)	8.2%



Figure 5: Placer County, California

Table 14: Disposal Data - Placer County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Placer	Auburn	13,780	19,728
	Colfax	2,058	2,541
	Lincoln	56,268	38,074
	Loomis	6,939	8,664
	Placer – Unincorporated	124,603	96,222
	Rocklin	75,129	44,119
	Roseville	163,304	125,022
	Total	442,081	334,370

Table 15: Exported MSW Tonnage - Placer County

Jurisdiction	2021	2022	2023	2024
Placer - Unincorporated	18,225	18,238	23,307	15,998
Total	18,225	18,238	23,307	15,998

Plumas County

Table 16: Population Growth - Plumas County

2020 Population	19,745
2024 Est. Population	18,583
Growth (%)	-6.3%

Table 17: Disposal Data - Plumas County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Plumas	Plumas Unincorporated	16,497	20,452
	Portola	2,086	1,914
	Total	18,583	22,366



Figure 6: Plumas County, California

Table 18: Exported MSW Tonnage - Plumas County

Jurisdiction	2021	2022	2023	2024
Plumas Unincorporated	21,389	21,799	23,125	20,011
Portola	1,799	1,843	2,109	1,914
Total	23,188	23,642	25,234	21,925

Sierra County

Table 19: Population Growth - Sierra County

2020 Population	3,226
2024 Est. Population	3,098
Growth (%)	-4.1%

Table 20: Disposal Data - Sierra County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Sierra	Sierra County Regional Agency	3,098	4,480
	Total	3,098	4,480



Figure 7: Sierra County, California

Table 21: Exported MSW Tonnage - Sierra County

Jurisdiction	2021	2022	2023	2024
Sierra County Regional Agency	4,371	4,115	3,832	4,464
Total	4,371	4,115	3,832	4,464

Yuba / Sutter County

Table 22: Population Growth - Yuba / Sutter County

2020 Population	181,459
2024 Est. Population	187,624
Growth (%)	3.3%

Table 23: Disposal Data - Yuba County

County	Jurisdiction	2024 Est. Population	2024 Disposal Tonnage
Yuba	Yuba/Sutter Reg. Waste Authority*	187,642	194,861
	Total	187,624	194,861

* Numbers for population and tonnage include Sutter County, California



Figure 8: Yuba County, California

MSW Tonnage Exported to Nevada

No MSW was reported as exported to Nevada from Yuba County between 2010 and 2013.

Nevada Regional Overview

Nevada Population and Tonnage Identified within Study Radius

In Nevada, the jurisdictions featuring the proximity, population, density and corresponding MSW volume necessary to supply impactful tonnage available to the Feedstock Processing Facility include Carson City, Churchill, Douglas, Humboldt, Lyon, Pershing, Storey and Washoe counties. According to the U.S. Census, in 2024 these jurisdictions has an estimated population of over 730,000.

Recycling and disposal tonnage data is reported to the Nevada Division of Environmental Protection by each county. Disposal tonnage is categorized as MSW and C&D materials. Based on total disposal and C&D materials, the identified counties generate over 930,000 tons of MSW and 443,000 tons of C&D materials.

Table 24: Tonnage and population of Nevada counties within established radius

Nevada Jurisdiction	2024 Estimated Population	2024 Disposed MSW	2024 Disposed C&D	2024 Total Disposed MSW (including C&D)
Carson City	58,300	158,777	214,189	372,966
Churchill County	25,955	55,077	8,000	63,077
Douglas County	49,591	34,600	1,997	36,597
Humboldt County	17,178	28,765	2,219	30,985
Lyon County	63,776	62,274	419	62,693
Pershing County	6,465	3,843	1,737	5,581
Storey County	4,181	18,449	211,639	230,088
Washoe County	505,384	568,556	2,901	571,458
TOTAL	730,830	930,341	443,103	1,373,445

Breakdown of Nevada Jurisdiction Population and Tonnage

Carson City

Table 25: Population Growth - Carson City

2020 Population	58,688
2024 Est. Population	58,300
Growth (%)	-0.7%

Table 26: Disposal Data - Carson City

County	2024 Disposed MSW (tons)	2024 Disposed C&D (tons)	Total 2024 Disposed Material (tons)
Carson City	158,777	214,189	372,966



