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SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FROM: Executive Office

SUBMITTAL DATE:
January 22, 2013

SUBJECT: Solid Waste System Study and Efficiency Analysis

RECOMMENDED MOTION:
That the Board of Supervisors:

1. Receive and file the following reports:
   - Solid Waste System Study by HF&H Consultants dated February 12, 2012;
   - Landfill Operational Efficiency Analysis by Blue Ridge Services dated March 26, 2012; and

2. Schedule a Workshop for February 26, 2013 to discuss the studies and identify opportunities to maximize revenue to the General Fund; and invite the private waste haulers to attend; and

3. Authorize the General Manager-Chief Engineer of the Waste Management Department to submit a proposal to the Los Angeles County Sanitation District for the importation of waste to County-owned landfills.

FINANCIAL DATA				
	Current F.Y. Total Cost:	$ N/A	In Current Year Budget:	Yes
	Current F.Y. Net County Cost:	$ N/A	Budget Adjustment:	No
	Annual Net County Cost:	$ N/A	For Fiscal Year:	12/13

SOURCE OF FUNDS:

Positions To Be Deleted Per A-30 ☐

Requires 4/5 Vote ☐

C.E.O. RECOMMENDATION:

APPROVE

BY: George A. Johnson

County Executive Office Signature

Departmental Concurrence

☒ Policy ☐ Consent

☒ Policy ☐ Consent

Dep't Recomm.:

Per Exec. Ofc.:

Prev. Agn. Ref.: | **District:** ALL | **Agenda Number:** 3-50

Form 11 (Rev 06/2003)

BACKGROUND: In November 2010, the Board directed the Executive Office to analyze the landfill system and identify asset maximization options, including the potential sale or lease of landfills. Through a competitive RFP process, the Riverside County Board of Supervisors approved a contract with Hilton, Farnkopf and Hobson Consultants (HF&H) to complete a Solid Waste System Report, which includes a valuation of the County's landfills and assist in identifying options available to the County. The executive summary from this report is included as Attachment A.

In July 2011, the Board directed the Executive Office to hire a consultant to provide an independent third-party audit and evaluation of the County's landfill operational efficiencies. Through a competitive RFP process, consultant services were obtained in September 2011 from Blue Ridge Services, Inc. to perform a Comprehensive Operational Review at the Lamb Canyon, Badlands and Blythe landfills. The executive summary from the report is included as Attachment B.

In addition, staff from the Executive Office and the Waste Management Department interviewed San Diego County Waste Management Department staff in order to better understand the results of privatizing the San Diego County landfill system in 1997. A summary of the "lessons learned" is included as Attachment C.

Staff has presented the findings of the reports as informational items to the CVAG Technical Working Group, WRCOG Solid Waste Technical Committee and the Riverside County Solid Waste Advisory Council which has submitted a letter to the Board regarding this matter (Attachment D).

Staff is recommending a Board Workshop be held on February 26, 2013, in order to allow adequate time to fully discuss the results of the studies and present options for Board consideration. Some of the available options are summarized below.

Summary of Available Board Options:

1) Sale of Solid Waste Disposal System
   The Solid Waste System assets include six active and 32 closed landfills. The county also owns six transfer stations, which are leased to private operators. The most valuable assets are represented by two landfills, Badlands and Lamb Canyon.

2) Operations Contract or Lease
   The County could consider a landfill operations contract or lease with a private operator. This option could have revenue enhancements such as out of county waste.

3) Enterprise Fund Loan
   The County may be able to meet its short-term funding objectives by continued county ownership of the landfills and additional loaning of Enterprise Funds to the General Fund. The Enterprise Funds are set aside for ongoing operation, landfill closure, post closure maintenance, and corrective action.

4) Importation of Out of County Waste
   Los Angeles County plans to close the Puente Hills landfill in October 2013. The Los Angeles County Sanitation Districts (LACSD) has issued an RFP for waste services, requesting formal proposals from landfill owners/operators to secure capacity for the waste currently processed by LACSD transfer stations. The Executive Office recommends that the Board authorize staff to pursue import opportunities at County landfills, and authorize staff to

submit a bid by the February 12th deadline, subject to the maximum of 225,000 tons/year allowed to the County-owned landfills under the El Sobrante Agreement.

5) Securitization
For waste importation scenarios, it is possible to advance Enterprise Funds to the General Fund without repayment, provided that the revenues generated through importation are used to securitize the loan.

6) Reimburse County General Fund/Rental Payment for use of County Property
The Board could consider charging the Enterprise Fund for payment of rent for the use of landfills properties.

7) Renegotiation of the El Sobrante Second Agreement

Valuation Assumptions and Methodology

The results of the valuation indicate that the entire existing system, including all of the active and inactive landfills, and the other activities performed by the Department, if valued based on its projected cash flows with an assumed 1.9% annual tonnage growth factor (Scenario 1) is between negative $10 million and $11 million. The range is based on an assumed discount rate between 8% and 12%. Under Scenario 2 tonnage assumptions (with disposal quantities assumed to increase to FY 05/06 levels in the next five years, and increased by 1.9% annually thereafter) the value would range from $49 million to $127 million, using the same discount rate range (8%-12%). The System Value Scenarios are summarized in the following table:

System Value Summary		
Valuation Scenario	12% Discount Rate	8% Discount Rate
Scenario 1 - (1.9% Tonnage Growth)	($10,000,000)	$11,000,000
Scenario 2 - (7.3%/1.9% Tonnage Growth)	$49,000,000	$127,000,000

Under current economic conditions, coupled with increasing state regulatory pressure to divert waste from landfills (Assembly Bill 341 sets a goal of 75% diversion by 2020), Scenario 2 tonnage assumptions do not appear to be realistic in the near future.

The primary value in the County-owned solid waste system assets is represented by the two regional landfills: Badlands and Lamb Canyon. Based on the operation and valuation assumptions described in the report, the estimated range of combined values for these two landfills is $122 million to $214 million, assuming 1.9% annual tonnage growth (Scenario 1), and $181 million and $330 million with tonnage assumed to increase to FY 05/06 levels in the next five years, and increased by 1.9% annually thereafter (Scenario 2). As stated above, Scenario 2 tonnage assumptions, which include 7.3% tonnage increases for the next five years, provide a high-end of the range but are likely not realistic values. In fact, staff believes that, considering the ongoing regulatory pressure to increase diversion from landfills, it is possible that tonnage will remain flat (0%). The valuation report includes such a scenario which significantly reduces the value of the regional landfills to a range of $82 million to $122 million, thus highlighting the sensitivity of tonnage growth assumptions. The Regional Landfill Value Scenarios are summarized in the following table:

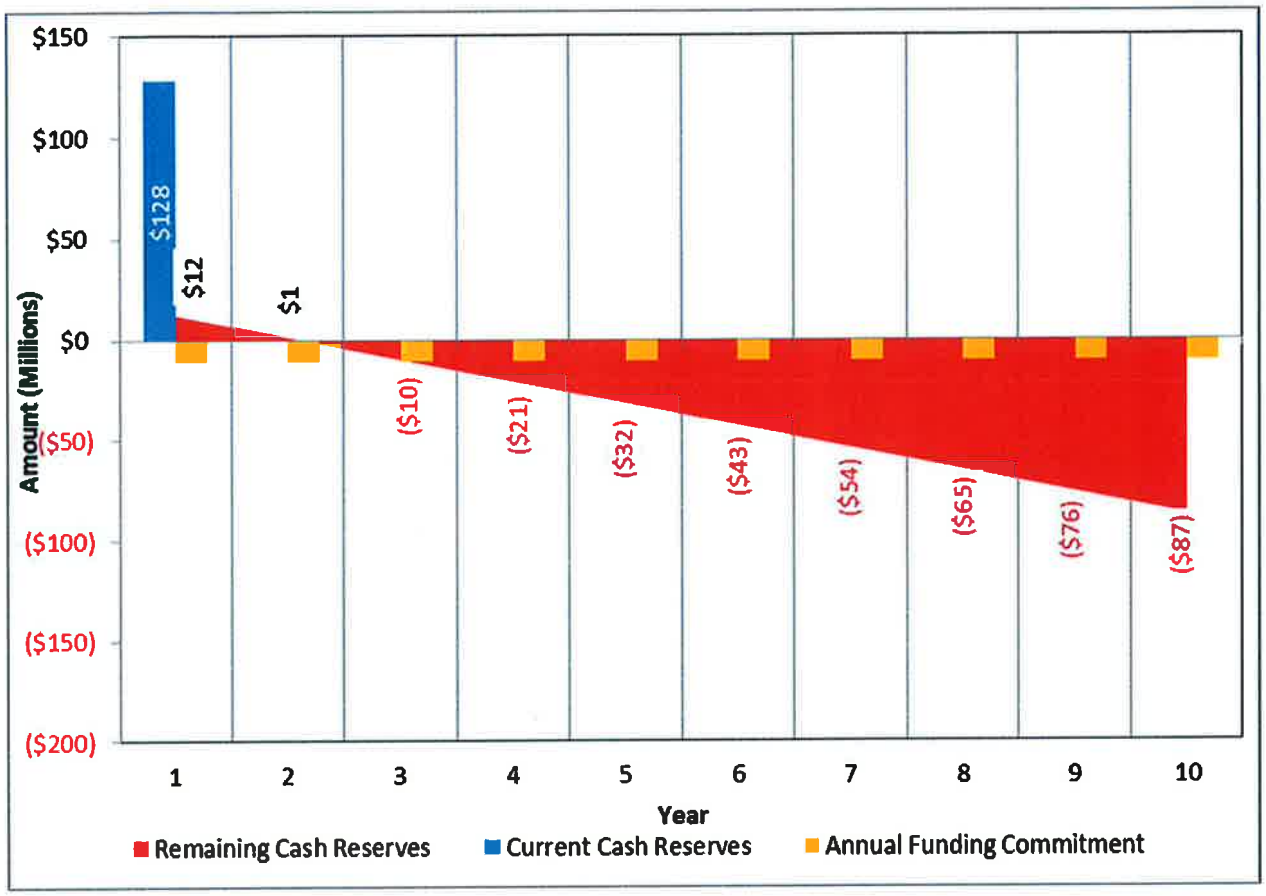
Regional Landfill Value Summary		
Valuation Scenario	12% Discount Rate	8% Discount Rate
Scenario 0 - (0% Tonnage Growth)	$82,000,000	$122,000,000
Scenario 1 - (1.9% Tonnage Growth)	$122,000,000	$214,000,000
Scenario 2 - (7.3%/1.9% Tonnage Growth)	$181,000,000	$330,000,000

It should be noted that the valuation scenarios incorporate both existing permitted capacity and future projected capacity. Currently, approximately only 13 years of permitted capacity remain at both regional landfills and the full landfill development of the remaining years of capacity is not certain. The uncertainty of this unpermitted projected capacity could also significantly reduce the value to a buyer.

If the County proceeds with a sale of some or all of the active landfills, the County will be required to (or may desire to) retain certain solid waste system functions which include, but are not limited to:

- performing gate fee, load check, and jurisdictional reporting for the active landfills;
- operating the desert landfills;
- monitoring and maintenance of the inactive/closed sites;
- operating the HHW and ABOP facilities and certain recycling programs;
- providing financial support for CVAG, WRCOG, and other County agencies;
- monitoring and control of illegal dumping; and
- managing and monitoring the El Sobrante contract.

If all of the above activities and related Department overhead were retained by the County, the annual funding requirements for the above County activities would be $11.3 million. It is important to point out that the revenue generated from the Badlands and Lamb Canyon landfills currently protects the County General Fund from this **annual funding commitment** of $11.3 million in addition to an estimated long-term liability (closure, post-closure, and remediation) of $116 million. Also, further uncertainty attributed to changing environmental regulations and unforeseen environmental liabilities is difficult to quantify and is not accounted for in these estimations, although it can be reasonably assumed that they will place additional financial pressures on the waste system. In the event of a sale, the current restricted funds set aside for Badlands and Lamb Canyon ($26 million) could be made available to the General Fund. Assuming that the $116 million estimated long term liability is fully funded, only $12 million ($154 - $26 - $116) would available for the annual funding commitment of $11.3 million. Its effect on the remaining Enterprise Funds cash reserves is illustrated below:



As can be seen from the above graph, the remaining cash reserves are depleted in the second year after a sale, assuming that known estimated liabilities are fully funded ($116 million).

ATTACHMENT A

RIVERSIDE COUNTY SOLID WASTE SYSTEM STUDY

EXECUTIVE SUMMARY

Study Purpose

The purpose of this study is to analyze options available to the County to further enhance General Fund revenue utilizing the County's waste management assets. As described in Section IV, four options to enhance the County's General Fund revenues using the County's waste management assets are evaluated in this report:

1. Sale of Solid Waste System;
2. Lease of Solid Waste System (Landfills);
3. Operating contract for the operations of the Solid Waste System (Landfills); or
4. Continue County operations and provide additional revenue to the General Fund through a loan of reserves and/or importation of out-of-county waste.

Summary of Findings

Based on our findings and analysis in the attached report, we conclude the following:

1. The County Waste Management Department ("WMD") Enterprise Fund supports a variety of activities, including:
   - operation of the active landfills and related activities;
   - monitoring and maintenance of the inactive/closed sites;
   - operating the HHW and ABOP facilities and certain recycling programs;
   - providing financial support for CVAG, WRCOG, and other County agencies; and
   - monitoring and cleanup of illegal dumping.

   The WMD Enterprise Fund protects the General Fund from incurring costs for these on-going activities, as well as potential unknown future costs for remediation and corrective action.

2. The value of the landfill system is highly dependent on the quantity of waste delivered to the system. The operation and valuation assumptions used in this analysis are described in Section VI of this report.

3. The entire existing system, including all of the active and inactive landfills, and the other activities performed by the department, if valued based on its projected cash flows, assuming 1.9% annual tonnage growth (Scenario 1), is $(10) million to $11 million. This assumes that all existing activities and obligations are transferred to a purchaser (except for the transfer station master leases). Under Scenario 2 tonnage assumptions, with disposal quantities assumed to increase to FY 05/06 levels in the next five years, and increased by 1.9% annually thereafter (Scenario 2) the value would range from $49 million to $127 million. However, due to the uncertain nature of costs and liabilities associated with the inactive landfills, it is reasonably possible that including the inactive landfills in

the purchase may discourage potential buyers from proposing or significantly reduce the values proposed.

4. The primary value in the County-owned solid waste system assets is represented by two landfills: Badlands and Lamb Canyon. The estimated range of combined values for these two landfills is $122 million to $214 million under Scenario 1 and $181 million and $330 million under Scenario 2.

5. Terms of the transfer station waste delivery agreements and the El Sobrante agreement, make it difficult to structure a sale or lease that will maximize value. If the County's landfills are sold, the transfer station operators may terminate the waste delivery agreements with the County and deliver waste to landfills outside the County, reducing its value to potential buyers. If tonnage controlled by the waste delivery agreements for the three County transfer stations operated by Burrtec left the system, total system tonnage could be reduced by approximately 716,000 tons (41% of total in-County tons for FY2010/11) or approximately $19 million (37% of FY 2010/11 tipping fee revenue). If the system is leased, the lessee would be limited in its ability to import out-of-County waste by the 225,000 ton/year restriction on import waste to County-owned landfills under the El Sobrante agreement (unless El Sobrante reaches its "Practical Maximum" disposal capacity as described later in this report). For these reasons, it is unclear whether a sale or a lease would generate more value. If the County decides to proceed with a Request for Qualifications/ Letter of Interest, we recommend that the County solicit proposals under both structures.

6. If the County proceeds with a sale or lease of some or all of the active landfills, the County may desire to retain certain functions as described in this report. Potential activities that the County may desire or be required to retain include, but are not limited to:
   - performing gate fee, load check, and jurisdictional reporting for the active landfills;
   - operating the desert landfills
   - maintenance of inactive/closed sites;
   - HHW, recycling and ABOP programs;
   - monitoring and control of illegal dumping; and
   - managing and monitoring the El Sobrante contract.

   If all of the above activities and related department overhead were retained by the County, the annual funding requirements for County activities would be $11.3 million annually at current funding levels. (This excludes the gate fee and load check functions at the Badlands and Lamb Canyon landfills that totaled $347,000 for FY 2010/11). Funding for these activities currently is provided through the WMD Enterprise Fund and would require an alternative funding source in the future if the regional landfills were sold.

7. If the Badlands and Lamb Canyon Landfills are sold and the purchaser assumes the related closure and post closure liabilities for these sites, the known unfunded liabilities for the remaining sites are estimated by the WMD as of June 30, 2011 at approximately $18 million, net of existing reserves for these activities (estimated liability based on the percentage of capacity used of $40 million, less the total amount in escrow of $22 million).

8. The County may be able to meet its short-term funding objectives by continued County ownership of the landfills and loaning reserves from the WMD to the General Fund (assuming that the loaning of WMD restricted reserves complies with applicable statutes regarding the use of funds). The

WMD sets aside reserves for future obligations for landfill closure, post closure maintenance, and corrective action, and much of these reserves are not anticipated to be utilized for a very long time. For example, based on site development plans, Badlands, with potential expansions, may not close until 2183, and Lamb Canyon, with potential expansions, may not close until 2074. The closure, post closure and corrective action reserves are estimated at $88.5 million as of June 30, 2011 and are estimated to increase to $137 million by 2021 (Exhibit 8A). There is an estimated additional $50 million in unrestricted reserves as of June 30, 2011 in excess of the operating target that could be loaned to the General Fund, and this amount is projected to be $26.6 million by 2021 (Exhibit 1A).

9. The County may be able to attract out-of-County waste to the County-owned landfills in order to generate net income that may be able to be used by the General Fund. The likelihood of attracting out-of-county waste will increase after the closure of the Puente Hills landfill in October of 2013 and the termination of the Orange County import agreements in 2016 or if San Bernardino County does not renew its waste delivery agreements. If Riverside County could attract the maximum of 225,000 tons/year allowed to the County-owned landfills under the El Sobrante Agreement, the County may be able to generate income of between $1,125,000 and $3,375,000 per year, assuming net revenue ranging between $5 and $15 per ton for the out-of-County waste, after allowance for disposal-related expenses. The ability to attract this tonnage would likely depend on an increase in regional tonnage associated with an economic recovery, and the timing of such a recovery is highly uncertain.

10. The County could consider a landfill operations contract with a private operator with continued County-ownership of the landfills. It is possible, but not certain, that such an arrangement may lower the overall cost of operations and increase the overall cost effectiveness of the system, allowing the WMD to loan additional reserves to the general fund, and potentially generate higher net revenues from out-of-County waste if such waste is delivered to the system. A private operator, if also a regional waste hauler, may be able to deliver out-of-County waste to the system if the contractual arrangements are structured to provide an incentive to do so. The direct cost of personnel and equipment at the landfills is approximately $8.5 million per year (Attachment 3). For example purposes, if these costs were reduced by 10% through an operations contract, the annual cost savings would be approximately $850,000.

11. There is value in the transfer station master leases because the County will retain ownership of these facilities constructed on County-owned land when the leases expire. Since the term of these leases is very long, we believe the County would receive significantly better value by considering a sale of the properties or renegotiating lease terms closer to the lease termination dates, which range from 2029 to 2050, including extensions. The master lease for the Coachella Valley Transfer Station provides the lessee with an option for an additional 25 years at the end of the initial term of 25 years.

ATTACHMENT B

3 EXECUTIVE SUMMARY

All of the landfills present a positive first impression. It is obvious that considerable thought and effort has gone into the designing and planning of the landfills. Badlands and Lamb Canyon both need to have more attention dedicated to the scraper haul roads and routes but otherwise were in good condition. At all landfills, there were examples of excellence.

For example, the deck grading at the Blythe landfill is perhaps as smooth and uniform as any landfill we've seen. This is only partly due to the dry climate, slow decomposition and associated lack of related differential settlement – and more a result of the excellent grading and machine operating capabilities of the manager of that landfill.

Similarly, with the exception of portable fencing at the face, the litter control fence network at Badlands and Lamb Canyon – as well as the performance of the cleanup crew is very good.

Based on our experience and understanding of the industry standard we've determined that the three Riverside County landfills are operating at a high level of efficiency – especially when compared to other similar municipal landfills. These findings are based on a comprehensive review of the following:

- Industry comparison
- Inbound tonnage
- Equipment
- Waste Handling
- Planning
- Staffing
- Safety
- Environmental Controls
- Scale Booth Operations
- Regulatory Compliance

Our findings – described throughout this report – show three landfills that are efficient, compliant and well-run. We found many indications that this trend toward lean efficiency has been happening for some time ...and continues today.

So again: while it is true that every landfill has room for improvement, we found that these three landfills were already taking steps to *make* improvement. For example, in our experience we've found – generally – that the use of tarps as a form of ADC makes sense for most landfills – including these landfills. We were encouraged to find that Riverside County's landfill staff was already conducting various studies on the use of tarps prior to this project – and had in fact ordered several new tarps for each landfill prior to our beginning the study.

Additionally we found at these landfills – as we have with other landfills during this recessionary time – that there are too many machines (i.e., scrapers) ...or the machine(s) being used are too large (i.e., the D10 at Badlands). But these findings are not a result of poor choices today, but are in fact left over from when inbound tonnage was much higher and more/larger machines were justified. This is affirmed by the fact that the average machine is approximately 10 ½ years old.

The following report presents a detailed discussion of our findings and recommendations.

ATTACHMENT C

SAN DIEGO COUNTY LANDFILL SYSTEM SALE – "LESSONS LEARNED"

In July of 1997, San Diego County sold four active landfills, two transfer/recovery stations and ten "bin sites" to Republic (formerly Allied). The following is a summary of the main issues surrounding the sale:

- Entire system was sold for $160 million
- $101 million was set aside for inactive/closed sites
- Balance ($59 million) was transferred to the General Fund
- Regulatory agencies heavily involved in the inactive/closed sites funding
- Major driver of privatization was a $24 million/year General Fund subsidy, largely due to debt financing for the North County Transfer Station
- County receives a $2.35/ton fee (no CPI) for:
    - Household Hazardous Waste Collection (HHWC) program ($1.10/ton)
    - Franchise Areas ($1.25/ton)
    - AB 939 diversion program ($0.10/ton)
- Requests for increased services resulted in General Funding of an additional $200-$300K per year for HHWC
- In 2005, the County determined that the Environmental Trust Fund would be depleted by 2016, resulting in a transfer of $9 million in FY 09 and $4 million in FY10 from the General Fund. No further transfers have occurred to date.
- Non-contract tipping fee at the landfills has increased from $34.00/ton to $68.75/ton, compared to $35.12/ton currently at Riverside County landfills

ATTACHMENT D

April 2, 2012

Riverside County Board of Supervisors
County Administrative Center
4080 Lemon Street, 5th Floor
Riverside, CA 92501

Re: Riverside County Solid Waste System Study

Dear Board Members:

On March 15, 2012, County staff provided the Riverside County Solid Waste Management Advisory Council (SWMAC) with an overview of the studies commissioned by the Board to analyze the solid waste system, including the efficiency of the present operations and the potential sale of County landfills.

Although this subject was not on the agenda as an action item, the SWMAC considered the results of the studies and members present discussed the issues at length. Without exception these knowledgeable volunteers supported retaining the County operations. This course provides the greatest revenue to balance and protect against the potentially massive long-term liabilities.

As you are aware, the SWMAC is a 22-member body whose diverse membership includes representatives of supervisorial districts, cities whose population exceeds 100,000, Western Riverside Council of Governments, Coachella Valley Council of Governments, the waste management industry, the environmental community, and the agriculture industry. The SWMAC considers a broad scope of waste management and recycling issues in its efforts to advise the County Waste Management Department and the Board of Supervisors in ensuring a coordinated, cost-effective, and environmentally sound solid waste management system in Riverside County.

Consistent with these responsibilities, the SWMAC does not support the divestiture of the two saleable assets of the system (Badlands and Lamb Canyon landfills). Without them the system would cease to be self-sustaining in the very near future. Most likely it would shift costs of related County programs to the general fund and increase costs to the rate-payer. There is a high-level of uncertainty within a dynamic regulatory framework which will probably increase costs to Riverside County to maintain its 32 closed landfills. This is particularly true when significant oversight is from CalRecycle and the State Water and Air Boards. There is a potentially massive cleanup expense if any of the closed landfills are breached or leak. Those future costs cannot be offset by a one-time cash payment.

The SWMAC is aware that similar divestitures in neighboring counties have negatively impacted landfill tipping fees and service levels.

The County solid waste system is efficient, stable and provides long-term capacity and services for Riverside County residents. It is for these reasons that the SWMAC urges the Board to keep control of the system.

Sincerely,

Simon Housman
First Vice-Chairman
Riverside County Solid Waste
Management Advisory Council

Separation Page

RIVERSIDE COUNTY
WASTE MANAGEMENT DEPARTMENT

Solid Waste System Study Report

* * * *

February 21, 2012

Prepared by:

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Phone: 949/251-8628
Facsimile: 949/251-9741

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Richard J. Simonson, CMC
Marva M. Sheehan, CPA

February 22, 2012

Mr. Hans Kernkamp
General Manager – Chief Engineer
Riverside County
Waste Management Department
14310 Frederick Street
Moreno Valley, California 92553

Solid Waste System Study Report

Dear Mr. Kernkamp:

We have completed our study of the Riverside County Solid Waste System. Enclosed with this transmittal letter are the executive summary and study report.

We would like to thank the County staff for their cooperation and support. If you have any questions, please call Laith Ezzet at (949) 251-8902 or Darrell Bice at (949) 251-0231.

Very truly yours,

Laith B. Ezzet, CMC
Senior Vice President

Darrell L. Bice
Director of Solid Waste and Recycling Audits

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RIVERSIDE COUNTY SOLID WASTE SYSTEM STUDY

EXECUTIVE SUMMARY

Study Purpose

The purpose of this study is to analyze options available to the County to further enhance General Fund revenue utilizing the County's waste management assets. As described in Section IV, four options to enhance the County's General Fund revenues using the County's waste management assets are evaluated in this report:

1. Sale of Solid Waste System;
2. Lease of Solid Waste System (Landfills);
3. Operating contract for the operations of the Solid Waste System (Landfills); or
4. Continue County operations and provide additional revenue to the General Fund through a loan of reserves and/or importation of out-of-county waste.