Figure 9: Carson City Nevada

Churchill County

Table 27: Population Growth - Churchill County

2020 Population	25,570
2024 Est. Population	25,955
Growth (%)	1.5%

Table 28: Disposal Data - Churchill County

County	2024 Disposed MSW (tons)	2024 Disposed C&D (tons)	Total 2024 Disposed Material (tons)
Churchill	55,077	8,000	63,077



Figure 10: Churchill County, Nevada

Douglas County

Table 29: Population Growth - Douglas County

2020 Population	49,525
2024 Est. Population	49,591
Growth (%)	0.1%

Table 30: Disposal Data - Douglas County

County	2024 Disposed MSW (tons)	2024 Disposed C&D (tons)	Total 2024 Disposed Material (tons)
Douglas	34,600	1,997	36,597



Figure 11: Douglas County, Nevada

Humboldt County

Table 31: Population Growth - Humboldt County

2020 Population	17,270
2024 Est. Population	17,178
Growth (%)	-0.5%

Table 32: Disposal Data - Humboldt County

County	2024 Disposed MSW (tons)	2024 Disposed C&D (tons)	Total 2024 Disposed Material (tons)
Humboldt	28,765	2,219	30,984



Figure 12: Humboldt County, Nevada

Lyon County

Table 33: Population Growth - Lyon County

2020 Population	59,464
2024 Est. Population	63,776
Growth (%)	7.3%

Table 34: Disposal Data - Lyon County

County	2024 Disposed MSW (tons)	2024 Disposed C&D (tons)	Total 2024 Disposed Material (tons)
Lyon	62,274	419	62,693



Figure 13: Lyon County, Nevada

Pershing County

Table 35: Population Growth - Pershing County

2020 Population	6635
2024 Est. Population	6,405
Growth (%)	-2.6%

Table 36: Disposal Data - Pershing County

County	2024 Disposed MSW (tons)	2024 Disposed Industrial/ C&D (tons)	Total 2024 Disposed Material (tons)
Pershing	3,843	1,737	5,580



Figure 14: Pershing County, Nevada

Storey County

Table 37: Population Growth - Storey County

2020 Population	4,108
2024 Est. Population	4,181
Growth (%)	1.8%

Table 38: Disposal Data - Storey County

County	2024 Disposed MSW (tons)	2024 Disposed Industrial / C&D (tons)	Total 2024 Disposed Material (tons)
Storey	18,449	211,639	230,088

*Not reported



Figure 15: Storey County, Nevada

Washoe County

Table 39: Population Growth - Washoe County

2020 Population	487,728
2024 Est. Population	505,384
Growth (%)	3.6%

Table 40: Disposal Data - Washoe County

County	2020 Disposed MSW (tons)	2024 Disposed Industrial / C&D (tons)	Total 2024 Disposed Material (tons)
Washoe	568,556	2,901	571,458



Figure 16: Washoe County, Nevada

Summary of Waste Hauling Contracts / Franchise Agreements

Franchise Agreement Overview

The majority of material disposed within the study area is under contract with WM and Waste Connections. The remaining volume is hauled either by municipal staff or small, family-owned companies, with the exception of Yuba County, California where the hauling contract is with Recology. In some franchise agreements, the municipality assigns ownership of the MSW at the point of collection and allow the hauler to determine disposal destination which is the case with the MSW volume in El Dorado, which is controlled by Waste Connections. Other franchise agreements contain language that allows the municipality approval rights should the current disposal destination be changed, or in most cases, if a change in disposal destination increases service rates. The counties that operate or host a landfill, including Placer and Yuba Counties in California and Carson City in Nevada.

Flow control is a component of some municipal franchise agreements and gives state and local governments the authority to designate or approve the ultimate destination where MSW is taken for processing, treatment, or disposal.

Waste Management

Refuse, Inc., a subsidiary of WM, Inc., owns and operates the Lockwood Regional Landfill, located in Storey County, Nevada. The NDEP reports that the daily volume of waste received at the Lockwood Regional Landfill, based on a five (5) day work week (260 working days per year), is approximately 5,000 tons per day of waste. This estimated waste volume incorporates MSW as well as C&D debris. Additionally, WM provides hauling services in Carson City, Douglas, Lyon and Washoe Counties. According to *Waste 360*, WM serves over 131,000 customers in Northern Nevada.