Summary of Findings

Based on our findings and analysis in the attached report, we conclude the following:

1. The County Waste Management Department ("WMD") Enterprise Fund supports a variety of activities, including:
   - operation of the active landfills and related activities;
   - monitoring and maintenance of the inactive/closed sites;
   - operating the HHW and ABOP facilities and certain recycling programs;
   - providing financial support for CVAG, WRCOG, and other County agencies; and
   - monitoring and cleanup of illegal dumping.

   The WMD Enterprise Fund protects the General Fund from incurring costs for these on-going activities, as well as potential unknown future costs for remediation and corrective action.

2. The value of the landfill system is highly dependent on the quantity of waste delivered to the system. The operation and valuation assumptions used in this analysis are described in Section VI of this report.

3. The entire existing system, including all of the active and inactive landfills, and the other activities performed by the department, if valued based on its projected cash flows, assuming 1.9% annual tonnage growth (Scenario 1), is $(10) million to $11 million. This assumes that all existing activities and obligations are transferred to a purchaser (except for the transfer station master leases). Under Scenario 2 tonnage assumptions, with disposal quantities assumed to increase to FY 05/06 levels in the next five years, and increased by 1.9% annually thereafter (Scenario 2) the value would range from $49 million to $127 million. However, due to the uncertain nature of costs and liabilities associated with the inactive landfills, it is reasonably possible that including the inactive landfills in

the purchase may discourage potential buyers from proposing or significantly reduce the values proposed.

4. The primary value in the County-owned solid waste system assets is represented by two landfills: Badlands and Lamb Canyon. The estimated range of combined values for these two landfills is $122 million to $214 million under Scenario 1 and $181 million and $330 million under Scenario 2.

5. Terms of the transfer station waste delivery agreements and the El Sobrante agreement, make it difficult to structure a sale or lease that will maximize value. If the County's landfills are sold, the transfer station operators may terminate the waste delivery agreements with the County and deliver waste to landfills outside the County, reducing its value to potential buyers. If tonnage controlled by the waste delivery agreements for the three County transfer stations operated by Burrtec left the system, total system tonnage could be reduced by approximately 716,000 tons (41% of total in-County tons for FY2010/11) or approximately $19 million (37% of FY 2010/11 tipping fee revenue). If the system is leased, the lessee would be limited in its ability to import out-of-County waste by the 225,000 ton/year restriction on import waste to County-owned landfills under the El Sobrante agreement (unless El Sobrante reaches its "Practical Maximum" disposal capacity as described later in this report). For these reasons, it is unclear whether a sale or a lease would generate more value. If the County decides to proceed with a Request for Qualifications/ Letter of Interest, we recommend that the County solicit proposals under both structures.

6. If the County proceeds with a sale or lease of some or all of the active landfills, the County may desire to retain certain functions as described in this report. Potential activities that the County may desire or be required to retain include, but are not limited to:
   - performing gate fee, load check, and jurisdictional reporting for the active landfills;
   - operating the desert landfills
   - maintenance of inactive/closed sites;
   - HHW, recycling and ABOP programs;
   - monitoring and control of illegal dumping; and
   - managing and monitoring the El Sobrante contract.

   If all of the above activities and related department overhead were retained by the County, the annual funding requirements for County activities would be $11.3 million annually at current funding levels. (This excludes the gate fee and load check functions at the Badlands and Lamb Canyon landfills that totaled $347,000 for FY 2010/11). Funding for these activities currently is provided through the WMD Enterprise Fund and would require an alternative funding source in the future if the regional landfills were sold.

7. If the Badlands and Lamb Canyon Landfills are sold and the purchaser assumes the related closure and post closure liabilities for these sites, the known unfunded liabilities for the remaining sites are estimated by the WMD as of June 30, 2011 at approximately $18 million, net of existing reserves for these activities (estimated liability based on the percentage of capacity used of $40 million, less the total amount in escrow of $22 million).

8. The County may be able to meet its short-term funding objectives by continued County ownership of the landfills and loaning reserves from the WMD to the General Fund (assuming that the loaning of WMD restricted reserves complies with applicable statutes regarding the use of funds). The

WMD sets aside reserves for future obligations for landfill closure, post closure maintenance, and corrective action, and much of these reserves are not anticipated to be utilized for a very long time. For example, based on site development plans, Badlands, with potential expansions, may not close until 2183, and Lamb Canyon, with potential expansions, may not close until 2074. The closure, post closure and corrective action reserves are estimated at $88.5 million as of June 30, 2011 and are estimated to increase to $137 million by 2021 (Exhibit 8A). There is an estimated additional $50 million in unrestricted reserves as of June 30, 2011 in excess of the operating target that could be loaned to the General Fund, and this amount is projected to be $26.6 million by 2021 (Exhibit 1A).

9. The County may be able to attract out-of-County waste to the County-owned landfills in order to generate net income that may be able to be used by the General Fund. The likelihood of attracting out-of-county waste will increase after the closure of the Puente Hills landfill in October of 2013 and the termination of the Orange County import agreements in 2016 or if San Bernardino County does not renew its waste delivery agreements. If Riverside County could attract the maximum of 225,000 tons/year allowed to the County-owned landfills under the El Sobrante Agreement, the County may be able to generate income of between $1,125,000 and $3,375,000 per year, assuming net revenue ranging between $5 and $15 per ton for the out-of-County waste, after allowance for disposal-related expenses. The ability to attract this tonnage would likely depend on an increase in regional tonnage associated with an economic recovery, and the timing of such a recovery is highly uncertain.

10. The County could consider a landfill operations contract with a private operator with continued County-ownership of the landfills. It is possible, but not certain, that such an arrangement may lower the overall cost of operations and increase the overall cost effectiveness of the system, allowing the WMD to loan additional reserves to the general fund, and potentially generate higher net revenues from out-of-County waste if such waste is delivered to the system. A private operator, if also a regional waste hauler, may be able to deliver out-of-County waste to the system if the contractual arrangements are structured to provide an incentive to do so. The direct cost of personnel and equipment at the landfills is approximately $8.5 million per year (Attachment 3). For example purposes, if these costs were reduced by 10% through an operations contract, the annual cost savings would be approximately $850,000.

11. There is value in the transfer station master leases because the County will retain ownership of these facilities constructed on County-owned land when the leases expire. Since the term of these leases is very long, we believe the County would receive significantly better value by considering a sale of the properties or renegotiating lease terms closer to the lease termination dates, which range from 2029 to 2050, including extensions. The master lease for the Coachella Valley Transfer Station provides the lessee with an option for an additional 25 years at the end of the initial term of 25 years.

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- Post Closure and Environmental Liability at Inactive/Closed Sites

SECTION I: STUDY PURPOSE AND BACKGROUND

Study Purpose

As a result of the current downturn in the economy, State, Federal and local governments are searching for additional opportunities to enhance general funds to continue operations of the governmental units. On November 2, 2010, the Riverside County Board of Supervisors directed the Riverside County Executive Office to procure the services of a consultant specializing in solid waste analytical services to assist in identifying options to maximize the County's waste management assets.

The purpose of this study is to analyze options available to the County to further enhance General Fund revenue utilizing the County's waste management assets. As described in Section IV, four options to enhance the County's General Fund revenues using the County's waste management assets are evaluated in this report:

1. Sale of Solid Waste System;
2. Lease of Solid Waste System (Landfills);
3. Operating contract for the operations of the Solid Waste System (Landfills); or
4. Continue County operations and provide additional revenue to the General Fund through a loan of reserves and/or importation of out-of-county waste.

Background

Description of County Solid Waste System

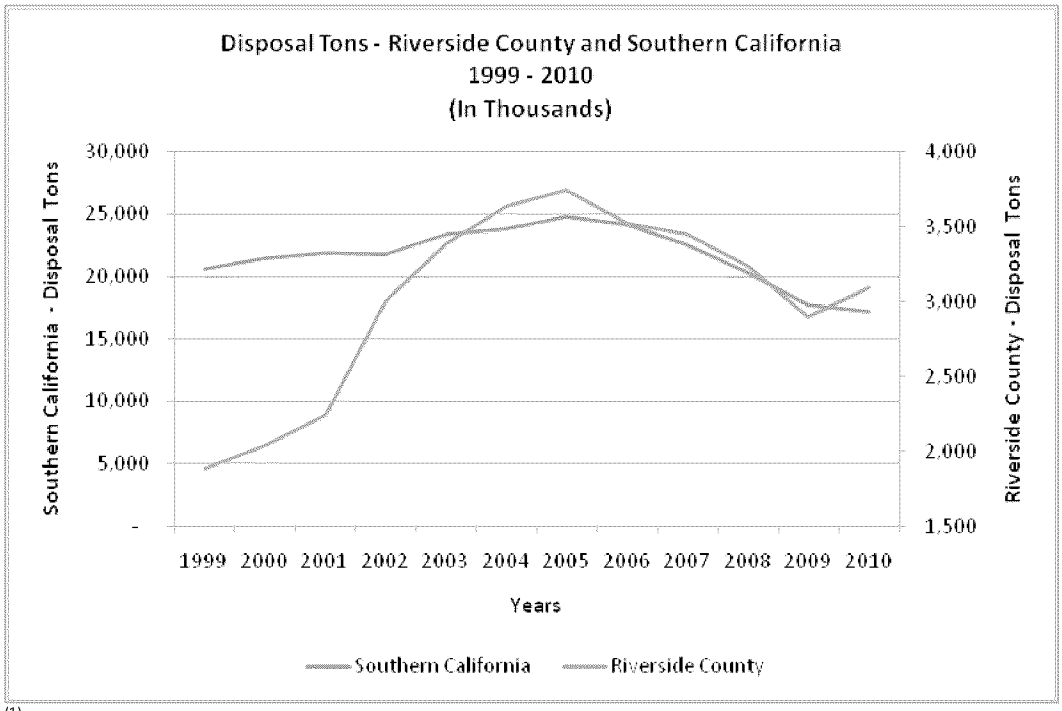
The Riverside County Solid Waste System consists of six (6) active landfills and thirty-two (32) inactive/closed landfills (Attachment 1). Additionally, the County owns and operates the Agua Mansa Regional Permanent HHW Collection Facility, adjacent to the Robert A. Nelson Transfer Station in Riverside and the Murrieta Regional Antifreeze Battery Oil and Paint (ABOP) Collection Facility located in the County Transportation Yard in Murrieta. The County has operating agreements with the cities of Palm Springs and Lake Elsinore to operate the Palm Springs Permanent Regional HHW Collection Facility (owned by the city of Palm Springs) and the Lake Elsinore Permanent Regional HHW Collection Facility (owned by the city of Lake Elsinore). The County leases to private companies property for five (5) transfer stations/material recovery facilities. There are thirteen (13) franchise areas in unincorporated areas of Riverside County.

The County has entered into waste delivery agreements ("WDA") with franchised haulers in the unincorporated franchise areas, the five (5) transfer stations/MRFs under master leases and two privately owned and operated transfer stations/MRFs. The terms of the WDAs with the haulers in the thirteen (13) unincorporated franchise areas are concurrent with the haulers' franchise agreements; when the franchise agreements expire, the WDAs are terminated. The WDAs with three (3) of the leased transfer stations/collection centers (the Robert A. Nelson Transfer Station, Edom Hill Transfer Station and the Coachella Valley Transfer Station) and the two (2) privately-owned transfer stations (the Moreno Valley Transfer Station/MRF and the Perris Transfer Station/MRF) may be terminated at the option of the contractors if the County relinquishes ownership in a landfill used by the transfer station.

Financial Challenges

The County solid waste system is facing short-term challenges from a deeper than anticipated economic downturn that resulted in lower tonnage. The system faces potential long-term financial challenges from diversion efforts that continue to provide downward pressure on disposal tonnage, both in Riverside County and in Southern California in general, resulting in a decrease in revenue. Landfill owners in other counties are aggressively pricing disposal capacity to attract tonnage from other areas of Southern California. The recent passage of AB 341, establishing a statewide goal of 75% diversion by 2020 and implementing mandatory commercial recycling, will further reduce demand for disposal capacity (The median diversion rate for the cities in Riverside County was approximately 68% in 2010). A graph of the disposal tonnage for 1999 through 2010 for Riverside County compared to the disposal tonnage in the major Southern California counties is shown in Figure 1.

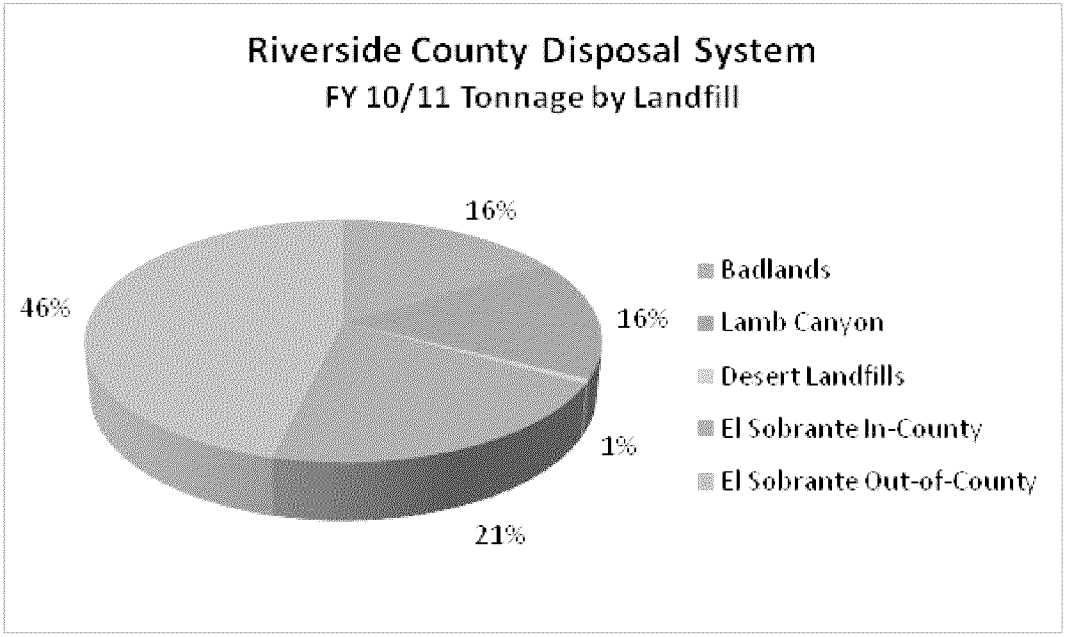
Figure 1



(1) Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties

The El Sobrante, Badlands and Lamb Canyon landfills received most of the in-County waste in FY 10/11, as shown in Figure 2. The four Desert landfills, including Blythe, Oasis, Mecca II and Desert Center account for less than one percent of the total disposal tonnage in the same period. The County disposal system received a total of 3,254,000 tons of waste in FY 10/11.

Figure 2



Stakeholders

There are a variety of stakeholders in the County's solid waste system, including:

- Waste haulers;
- Transfer station operators;
- Self haulers;
- Residential, commercial and industrial customers;
- The County Board of Supervisors;
- City officials;
- County employees/unions;
- Riverside County Solid Waste Advisory Council and Local Task Force
- Waste Management, Inc. (El Sobrante Landfill);
- The Local Enforcement Agency;
- The State waste board (CalRecycle);
- The State Water Board; and
- Host communities and cities adjacent to the landfills.

A description of stakeholder interests is provided in Attachment 2.

Potential Proposers

There are at least six (6) proposers that may respond to an RFQ/LOI. Those proposers include:

1. Waste Management, Inc.
2. Republic Services, Inc./Allied Industries
3. Waste Connections, Inc.
4. Burrtec Waste Industries

5. CR&R Incorporated
6. Los Angeles County Sanitation District

There may be other interested solid waste companies outside of the Southern California region. Below is a brief description of the potential proposers.

Waste Management, Inc. (WM)

WM is the largest solid waste management company in the United States that owns a substantial number of landfills throughout the country. WM owns and operates the El Sobrante Landfill in Riverside County and the Moreno Valley Transfer Station. WM has franchise agreements with seven (7) cities in Riverside County and four (4) franchise agreements in unincorporated Riverside County.

Republic Services/Allied Industries

Republic Services, Inc. is the second largest solid waste company in the USA. Republic owns and operates the Sunshine Canyon Landfill in Los Angeles County. Republic owns and operates the CRT Regional MRF and Transfer Station in Anaheim, CA and the Inland Regional MRF and Transfer Station in Colton, CA.

Waste Connections, Inc.

Waste Connections is an integrated solid waste services company providing solid waste collection, transfer, disposal and recycling serviced in the Western and Southern regions of the USA. Waste Connections is a large solid waste company that owns and operates the Chiquita Canyon Landfill in Los Angeles County.

Burrtec Waste Industries

Burrtec is one of the largest privately held solid waste companies in Southern California. Burrtec operates three major transfer stations in Riverside County (Robert A. Nelson Transfer Station, Edom Hill Transfer Station and the Coachella Valley Transfer Station, through the Coachella/Indio Transfer Station Authority). Burrtec operates the San Bernardino County landfills and transfer stations under contract to the County of San Bernardino. Burrtec has recently acquired a long-term lease of the Salton City Landfill in Imperial Valley. Burrtec has franchise agreements with seven (7) cities in Riverside County and three (3) franchise agreements in unincorporated Riverside County.

CR&R Incorporated

CR&R is a franchise solid waste hauler for six (6) cities in Riverside County and four (4) franchise areas in unincorporated Riverside County. CR&R owns and operates a transfer station and MRF in Perris, CA in Riverside County and a transfer station and MRF in Stanton, CA in Orange County. CR&R also provides solid waste services throughout Orange, Los Angeles, San Bernardino and Imperial County.

Los Angeles County Sanitation Districts (LACSD)

The LACSD owns and operates the Puente Hills Landfill (closing in 2013) and the Puente Hills Transfer Station/MRF. The LACSD is developing a waste-by-rail system to replace the Puente Hills Landfill. LACSD

acquired the Mesquite Landfill in Imperial County and the Eagle Mountain landfill site (currently in litigation).

Tipping Fees in the Region

The tipping fees for refuse at selected landfills in the Southern California Region are reflected in Table 1. As shown in Table 1, the Riverside County landfill tipping fee is the lowest for in-County waste.

Table 1: Tipping Fees in the Region

Area/Landfill	Tipping Fee per Ton
Orange County	
Orange County Landfills:	
Gate Rate – Direct Haul	$54.30
Orange County Contract Rate for Cities (In-County Waste)	$30.30
Import Rate (Out-of-County Waste)	$22.68 [1]
San Bernardino County	
San Bernardino County Landfills:	
Gate Rate – Direct Haul	$58.73 [2]
Waste Disposal Agreement Rate	$36.92
Article 19 (In-County Waste – Transfer Station)	$26.62
Article 20 (Out-of-County Waste)	$27.47
Riverside County:	
Riverside County Landfills	
Gate Rate – Direct Haul	$34.37
Transfer Station Tonnage (approximately 69% of County tons) [3]	$26.35 - $26.94
Los Angeles:	
Los Angeles County Sanitary District (Puente Hills Landfill)	$38.41
Los Angeles County Sanitary District (Volume Discount Program)	$28.43 - $34.32
Sunshine Canyon Landfill – Allied Waste (Posted Rate)	$59.88 [4]
Chiquita Canyon Landfill – Waste Connections (Posted Rate)	$59.00 [4]

[1] Import rate effective January 1, 2012.
[2] Includes $12.00 for the Comprehensive Disposal Site Diversion Program.
[3] Riverside County's transfer station rates are set using a rate adjustment formula described in each agreement limiting the annual rate increase to the CPI for All Urban Consumers for Los Angeles/Riverside/Orange Counties
[4] Lower contract rates are available.

SECTION II: DESCRIPTION OF SOLID WASTE SYSTEM

Landfills and Disposal Sites

The County of Riverside owns six (6) active landfills and owns and/or operated thirty-two (32) inactive/closed landfills. See Appendix D for a map of the active County landfills, including the County-owned landfills and the privately owned El Sobrante Landfill.

Active County-Owned Landfills

- Badlands Sanitary Landfill ("Badlands")
- Lamb Canyon Landfill ("Lamb Canyon")
- Blythe Sanitary Landfill ("Blythe")
- Oasis Sanitary Landfill ("Oasis")
- Mecca Landfill II ("Mecca II")
- Desert Center Landfill ("Desert Center")

Table 2 identifies tonnage and capacity data for the six (6) active County-owned landfills.

Table 2: Summary the Six Active County-Owned Landfills in Riverside County

Landfill	Maximum Permitted Tons/Day	Operating Days per Year	Average Tons/Day (FY 2011)	Maximum Permitted Refuse Capacity [1] (Cubic Yards)	Estimated % Capacity in Place	% Capacity Remaining	Estimated Remaining Refuse Capacity (Cubic Yards)	Closure Date per Permit
Badlands Sanitary Landfill [2]	4,000	307	1,711	33,561,000	50.46%	49.54%	16,626,000	2024
Lamb Canyon Sanitary Landfill [2]	5,000	307	1,723	33,041,000	46.45%	53.55%	17,693,000	2021
Blythe Sanitary Landfill	400	266	60	6,034,000	33.44%	66.56%	4,016,000	2047
Oasis Sanitary Landfill [3]	450	104	13	1,484,000	72.26%	27.74%	412,000	2021
Mecca Landfill II	400	2	1	372,000	99.42%	0.58%	2,000	2005
Desert Center Landfill	60	2	18	117,000	69.20%	30.80%	36,000	2011
Total	10,310		3,526	74,609,000	48.02%	51.98%	38,785,000	

[1] Based on percentage filled from the 2011 Engineering and Environmental Financial Assurance Estimate (cubic yards are rounded to thousands)
[2] Six days per week (365 days per year) less six holidays – 307 Days.
[3] Includes 400 tons per day of non-hazardous solid waste and 50 tons per day of beneficial-use green waste.

A detailed description of the various solid waste facilities owned and operated, or leased by the County is provided in Appendix A.

A list of the 32 inactive/closed landfills and disposal sites is provided in Table 3:

Table 3: Inactive/Closed Landfills and Disposal Sites

	NAME	ACREAGE [2]	DATE OPENED	DATE CLOSED
1	ANZA SANITARY LANDFILL	52.25	1955	1999
2	IDYLLWILD DISPOSAL SITE	26.05	1967	1986
3	COACHELLA VALLEY DISPOSAL SITE	642.72	1972	1997
4	EDOM HILL SANITARY LANDFILL	435.20	1967	2004
5	CORONA DISPOSAL SITE	76.86	1951	1986
6	DOUBLE BUTTE DISPOSAL SITE	577.94	1973	1994
7	ELSINORE SANITARY LANDFILL	45.07	1953	1986
8	HIGHGROVE SANITARY LANDFILL	248.64	1947	1998
9	MEAD VALLEY DISPOSAL SITE	237.75	1974	1997
10	MECCA LANDFILL	20.09	1950	1982
11	WEST RIVERSIDE SANITARY LANDFILL	72.51	1965	1983
12	BEAUMONT LF	10.68	1962	1970
13	BELLTOWN I	14.11	1956	1964
14	BUNDY CANYON	83.88	Unknown	1953
15	CATHEDRAL CITY	67.04	1955	1967
16	CRESTMORE	5.37	1965	1972
17	DESERT HOT SPRINGS	191.85	1955	1968
18	EAST COUNTY LINE	46.21	1956	1965
19	HEMET	88.66	1958	1972
20	HOMELAND	8.40	1948	1966
21	INDIO (DA #18) (INDIO CLOSED LANDFILL)	10.11	1953	1960
22	LAKEVIEW	7.51	1951	1971
23	MENIFEE	19.14	1948	1973
24	MIRA LOMA	7.79	1947	1956
25	OLD COACHELLA (COACHELLA CITY)	17.16	1954	1960
26	OLD EAGLE MOUNTAIN	32.92	1972	1976
27	OLD IDYLLWILD BURN SITE	4.04	1950	1967
28	PEDLEY	19.60	1932	1958
29	TEMECULA	3.63	1955	1971
30	THERMAL	29.28	1948	1972
31	VALLE VISTA	26.06	1956	1957
32	PINON FLATS COLLECTION STATION	0.53	Unknown	1973
	Total Acres	3,129.05		

Privately Owned Landfill – El Sobrante Landfill

The El Sobrante Landfill ("El Sobrante") is the one active privately owned landfill in the County. On September 1, 1998 the County entered into the Second El Sobrante Landfill Agreement ("Agreement") with USA Waste (Waste Management) for the disposal of in-county and out-of-county waste that expires January 1, 2075.

The County pays a set tip fee to Waste Management for each ton of in-county waste received at the landfill. The effective rate at July 1, 2011 is $20.01 per ton and is adjusted annually by ninety percent of the CPI for all urban consumers in the Los Angeles, Anaheim, Riverside area.

Per Section 5(b)(2) of the Second Amendment to the Agreement, "If there is a contract under which USA Waste (WM) accepts more than thirty thousand (30,000) tons of non-County waste into the Landfill (El Sobrante) for disposal into the Landfill in any twelve-month period and renders no other substantial services except transportation or transfer at a disposal rate lower than that set forth in paragraph

4.2.1(b)(1), as the rate may be adjusted from time to time, then USA Waste shall provide County with a credit against any amounts due for acceptance of County waste (the "billing credit") in an amount equal to the difference between the contract rate and the rate established under paragraph 4.2.1(b)(1), multiplied by the tons of waste received under such contract during the applicable twelve-month period. The billing credit does not apply and shall not be provided in the event that the amount received under any such contract is not more than thirty thousand (30,000) tons in any twelve-month period. The billing credit and the thirty thousand (30,000) ton threshold are specific to each such contract for non-County waste and not to all such contracts cumulatively or in the aggregate."

The County charges USA Waste an import fee based on the tonnage imported into the El Sobrante landfill. USA Waste remits a charge to the County for import tonnage in an amount of twelve to seventeen percent (12%-17%) of the base disposal fee charged by USA Waste for deposit of non-County waste or $3.00 per ton, whichever is greater. This County revenue for import tonnage goes to the General Fund and not to the WMD.