Carson City, Nevada

Capital Sanitation Company, a subsidiary of WM, Inc., provides solid waste service for Carson City, which is officially known as the Consolidated Municipality of Carson City. With a population of 58,688, the volume of municipal solid waste is estimated to be around 158,777 tons per year. The MSW is sent to the Carson City Landfill, which is owned by the municipality and operated by the City of Carson City.

Washoe County, Nevada

The two largest cities in Washoe County, Reno and Sparks, make up 69 percent of the population of Washoe County and generate the majority of the County's municipal solid waste. Apart from a small service provider, Independent Sanitation, Co., which is located in Incline Village near Lake Tahoe, all solid waste services in Washoe County are provided by companies owned and operated by WM, Inc. These include Reno Disposal, Sparks Sanitation, Incline Village Sanitation and Capital Sanitation.

Reno

On November 7, 2012, the City of Reno entered into a franchise agreement with Reno Disposal, a subsidiary of WM, Inc. The term of the agreement is for 17 years, or until 2029. An automatic extension will be granted unless written notice is provided by either party a minimum of five (5) years prior to the end of the initial contract term. Additionally, Reno Disposal is entitled to terminate the agreement anytime during the last three years of the initial term but must provide a minimum of 24 months prior written notice to the city.

As part of the agreement, Reno Disposal is directed to deliver materials to Refuse, Inc., the WM, Inc. entity that owns the Lockwood Regional Landfill, for disposal. Reno Disposal and Refuse, Inc. have the option of designating alternative facilities during the course of the contract, provided the use of the alternative facility does not result in an increase in rates or in material costs to the contractor, and that appropriate arrangements are made to ensure that Host Fees that would have been generated through the use of Refuse, Inc. are paid to the City of Reno by the appropriate party.

As part of the contract with the City of Reno, WM has agreed to construct the single stream processing facility, EcoCenter. This facility represents an estimated \$20 million investment in local infrastructure and serves as a strong incentive for WM to ensure the longest contract term possible. Based on the terms of the contract and the capital investment made by WM, it is expected that the company will dedicate the resources necessary to meet all contractual requirements and ensure the viability of the contract.

Currently, the recyclables collected in Washoe County are sent to the EcoCenter for initial processing, cardboard and glass are separated for recovery, glass is used as landfill cover, and residual is sent to the Lockwood Landfill. The mixed containers separated from the single stream material are transported to WM facilities in Sacramento, California for processing. An added benefit of the EcoCenter is that the residual and contaminated materials extracted from the recycling stream during processing will become part of the local, Washoe County waste stream.

Sparks

In July 2008, the City of Sparks entered into a franchise agreement with Sparks Sanitation, a subsidiary of WM, Inc. The contract has an initial term of 10 years, with the opportunity for two, mutually agreed upon five-year extension periods. The City of Sparks is required to give at least six months' notice of termination prior to the expiration of each of the 5-year extension periods.

While the terms of this contract allow for a shorter notice period than the City of Reno agreement, it results in less time for the City of Sparks to initiate a procurement process and identify other waste service providers with the infrastructure to provide services under a franchise agreement. Additionally, when committing to the significant capital investment required to build the Reno EcoCenter, WM likely factored the tonnage generated through the Sparks contracted in the cost/benefit analysis. As with the Reno contract, WM will be strongly motivated to ensure the fulfillment of the contract and the award of all available extensions.

Lyon County, Nevada

The County of Lyon has a population of 63,776 and is located to the East of Storey County. The City of Fernley has a population of 25,508 and is located less than 40 miles from Storey County. In December 2008, the City entered into a 10-year agreement with Trash Pros. This company was subsequently acquired by WM. The contract is an exclusive agreement includes the opportunity for two, five-year extensions, which could extend the life of the contract until 2028. The agreement also features the right to assign the contract, and options for obtaining approval from the City of Fernley for the designated disposal site of the solid waste stream.

Nevada County, California

The cities of Grass Valley, Nevada City and Truckee, with a combined population estimated at 34,520, export approximately 37,472 tons of MSW each year to Lockwood Regional Landfill. Grass Valley and Nevada City use WM for hauling services.

Plumas County, California

The County of Plumas, with a population of 18,773, contracts with WM to provide hauling services, and together, Plumas and WM contract with Lockwood Regional Landfill for disposal. The agreement with Lockwood allows both the landfill (WM) as well as the County and hauler (WM) to end the agreement with 90 days' notice.