El Sobrante disposed of approximately 2,183,000 tons in calendar year ("CY") 10/11, approximately 67% of the total landfilled tonnage in the County (3,254,000 tons). As shown in Table 4, El Sobrante imported two-thirds of its total landfilled tonnage from outside of the County.

Table 4: Summary of El Sobrante Landfilled Tonnage – CY 10/11

Description	Tons	% of Total Tons
Out-of-County	1,503,000	69%
In-County	680,000	31%
Total Tons	2,183,000	100%

El Sobrante is permitted for 70,000 tons per week (3,640,000 tons per year). The out-of-county tonnage is limited to 42,000 tons per week or 2,184,000 tons per year. The in-county tons are also limited to a maximum of 52,320,000 tons or 40% of total lifetime landfill volume. Total lifetime tonnage capacity per CalRecycle is 184,930,000 tons; 40% of the total lifetime tonnage capacity reserved for in-County disposal is 73,972,000 tons. The permitted closure date is January 1, 2045.

Per Section 11 of the Second Amendment to the Second El Sobrante Landfill Agreement Waste Management is required to deliver no less than 9,000 tons per calendar month from its Moreno Valley Transfer Station to a landfill owned or operated by the County. The monthly minimum requirement of 9,000 tons is increased by two and one-half percent (2 ½%) each year.

The County will not accept more than 225,000 tons of non-county waste at the County owned and operated landfills during any twelve (12) month period. Per Section 12.1.2(b) of the Agreement, the limit is lifted if WM deposits the equivalent of more than 5,800 ("Practical Maximum Amount") of non-County waste. According to Section 12.1.3 of the Agreement, "The COUNTY charge for Non-County Waste shall not be less than the amount per ton payable by USA Waste in respect of Non-County Waste under Section 5 above plus the lowest COUNTY contract price between the COUNTY and any City or hauler for County Waste at the Landfill or COUNTY's cost per ton at the Landfill."

Based on the lowest current in-County contract rate of $26.35 per ton, plus the approximate $3.00 per ton import charge, the County's import rate at County-owned landfills is $29.35 per ton or the County's cost per ton at the landfill, whichever is less.

Transfer Station/Material Recovery Facilities

There are eight (8) transfer station/MRFs and collection facilities that accounted for 1,203,000 tons of in-county disposal in FY 10/11. See Appendix E for a map of the transfer station/MRFs. The West Valley MRF in San Bernardino County delivered 6,093 in-county tons to Riverside County landfills in FY 10/11. Five (5) of the eight (8) transfer station/MRFs are on properties that are leased by the County. As shown in Table 5, the facilities are listed below with the operator. Tonnage delivered to County landfills by transfer stations/MRF in the County accounted for 62.4% of the total tipping fee revenue for FY 10/11.

Table 5: Summary of Transfer Station/MRF Tonnage for FY 10/11

Facility	Operator	Total Tons FY 10/11 [1]	% of Total Tons	Revenue FY 10/11 [1]	% of Total Gross Tipping Fee Revenue
Transfer Station/MRFs Under Lease Owned by County					
Robert A. Nelson Transfer Station/MRF	Burrtec	344,827	19.7%	$ 9,086,692	18.0%
Coachella Valley Transfer Station	Burrtec	109,648	6.3%	2,889,384	5.7%
Edom Hill Transfer Station	Burrtec	261,626	14.9%	6,894,225	13.6%
Idlywild, Pinyon Flats and Anza Transfer/Collection Stations	WM	12,169	0.7%	327,777	0.7%
Total Transfer Station/MRFs Under Lease Owned by County		728,270	41.6%	19,198,078	38.0%
Transfer Stations/MRFs - Privately Owned (In-County)					
Perris Transfer Station/MRF	CR&R	194,847	11.1%	5,134,501	10.1%
Moreno Valley Transfer Station/MRF	WM	274,023	15.6%	7,220,903	14.3%
Total Transfer Stations/MRF - Privately Owned		468,870	26.7%	12,355,404	24.4%
Subtotal Transfer Station Tonnage		1,197,140	68.3%	31,553,482	62.4%
West Valley MRF (In County) [2]	Burrtec	6,093	0.4%	160,559	0.3%
Non-Transfer Station Tonnage		548,622	31.3%	18,856,440	37.3%
Total FY 10/11		1,751,855	100.0%	$ 50,570,481	100.0%

[1] Valuation Model

[2] Facility located in San Bernardino County

Transfer Stations/MRFs under Lease - Owned by the County

The County has master leases with two (2) solid waste companies for the construction and operation of various transfer station/material recovery facilities in the County. The County leased the land to the operator with the agreement that the operator would construct and operate a transfer station/material recovery facility on the property. Upon the termination of the lease, the property, including improvements, reverts to the County for a nominal fee of $1.00. As lessee of three (3) of these facilities (Robert A. Nelson Transfer Station/MRF, Edom Hill Transfer Station and Coachella Valley Transfer Station) Burrtec has the "Right of First Refusal" in the event the County chooses to sell the facilities. The County also entered into a waste disposal agreement with each facility for disposal of refuse at a County landfill. The facilities include:

- Robert A. Nelson Transfer Station
- Edom Hill Transfer Station
- Coachella Valley Transfer

- Idyllwild Transfer Station (Lease) and Pinyon Flats Transfer Station (Operating Agreement)
- Anza Transfer Station

See Appendix B for a description of the above transfer stations and Appendix E for a map of the County transfer stations.

Agua Mansa Regional HHW Collection Facility

The County owns and operates the Agua Mansa Regional HHW Collection Facility. This facility is located at 1780 Agua Mansa Road in Riverside, adjacent to the Robert A. Nelson Transfer Station. This facility is open to the public from 9 AM to 2 PM on Saturdays.

Murrieta Area Regional ABOP Collection Facility

The County owns and operates the Murrieta Area Regional ABOP (Antifreeze, Batteries, Oil and Paint) collection facility that is located at 25315 Jefferson Avenue in Murrieta. The ABOP facility is located at the County transportation yard. This facility is open to the public from 9 AM to 2 PM on Saturdays.

Transfer Stations/MRFs – Privately Owned

There are two privately owned transfer stations in the County that are described below:

Moreno Valley Solid Waste R & T Facility

17700 Indian Street, Moreno Valley, CA
Owner/Operator: WM

Activity: Large volume transfer/processing facility
Maximum Permitted Throughput: 2,000 tons per day
Permitted Capacity: 2,600 tons per day

Perris Transfer Station and MRF

1706 Goetz Road, Perris, CA
Owner/Operator: CR&R, Incorporated

Activity: Large volume transfer/processing facility
Maximum Permitted Throughput: 3,000 tons per day
Permitted Capacity: 3,287 tons per day

Waste Delivery Agreements

The County entered into WDAs with the five (5) transfer stations/MRFs under master leases, two (2) privately owned and operated transfer stations/MRFs, and with the franchised haulers in the thirteen (13) franchise areas in the unincorporated County.

Transfer Stations/MRF

The transfer station/MRFs with WDAs include:

County-Owned - Leased

- Robert A. Nelson Transfer Station
- Edom Hill Transfer Station
- Coachella Valley Transfer Station
- Idyllwild Transfer Station (Lease) and Pinion Flats Transfer Station (Operating Agreement)
- Anza Transfer Station

Privately Owned

- Moreno Valley Solid Waste Refuse & Transfer Facility
- Perris Transfer Station and MRF

The lessees for each of the transfer stations may terminate the WDA with the County except for the Idyllwild, Pinyon Flats and Anza transfer stations, in the event the County relinquishes ownership of the landfills. The Idyllwild, Pinyon Flats and Anza Transfer Station Exclusive WDA's are concurrent with the related franchise agreement and terminate with the expiration of the franchise agreement.

Franchise Area – Exclusive Waste Delivery Agreements

The County has 13 franchise areas with franchise agreements. Each of the franchisees entered into a WDA with the County requiring the franchisee to deliver all of the waste originating in the franchise area to a designated County landfill. Table 6 lists the franchise areas and identifies franchisees. The WDAs run concurrently with the respective franchise agreements, including extensions. The unincorporated area franchise agreements automatically extend for one year, unless either the franchise hauler or the County provides notice of non-renewal within 30 days of the renewal date. The total tons from unincorporated areas of Riverside County totaled approximately 367,000 tons, approximately 21% of 1,752,000 tons for in-county waste disposed in FY 10/11, including El Sobrante Landfill tonnage.

Table 6: Franchise Area Exclusive Waste Delivery Agreements

Franchise Area	Contractor	Designated Landfill/ Transfer Station
Franchise Area 1	Waste Management	El Sobrante, Lamb Canyon, RAN TS & Moreno Valley TS
Franchise Area 2	Burrtec Waste Industries	
Franchise Area 3	Waste Management	El Sobrante
Franchise Area 4	Waste Management	Badlands, El Sobrante & RAN TS
Franchise Area 5	CR&R Incorporated	Badlands, El Sobrante & Perris TS
Franchise Area 6	CR&R Incorporated	Lamb Canyon
Franchise Area 7	CR&R Incorporated	Lamb Canyon & Badlands
Franchise Area 8	Waste Management	Lamb Canyon & Moreno Valley TS
Franchise Area 9	CR&R Incorporated	Lamb Canyon & Edom Hill TS
Franchise Area 10	Desert Valley Disposal	Edom Hill TS
Franchise Area 11	Burrtec Waste Industries	Edom Hill TS
Franchise Area 12	Burrtec Waste Industries	Edom Hill TS
Franchise Area 13	Palo Verde Disposal	Blythe

According to County management, unincorporated Franchise Area 2 is associated with the RAN lease and related WDA that expire on March 10, 2029. Unincorporated Franchise Areas 11 and 12 were combined.

Other Contractual Arrangements

Operation of Permanent HHW Collection Facilities

The County entered into operating agreements with the cities of Palm Springs and Lake Elsinore to operate or co-operate the Palm Springs Regional HHW Collection Facility and the Lake Elsinore Regional HHW Collection Facility. The cities of Palm Springs and Lake Elsinore own their respective HHW collection facilities.

Under the HHW operating agreements with the cities of Palm Springs and Lake Elsinore, the RCMWD is obligated to:

- Find and obtain a state-certified, permitted and licensed HHW transportation and disposal company;
- Provide necessary advertising;
- Cleanup any HHW spills;
- Prepare all necessary permit and variance applications;
- Provide the necessary staffing for site security, receiving, classifying, packaging and transportation of HHW;
- Ensure that the HHW contractor completes the off-site transportation, recycling and disposal of HHW in accordance with all Federal and State laws and regulations;
- Purchase all necessary equipment to handle HHW; and,
- Act as an independent contractor subject to the direction of the cities.

Landfill Gas-to-Energy

The County entered into landfill gas to energy agreements to collect and process the landfill gas ("LFG") at the Badlands Landfill.

Power Purchase Agreement (Southern California Edison):

The County has entered into a Power Purchase Agreement with Southern California Edison in February 2009 for the purchase of electricity generated at the Badlands Landfill for a period of ten (10) years.

Operations and Maintenance Agreement (SCS Energy):

The County has entered into an Operations and Maintenance Agreement with SCS Energy for the operations and maintenance of the Landfill Gas-to-Energy Facility at the Badlands Landfill. The County pays SCS Energy for these services.

The existing Landfill Gas-to-Energy Facility at the Badlands Landfill is rated at 1.2 kW. The County projects an expansion of the Badlands LFG to Energy Facility to 4.0 MWh in FY 14/15 and the development of a LFG to Energy Facility, also rated at 4.0 MWh, at the Lamb Canyon Landfill in FY 15/16.

Riverside County Waste Management Department

The Riverside County Waste Management Department ("WMD") is organized with three divisions: Administration Division, Engineering/Operations Division and the Environmental Division. The WMD has just under 200 employees. A recent organizational chart for the WMD is provided in Attachment 4.

Administration Division

The Administration Division provides:

- Administrative services, including transfer station and contract oversight;
- Administrative support, including legislative analysis, training, recruiting, personnel, and document management;
- Information technology, includes network administration, database administration, web development and software development;
- Safety;
- Fleet administration, including procurement, warehousing, and equipment and vehicle maintenance;
- Collection of gate fees; and
- Accounting (general accounting, accounts payable, accounts receivable, purchasing, budget and financial analysis and payroll.

Engineering/Operations Division

The Engineering/Operations Division designs, permits, constructs, operates and maintains the landfill sites. These activities include:

- Planning
- Design – includes grading plans, hydrology studies, soil analysis, seismic and stability studies, hydraulic calculations, traffic plans, and landfill liner systems;
- Permitting – Includes the preparation of the required documents to obtain the necessary permits and operation of the sites in accordance with state and federal regulations;
- Construction Management, including preparing contract documents and performing construction oversight on construction contracts;
- Operations, includes the daily receipt and "push, pack and cover" operations to bury the daily waste stream; and
- Refuse Control, including litter control, control of illegal dumping, the cleanup program and post closure maintenance.

Environmental Division

The Environmental Division is responsible for environmental monitoring, which includes the following:

- The Air/Gas Section designs, permits, operates and maintains landfill gas collection and flare stations and monitors air quality;
- The Water Section designs, permits, operates and maintains ground water monitoring and surface water sampling, and leachate management;
- The load check program;
- Traffic direction;
- Recycling at the landfills;

- The HHW Collection Program (AB 939 compliance, business and residential recycling); and,
- The composting program.

Other WMD Activities

The WMD:

- Provides call-in HHW information assistance and an HHW collection program through permanent County HHW facilities and frequent HHW collection events operated by the County at no charge to County residents (19 events were scheduled through June 13, 2011);
- Operates the permanent HHW collection facilities at the:
    - Palm Springs Regional HHW Collection Facility (Owner: City of Palm Springs)
    - Lake Elsinore Regional Permanent HHW Collection Facility (Owner: City of Lake Elsinore)
    - Agua Mansa Regional Permanent HHW Collection Facility (Owner: WMD);
- Provides sharps labels and collects sharps and medication at the HHW collection locations and events;
- Operates the ABOP facility at the Murrieta Area Regional ABOP Collection Facility (two other facilities are located at transfer stations and are operated by Burrtec); and
- Operates recycling programs at the County landfills, including appliance servicing, and electronic waste collection (recycling revenue helps offset the cost of other mandated activities).

The WMD is a state-approved electronic waste collector and recycler and a Certified Appliance Recycler responsible for removing HHW from appliances received at the landfills (such as Freon, neon, mercury, etc.).

The WMD is funded through tipping fees at the landfill.

SECTION III: ANALYSIS OF REGIONAL DISPOSAL CAPACITY

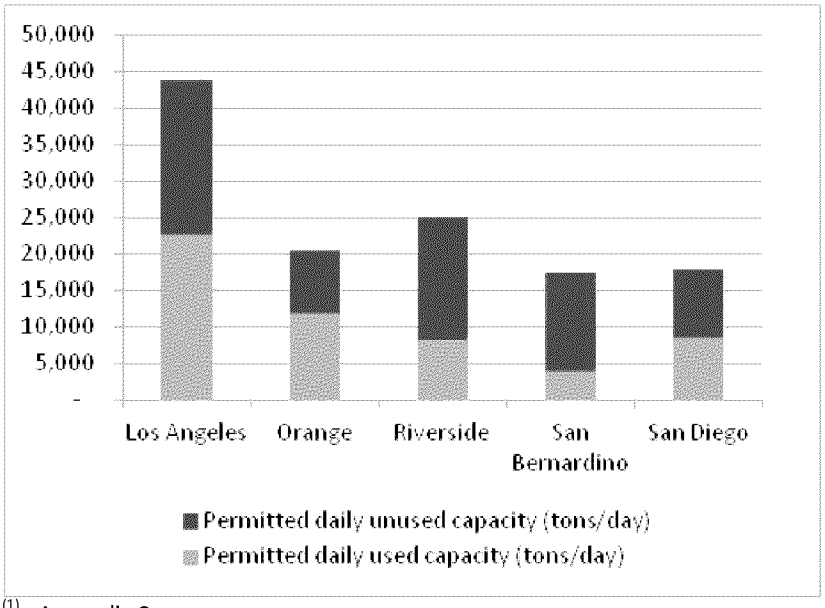
The value of the County solid waste system will be affected by the demand for disposal capacity. This section describes the regional disposal capacity conditions in Southern California.

Currently, permitted daily capacity at the three major Riverside County landfills (Badlands, Lamb Canyon and El Sobrante) totals approximately 25,000 tons per day. A map of the active Riverside County landfills is provided in Appendix D. The daily capacity used for Badlands, Lamb Canyon Landfill and El Sobrante for CY 2009 totals approximately 9,000 tons per day and 10,000 tons per day for CY 2010 (including import tons received by El Sobrante) with an unused permitted capacity of approximately 16,000 tons per day in CY 2009 and 15,000 tons per day in CY 2010. See Appendices D and E for maps of the Riverside County solid waste system.

There are twenty-five (25) significant landfills in the Imperial, Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties. See Appendix F for a map of the Southern California Landfills. Figure 1 reflects total regional capacity and use for 2009, for the Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties.

Figure 3 reflects a significant amount of unused daily capacity in the region. There are approximately 124,000 permitted tons per day in the five-county region at the 25 surveyed landfills (including several insignificant landfills) with unused daily capacity of approximately 70,000 tons.

Figure 3: Five-County Regional Capacity and Use – 2009 [(1) (2) (3)]



(1) Appendix C

(2) Active landfills for which disposal tonnage was excluded, include facilities with throughput less than 50 TPD, military facilities and the four remote landfills in Riverside County.

(3) The Mesquite Regional Landfill available daily tonnage is reflected in Los Angeles County assuming that the majority of the disposal tonnage will be delivered to the facility from the Puente Hills Transfer Station/MRF.

In 2013, the Colton Sanitary Landfill (3,100 permitted TPD), Puente Hills Landfill (13,200 permitted TPD) and Landers Sanitary Landfill (1,200 permitted TPD) are anticipated to close and the Mesquite Regional Landfill (Mesquite) in Imperial County will become available. Permitted for up to 20,000 tons per day, Mesquite is initially planned for up to 12,000 tons per day (8,000 tons by rail and 4,000 tons by truck) and is planned as a regional waste-by-rail facility to accept tonnage from the Puente Hills intermodal facility (truck-haul is also permitted, if the material is processed first). For analysis purposes, this is shown as capacity in Los Angeles County, because the delivery point would be the Puente Hills intermodal facility.

Additionally, Imperial County has applied for and received a Conditional Use Permit application to expand the existing Salton City Municipal Solid Waste landfill, recently acquired by Burrtec Waste Industries (Burrtec) under a long-term lease, to accept up to 6,000 tons of municipal solid waste per day and an EIR is currently being prepared for the environmental impact of the proposed expansion.[1]

In 2016, the Orange County waste import agreements will expire and are highly unlikely to be renewed based on current waste disposal agreements between the Orange County cities and the County of Orange. In 2011, approximately 2,600 tons per day were imported into the Orange County landfills, mostly from Los Angeles County.

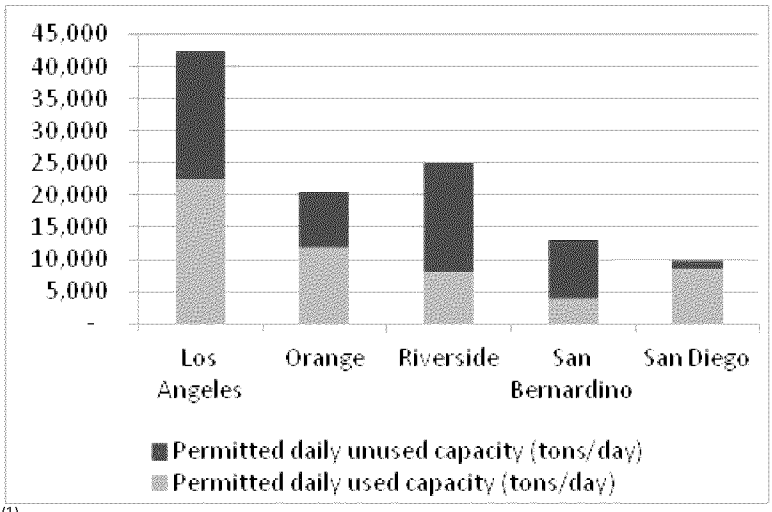
In 2017, the West Miramar Sanitary Landfill in San Diego will stop accepting waste, reducing the total permitted daily capacity of the five-county region by 8,000 tons per day.

Figure 4 reflects the projected five-county regional capacity at the end of 2017 impacted by projected growth in disposal tonnage, the closure of three landfills in 2013 and one landfill in 2017. By the end of 2017, the five-county region is projected to have approximately 111,000 tons of daily permitted capacity with a projected unused daily capacity of approximately 56,000 tons.

For purposes of the analysis of Southern California disposal capacity, proposed landfills sites at Gregory Canyon in north east San Diego County and Eagle Mountain in Riverside County were not considered as potential disposal options, because the availability of those sites is contingent upon the outcome of pending litigation, as well as permitting with various Federal and State agencies.

[1] Travertine Point Revised Draft EIR, Impact Services, Inc., May 2011

Figure 4: Five-County Regional Capacity and Use – 2017 [(1) (2) (3)]



(1) Appendix C

(2) The Mesquite Regional Landfill available daily tonnage is reflected in Los Angeles County assuming that the majority of the disposal tonnage will be delivered to the facility from the Puente Hills Transfer Station/MRF.

(3) Assumes that tonnage previously imported to Orange County landfills is landfilled in the county of origin.

SECTION IV ANALYSIS OF OPTIONS

Summary of Options

After meeting with County staff to confirm the County's study goals, we identified four potential options to enhance general fund revenues using the County's waste management assets:

1. Sale of Solid Waste System with net proceeds going to the General Fund (assuming County Counsel approval of the use of funds);
2. Lease of Solid Waste System (Landfills) with net lease payments going to the General Fund (assuming County Counsel approval of the use of funds);
3. Operating Contract for the operations of the Solid Waste System (Landfills) with the presumed savings increasing the amount that could be loaned to the General Fund; or
4. Continue County operations and provide additional revenue to the General Fund through a loan of reserves and/or importation of out-of-county waste.

Description of Options

Option #1: Sale of All or Part of the Active and Inactive/Closed Landfills

Under this option the Riverside County Waste Management Department ("County") would sell all or part of the Riverside County Solid Waste System landfills that includes the six (6) active landfills (Table 2), thirty-two (32) inactive/closed landfills (Attachment 1) and all related operating equipment. The buyer would be required to operate the purchased landfills and assume all of the closure and post-closure obligations for the landfills purchased. The County could contractually guarantee disposal capacity for the County waste stream as part of the sale conditions.

As previously described there are six active County-owned landfills and 32 inactive/closed landfills, five transfer stations, an ABOP facility (located at the County Transportation Yard in Murrieta), the Agua Mansa HHW Collection Facility and related equipment.

The Badlands and Lamb Canyon landfills are the primary County-owned disposal sites and provide the primary value to a buyer of the County's solid waste system assets. The remaining four landfills (Blythe, Oasis, Desert Center and Mecca II) are small landfills. The County operates the four smaller landfills at a net loss for the benefit and convenience of County residents and businesses. The Blythe landfill is at the eastern border of the County and received approximately 15,951 tons during FY 2011. The Oasis, Desert Center and Mecca II landfills received a combined total of 1,346 tons of refuse during FY 2011. Oasis is open two days per week and Desert Center and Mecca II are open only two days per year. If included in a sale, the small landfills are likely candidates for closure or to have operations suspended if the solid waste system is privatized, unless the buyer is contractually obligated to operate them.

While the Mecca II landfill is substantially full with an estimated closure date of 2005 (per the Solid Waste Permit), the landfill has expansion potential. The County projects a potential expansion for the Mecca II landfill in FY 2020. The expansion of the Mecca II would be dependent on regional growth and a related increase in disposal capacity requirements. Any increase in capacity at the Mecca II landfill to attract import waste would compete with the disposal capacity at the Mesquite Regional Landfill and

the Salton City Landfill. The estimated daily volume for Mesquite Regional Landfill is permitted for 4,000 tons per day for the first year of operations, increasing up to 20,000 tons per day after year seven. Trucks may be used in event of railroad stoppages. According to the LACSD, the Mesquite site is also permitted to receive up to 1,000 tons per day from Imperial County. Additionally, Imperial County has requested an increase from 50 TPD to 6,000 TPD for the Salton City Landfill (operated by Burrtec). The request for the increase tonnage permitted for the Salton City Landfill is still in process.

The 32 inactive/closed landfills have little or negative value in a sale as a result of the on-going monitoring, maintenance and corrective action required under state and Federal regulations. Due to the uncertain nature of the liabilities associated with these facilities, including the inactive/closed landfills in a sale might discourage potential buyers from proposing. According to BAS, it is difficult to determine the adequacy of the long-term estimate of liabilities related to the closed/inactive sites. The County is cautioned to remain cognizant of these liabilities if an "active landfill only" sale option is pursued, since the Enterprise Fund would no longer be able provide the financial protection to the General Fund as is currently the case. Any option pursued by the County should continue to provide funds for on-going monitoring, maintenance and corrective action required for these sites.

The buyer would be required to continue the recycling programs, including the receipt of appliances at the landfills.

Due to lengthy RFP/divestiture process, potential sale proceeds would not be immediately available. Additionally, the County would need to pre-fund certain transaction costs such as legal and consultant costs.

Advantages

The advantages of selling all or part of the active and inactive/closed landfills are:

1. County General Fund would receive the net proceeds (assuming County Counsel approval of the use of funds) for the sale of the landfills and related equipment, after set aside of reserve funds for future obligations.
2. The County would no longer be responsible for the daily operations, maintenance and corrective action for the landfill system (although the County could choose to retain the operation of the landfill gates, collection of gate fees and performance of the load check function).
3. A sale of all or part of the solid waste system could limit the potential environmental liability for the landfills to the accrued liabilities at the date of the transfer of ownership; the buyer might be responsible for any environmental cost incurred after the transfer of the property.
4. The 225,000 tons per year limitation on non-County waste at the County-owned landfills, under the El Sobrante agreement, may no longer apply, increasing the value to a potential buyer.

Disadvantages

The disadvantages of selling all or part of the active and inactive/closed landfills are:

1. The transfer of ownership of the County landfills would activate the lease clause allowing the lessee to terminate the WDA with the transfer station operators. This may significantly decrease the value of the solid waste system and reduce any potential ongoing per-ton revenue that may be proposed for the General Fund.

2. The County would no longer have direct control of the landfill activities and less control over customer rates.
3. There would likely be little interest in the inactive/closed landfills, the HHW and ABOP facilities, unless specifically required as part of the sales agreement. The inclusion of these facilities, along with the potential liability, would likely significantly lower the value of the potential sale. Excluding these facilities from a sale would leave the County with significant ongoing costs and potentially future unfunded liabilities.
4. Many existing employees may lose their employment with the County. The purchaser of the system may retain some of the existing employees, although wages and benefits may be different.
5. Upfront costs associated with necessary outside consultants (legal, M&A)
6. The increasing costs of stricter environmental regulations on landfills (remaining with the County) would need to be absorbed by the General Fund.

Significant Considerations Related to the Sale of All or Part of the Solid Waste System

Potential Cancelation of WDA's

In the event that the County relinquishes ownership in a landfill, the WDA with the operators of the Robert A. Nelson, Edom Hill, Coachella Valley, Moreno Valley and Perris transfer stations/MRFs may be terminated at the option of the operator. Based on the FY 10/11 budgeted tonnage reflected in Table 7 from the County's economic model, the tonnage impacted by the WDA accounts for approximately 1,197,000 tons or nearly $32 million. The $32 million represents approximately 63% of total estimated gross tipping fees of $51 million for FY 10/11.

Table 7: County Transfer Station Tonnage under Waste Disposal Agreements

Facility	Operator	Total County Tons FY 10/11 [1]	% of Total Tons	WDA Tipping Fee Revenue FY 10/11 [2]	% of Total WDA Gross Tipping Fee Revenue
Waste Disposal Agreements - Transfer Stations					
Robert A. Nelson Transfer Station/MRF	Burrtec	344,827	28.8%	$ 9,086,692	28.8%
Coachella Valley Transfer Station	Burrtec	109,648	9.2%	2,889,384	9.2%
Edom Hill Transfer Station	Burrtec	261,626	21.8%	6,894,225	21.8%
Subtotal Burrtec Transfer Stations		716,101	59.8%	18,870,301	59.8%
Perris Transfer Station/MRF [3]	CR&R	194,847	16.3%	5,134,501	16.3%
Idlywild, Pinyon Flats and Anza Facilities	WM	12,169	1.0%	327,777	1.0%
Moreno Valley Transfer Station/MRF [3]	WM	274,023	22.9%	7,220,903	22.9%
Subtotal WM Transfer Stations		286,192	23.9%	7,548,680	23.9%
Total County Transfer Station Tonnage Under WDA		1,197,140	100.0%	31,553,482	100.0%
Tons Above Delivered to El Sobrante [3]		328,721	27.5%	8,662,275	27.5%
Net Tons Delivered to County-Owned Landfills		868,419	72.5%	22,891,207	72.5%

[1] Exhibit 6A

[2] Exhibit 2A

[3] Includes 164,647 tons from the Moreno Valley TS/MRF and 164,074 tons from the Perris TS/MRF.

Burrtec is the largest transfer station operator, as measured by facility tonnage. The estimated in-County tonnage from the Burrtec operated transfer stations (Robert A. Nelson, Edom Hill and Coachella Valley) totals approximately 716,000 tons for FY 10/11 or approximately 41% of 1,752,000 total in-County tons disposed and $19 million or 37% of the gross tipping fee revenue of $51 million, net of pass-

through billings (includes pass-through fees for Habitat & Environmental Mitigation, State Fees, Household Hazardous Waste and Code Enforcement).

Moreno Valley and Perris TS/MRFs delivered 329,000 tons to the El Sobrante Landfill in addition to 139,000 tons to County-owned landfills.

Potential Exportation of County Tonnage

Landfill cash flows are dependent on the quantity of tonnage received and therefore the value of the landfill system is highly dependent on the quantity of tonnage. The potential loss of County tonnage to out-of-county landfills would reduce cash flow and reduce the value of the system to a buyer. Any tipping fee surcharges that may be assessed to fund future County obligations or General Fund contributions would also be negatively impacted by tonnage loss.

Burrtec currently operates the San Bernardino County solid waste system under an operations contract. Burrtec is the franchise hauler for many cities in Riverside County and may be interested in the opportunity to export Riverside County tonnage to the County of San Bernardino. Under Article 20 of the San Bernardino operations contract, Burrtec may deliver to the San Bernardino County landfills imported waste of up to 100,000 tons per year at a reduced rate, currently $27.47 per ton[2]. Additionally, Burrtec is paid an additional fee by San Bernardino County as the system operator to handle the tonnage. Tonnage delivered from the three Riverside County transfer stations leased and operated by Burrtec account for approximately 716,000 tons annually (2,332 TPD), representing $18,870,000.

Unused capacity at San Bernardino County landfills has been increasing over the past five years. The Mid-Valley Landfill had an unused capacity of approximately 1.7 million tons in 2010 (5,566 tons per day).

Burrtec recently leased the Salton City landfill in Imperial County. Burrtec may be interested in exporting Riverside County waste through the Coachella Valley Transfer Station to the Salton City landfill. Imperial County has requested an increase in the permitted tonnage from 50 TPD to 6,000 TPD, a maximum of approximately 1,872,000 tons per year.

The opportunity to export Riverside County tonnage into the San Bernardino County landfills (primarily the Mid-Valley Landfill) and into the Salton City Landfill may be attractive to Burrtec and to the counties of San Bernardino and Imperial.

The Orange County import agreements will terminate on June 30, 2016. Orange County imported approximately 2,550 tons per day into the Orange County landfills in CY 2010. The landfills in Los Angeles County, San Bernardino County, Riverside County and Imperial County will compete for the 700,000 to 800,000 annual tons currently being delivered to Orange County landfills beginning July 1, 2016.

As reflected in Figure 1 for 2009, disposal capacity and Figure 2 for projected disposal capacity in 2017, there is significant unused disposal capacity in the Southern California region.

[2] Report/Recommendation to the Board of Supervisors of San Bernardino County and Record of Action, June 15, 2011

Examples – City and County of San Diego

Examples of two jurisdictions that attempted sales of their landfill systems are provided in Section V. The County of San Diego sold its landfill system in 1997. The City of San Diego attempted to sell its landfill in 2010 and was unable to find a buyer.

Potential Sale Options

There are several potential structures for the sale of all or part of the County's solid waste system:

1A. Sale of all active and inactive/closed landfills;

1B. Sale of the Badlands and Lamb Canyon landfills, only;

1C. Sale of the active landfills, only (six active landfills); and

1D. Sale of the transfer station/MRFs (the RAN, Edom Hill and Coachella Valley transfer stations)

Each of these options is discussed below.

1A. Sale of all active and inactive/closed landfills.

This option involves the sale of the entire solid waste system, including the six active landfills and the 32 inactive/closed landfills. Sale of the landfills would result in the County transferring ownership, and may instigate the clause in the WDA allowing the transfer station operators the option to terminate the WDA and deliver the waste stream to other disposal facilities (See Section 13B in the Edom Hill Transfer Station and the Coachella Valley Transfer Station agreements and Section 14B of the Robert A. Nelson Transfer Station agreement for the disposal of solid waste).

Unless required by contract to remain open, it is possible that a private owner would close or suspend operations at one or more of the smallest landfills (Blythe, Oasis, Desert Center and Mecca II); either permanently or until demand increases sufficiently to provide profitable operation of the facilities. The County operates the four smallest landfills at a net loss for the benefit and convenience of County residents and businesses and provides a necessary disposal site for solid waste in areas highly prone to illegal dumping.

The County could choose to retain operation of the gate, waste inspection, illegal dumping, HHW and ABOP collection activities for the benefit and convenience of County residents and businesses. The cost of these activities for FY 10/11 is shown in Table 14 on page 34 of this report. The amount could increase in the future, as it is difficult to estimate future requirements. The County could also choose to retain those activities under option 1B and 1C below.

1B. Sale of the Badlands and Lamb Canyon Landfills, only.

This option includes the sale of the Badlands and Lamb Canyon landfills, only. Sale of these two landfills would result in the County transferring ownership, and will instigate the clause in the WDA allowing the transfer station operators the option to terminate the WDA and deliver the waste stream to other disposal facilities.

The County would retain operation of the four smallest landfills (Blythe, Oasis, Desert Center and Mecca II), the 32 inactive/closed landfills and the HHW and ABOP collection activities for the benefit and convenience of County residents and businesses. The cost of these activities for FY 10/11 is shown in Table 14 on page 34 of this report. The amount could increase in the future, as it is difficult to estimate future remediation requirements for the inactive/closed landfills.

As described in Appendix A, the Oasis, Desert Center and Mecca II landfills currently are operated at reduced schedules. The Oasis Landfill is operated two days each week and the Desert Center and Mecca II landfills are both operated for two days each year.

1C. Sale of the active landfills, only (six active landfills).

Option 1C would involve the sale of all six of the active County landfills and would activate the potential termination of the WDA. Under this option, as in Option 1A, it is possible that a private owner would close one or more of the four smallest landfills (Blythe, Oasis, Desert Center and Mecca II), either permanently or until demand increase sufficiently to provide profitable operation of the facilities, unless required contractually to remain open.

1D. Sale of transfer station/MRFs (the Robert A. Nelson, Edom Hill and Coachella Valley Transfer Stations)

Under Option 1D, the sale would involve the three large transfer stations currently under lease to Burrtec. Under the lease of these transfer stations, Burrtec has the first right of refusal for two of the transfer stations in the event that the County offers the transfer stations for sale. Burrtec would have the option to purchase the transfer stations for the price offered by a third party. Option 1D could be added to options 1A, 1B or 1C.

Option #2: Lease of Solid Waste System

Under this option the Riverside County Waste Management Department ("County") would lease all or part of the solid waste system with an annual lease payment that would be based on tonnage delivered. The County could retain the obligation and cost for the planning and engineering of liners, expansions and closure. Under a lease, the leased parts of the solid waste system would return to the County at the end of the lease.

A lease could be structured for the system components similar to those described in a sale for options 1A, 1B or 1C, but option 1D would likely not apply because the three transfer stations are already under master leases with the County.

Advantages

The advantages of leasing all or part of the active and inactive/closed landfills are:

1. Under a lease agreement the ownership of the landfills would not change and therefore the termination option in the WDAs with the transfer station/MRF leases could not be exercised. As a result the County's landfills would continue to receive disposal tonnage as directed by the WDAs.
2. County General Fund would receive an annual net lease payment for the landfills and related equipment.

3. County could retain the operation of the landfill gates, collection of gate fees and performance of the load check function.
4. The County would no longer be responsible for performing the daily operations, maintenance and corrective action for the landfill system.
5. The County would be able to guarantee disposal capacity for the County waste stream through the lease agreement.

Disadvantages

The disadvantages of leasing all or part of the active and inactive/closed landfills are:

1. The County would no longer have daily control of the landfill activities and less control over customer rates.
2. The County might retain the responsibility and cost for the acquisition of required land and the planning and engineering of new liners, fill sequencing, landfill expansion, closure and post-closure maintenance, depending on the lease terms.
3. There would likely be little interest in the inactive/closed landfills, the HHW and ABOP facilities, unless specifically required as part of the lease arrangement. The inclusion of these facilities, along with the potential liability, would likely significantly affect the amount of the lease payment.
4. Since the landfills and related operating assets will revert to the County at the end of the lease term, a lessee may minimize investment in on-going maintenance activities.
5. The County would likely retain the environmental liability associated with disposal operations.
6. The 225,000 tons per year limitation on import tons to County-owned landfills, under the El Sobrante agreement, would still apply.

Structure of the lease – Although the lessee would operate the leased facilities, the County would need to include sufficient language in the lease to ensure continued operations and maintenance of the solid waste system under current and future State and Federal regulations.

Option #3: Operation Contract for All or Part of the Solid Waste System

Under this option the Riverside County Waste Management Department ("County") would enter into an operating contract with a private party ("Contractor") for the operation of the County landfills, and possibly the Agua Mansa Permanent HHW Collection Center and the Murrieta Regional ABOP Collection Facility. The County landfills include six active landfills (three of which are actively receiving refuse) and thirty-two inactive/closed landfills and disposal sites (including identified burn sites).
Under an operations contract, the County would retain ownership of all of the system facilities and assets and a contractor would operate and maintain all of the system landfills (active and inactive) and transfer stations. The County could continue to operate the gates and perform the load check function.

Advantages

1. Under the operations contract the ownership of the landfills would not change and therefore the termination option in the WDAs with the transfer station/MRF leases could not be exercised. As a result the County's landfills would continue to receive disposal tonnage as directed by the WDA.
2. The County would no longer be responsible for performing the daily operations, maintenance and corrective action for the landfill system. The private operator might be able to perform the services

at a reduced cost compared to the County operations. If able to reduce costs, the solid waste fund might be able to loan additional funds to the General Fund or provide additional rate stabilization.
3. The County would be able to continue to plan and assure disposal capacity for the County waste stream.
4. County could retain the operation of the landfill gates, collection of gate fees and performance of the load check function.
5. County would retain control over customer rates.

Disadvantages

1. The County would no longer have daily control of the landfill activities.
2. The County would retain the responsibility and liability for the acquisition of required land and the planning and engineering of new liners, fill sequencing, landfill expansion, closure and post-closure maintenance.
3. The County would retain the environmental liability associated with disposal operations.

Example – San Bernardino County

The solid waste system operations contract between San Bernardino County and Burrtec Waste Industries (Burrtec) is an example of Option #3. San Bernardino County contracted with Burrtec to conduct all work necessary for the operations and maintenance of the County's landfills (active and inactive) and transfer station operations. The scope of work under the operations contract includes anticipated facility closures, fill sequencing plans and other normal operational activities.

Burrtec receives compensation in the form of an annual payment (in monthly installments) based on the Burrtec's total annual costs of operation of the landfills and transfer stations, including annual fixed costs and direct operating costs that are based on a standard tonnage for each facility. Burrtec also receives a tonnage adjustment, over or under the standard tonnage. If the tons received by Burrtec at the County landfills and transfer stations exceeds (calculated by facility) the standard tonnage, Burrtec's compensation is increased. If the tonnage is less than the standard tonnage, Burrtec's compensation is decreased.

Table 8 shows the owner/operator relationship for several significant publicly owned landfills in other local counties.

Table 8: Public Landfill Operations

Landfill Owner	# of Active Landfills	Operator
County of Orange	3	County
County of Riverside	6	County
County of San Bernardino	5	Burrtec Waste Industries
County of Kern	7	County
Los Angeles County Sanitation Districts	2	LACSD
City of San Diego	1	City of San Diego
City of Burbank	1	City of Burbank
City of Glendale	1	LACSD

Option #4: Continued County Operations

4A: Business as Usual and Loan Funds to the County General Fund from the WMD Reserves

Under this option the Riverside County Waste Management Department would continue to operate the County Solid Waste System and would loan monies to the General Fund from the solid waste reserves. The County determined that it is necessary to maintain a cash reserve in its solid waste operations fund equal to three months of expense, including operating expenses and restricted costs for Closure, Post Closure and Remediation Funding.

The WMD had approximately $45.3 million in unrestricted cash as of at the beginning of FY 10/11 (CAFR balance at June 30, 2009). Excess unrestricted cash reserves over the three-month operations target are shown in Table 9. This is the amount that might be available for a loan in any given year based on current projections.

According to the Riverside County Counsel in a memorandum dated July 27, 2011, California courts have held that the general fund of a county may temporarily borrow restricted funds provided that there is a mechanism to repay the funds and that the borrowed monies are repaid before the funds are to be expended for the original purpose.

Table 9: Summary of Estimated Excess Operating Cash Reserves Available for Loan for the Ten Years from FY 11/12 – FY 20/21 (Year End Balances) Scenario 1: Tonnage Growth – 1.9% per Year [1] [2]

Fiscal Year	Reserves	Target	Available for Loan
FY 11/12	$ 43,571,000	$ 19,607,000	$ 23,964,000
FY 12/13	45,884,000	14,716,000	31,168,000
FY 13/14	47,780,000	16,744,000	31,036,000
FY 14/15	50,693,000	15,796,000	34,897,000
FY 15/16	57,973,000	15,487,000	42,486,000
FY 16/17	60,836,000	17,527,000	43,309,000
FY 17/18	64,347,000	18,073,000	46,274,000
FY 18/19	68,617,000	18,761,000	49,856,000
FY 19/20	35,247,000	30,094,000	5,153,000
FY 20/21	46,973,000	20,350,000	26,623,000

[1] CAFR balance at June 30, 2011 was $52.5 million.
[2] Exhibit 2A

The ability to loan funds to the General Fund is discussed in Section 22241 of Title 27 in the California Code of Regulations.

CalRecycle, under Title 27, Environmental Protection, may limit the ability of the County to loan funds to the General Fund. In Subchapter 3. Allowable Mechanisms - Section 22241. CIWMB (now CalRecycle) – Enterprise Fund:

"(a) The enterprise fund shall dedicate its revenue exclusively or with exclusive first priority to financing closure and/or post closure maintenance and/or corrective action.

(b) Revenue generated by an enterprise fund shall be deposited into a financial assurance mechanism that the operator demonstrates, to the satisfaction of the CIWMB, meet the following requirements:

(1) The mechanism will provide equivalent protection to a trust fund in ensuring that the assured amount of funds shall be available in a timely manner for closure and/or post closure maintenance and/or corrective action."

Section 22241(b) also states;

"(5) If the provider of financial assurance has authority to invest revenue deposited into the mechanism, the provider shall exercise investment discretion similar to a trustee; and
(6) The mechanism meets other requirements that the CIWMB determines are needed to ensure that the assured amount of funds shall be available in a timely manner for closure and/or post closure maintenance and/or corrective action."

There are fourteen allowable financial assurance mechanisms. The County uses two of the financial assurance mechanism to assure the closure and/or post closure maintenance and/or corrective action of its landfills:

- 22241 – Enterprise Fund; and
- 22245 – Pledge of Revenue.

Under the Enterprise Fund and Pledge of Revenue mechanisms the County has long-term restricted reserves for closure, post closure and corrective action that might be able to be loaned with interest to the County. The County contributes to the closure, post closure and corrective action reserves annually based on the tonnage received at each landfill. Table 10 provides a summary of the estimated closure, post closure and corrective action fund balances for the ten years from FY 11/12 to FY 20/21.

Table 10: Summary of Estimated Closure, Post Closure and Corrective Action Reserve Balances at Year End for the Ten Years from FY 11/12 – FY 20/21 [(1) (2)]
Scenario 1: Tonnage Growth – 1.9% per Year

Fiscal Year	Closure/Post Closure	Corrective Action	Total
FY 11/12	$ 73,105,000	$ 17,108,000	$ 90,213,000
FY 12/13	75,823,000	14,975,000	90,798,000
FY 13/14	74,526,000	16,744,000	91,270,000
FY 14/15	79,446,000	17,116,000	96,562,000
FY 15/16	85,029,000	17,577,000	102,606,000
FY 16/17	90,366,000	18,051,000	108,417,000
FY 17/18	96,515,000	18,534,000	115,049,000
FY 18/19	102,979,000	19,029,000	122,008,000
FY 19/20	109,773,000	19,536,000	129,309,000
FY 20/21	116,913,000	20,054,000	136,967,000

(1) Exhibit 8A
(2) CAFR balance at June 30, 2010 for restricted reserves was $86.6 million.

Under Section 22245 (Pledge of Revenue), the County entered into twelve Pledge of Revenue agreements to provide assurance of funds for post closure maintenance. The landfill revenues are

pledged from future operations to be available for post closure maintenance. The pledged revenues may be increased or decreased for any adjustment to the cost estimate that is mutually agreed to by the WMD and CalRecycle.

Example – County of Orange

The Orange County General Fund borrows against reserve funds established by OC Waste &Recycling, The amount loaned to the General Fund is repaid with interest. The department operates the landfills in Orange County.

4B: Increase Imported Tonnage with Net Revenue Provided to the General Fund

Under this option the Riverside County Waste Management Department would continue to operate the County Solid Waste System and seek import tonnage for the County-owned landfills. It would transfer funds to the General Fund to the extent the tipping fees from the additional imported tons exceeded the cost of operations, including the contribution to the required closure/post closure reserves.

Under the existing El Sobrante Agreement, importation to the County-owned landfills is limited to 225,000 per year (or higher amount if El Sobrante receives its Practical Maximum Amount). Assuming the County could generate net incremental revenue ranging from $5 to $15 per ton and maximize the importation at 225,000 tons per year, the County could generate between $1,125,000 and $3,375,000 per year for the General Fund. This might be possible depending on market conditions after closure of Puente Hills in 2013, termination of the Orange County import agreements in 2016, and expiration of the San Bernardino County waste delivery agreements, if not renewed in the next few years.

Example – County of Orange

As an example of the potential to import tonnage, Orange County has import agreements with certain haulers for the disposal of out-of-county waste in the Orange County landfill system. The current import rate is $22.68 per ton. The Orange County solid waste department retains its incremental costs to dispose of the waste, and the balance of approximately $16 per ton is remitted to the General Fund.

SECTION V: OTHER SIMILAR TRANSACTIONS

County of San Diego – Sale of Solid Waste System

In 1996, the San Diego County Board of Supervisors directed staff to begin the process for divestiture of the County Solid Waste System. The County Solid Waste System assets included:

- Four landfills
  - Sycamore;
  - Otay;
  - Ramona, ; and
  - Borrego
- The North County Recycling and Recovery Facility (NCRRF),
- Ten rural container transfer stations, and
- The Palomar Transfer Station.

The County contracted with J.P. Morgan for consulting services for the County's Solid Waste Asset divestiture program.

On August 12, 1997, the Board of Supervisors authorized the sale of the County's Solid Waste System to Allied Waste Industries. The County successfully divested itself from the business of owning and operating landfills and the North County Resource Recovery Facility. However, certain responsibilities were retained:

1. Management of inactive and closed solid wastes sites (compliance with environmental laws and regulations);
2. Activities to ensure provision of solid waste collection services, reduction and diversion; and,
3. Countywide planning and reporting as required by law.

The County received approximately $179 million, including $160 million from the proceeds of the sale, $16 million from the release of excess closure/post-closure reserves and $3 million other, as shown below. As reflected in Table 11, of the $179 million in sales proceeds, $59 million was available for the General Fund, with the remainder designated as restricted funds. According to County management, of the $59 million, $17 million was used for a computer upgrade, courthouse and office repairs and habitat conservation.

Table 11: Summary of Proceeds and Proposed Uses of Proceeds from Sale of Solid Waste System

Proceeds Related to Sale of Solid Waste System	
Estimated Sales Proceeds	$ 160
Release of Closure/Post-Closure Reserves	16
Other	3
Total Estimated Proceeds from Sale	179
Use of Proceeds - Restricted:	
Solid Waste Environmental Trust Fund	101
Various Fund Specific Requirements Associated with the Sale	19
Restricted Proceeds	120
Proceeds in Excess of Identified Uses (General Fund)	$ 59

City of San Diego – Miramar Landfill

The City, through issuance of this Request for Qualifications/Non-binding Statement of Interest ("RFQ/SOI"), solicited Statements of Qualifications and Non-binding Statements of Interest which include summaries of specific but non-binding economic proposals ("SOQ/SOIs"), from private entities for:

- The leasehold acquisition or sublease, expansion, operation, regulatory compliance, and closure/post-closure maintenance and monitoring of the Miramar Landfill, including all closed and inactive portions;
- Greenery processing at the Miramar Landfill and marketing and sales of greenery products;
- Recyclables buy-back center operations at the Miramar Landfill, subject to the existing contract between the City and Allan Company;
- The development of a materials transfer and processing facility at the Miramar Landfill site;
- The development of the Miramar Landfill site for other solid waste management processes including, but not limited to: construction and demolition debris ("C&D") processing, other recyclables processing, waste-to-energy conversion technology operations, and other sustainable purposes such as the generation of wind or solar energy;
- Household Hazardous Waste Transfer Station operations, subject to the existing contract between the City and Clean Harbors Environmental Services, Inc.;
- Management, installation, testing, monitoring, and corrective actions related to the Landfill gas collection system as needed to comply with regulatory requirements and contractual requirements;
- Management, installation, testing, monitoring, and corrective actions related to the Landfill leachate collection system as needed to comply with regulatory requirements;
- Collection, accounting, and remittance to the City of fees and taxes imposed on waste or other materials delivered to the Miramar Landfill and revenues from transfer or processing activities conducted on the Miramar Landfill Leasehold property;

- Acceptance of City-collected solid waste (whether collected by City forces or by City contractors) and solid waste generated by City government activities;

- Acceptance of waste generated by the Department of Navy installations and facilities located within or near the boundaries of the City of San Diego in accordance with the Lease;

- Reclamation of closed/inactive landfills on the Miramar Landfill Leasehold property; and

- Acceptance of assignment of rights and delegation of duties under the commercial landfill gas lease agreement for the operation of cogeneration facilities serving the City and other customers.

Results

A number of companies attended the initial meeting regarding the landfill sale. Ultimately, none of the companies made an acceptable offer to the City, due in part to the limited remaining capacity of the landfill (estimated at approximately 10 years), uncertainty over responsibility for prior environmental liability and the complexity of the potential transaction. The Navy owns the land and leases the land to the City, and would be required to approve a third party transaction. The City is currently going through a managed competition for operation of the landfill.

County of San Bernardino – Solid Waste System

In 2000, the County of San Bernardino requested proposals for the operation of the County's Solid Waste System, including the operation of active landfills, the inspection and maintenance of inactive and closed landfills and the operation of transfer stations. The proposers were given four proposal options:

1. Operate all landfills and all transfer stations;
2. Operate all landfills, only;
3. Operated all transfer stations, only; and/or,
4. Operate individual transfer stations.

The San Bernardino County Solid Waste System was comprised of 7 active landfills, 9 inactive plus 23 closed sites, seven regular transfer stations and four limited-volume transfer stations.

Contractor Responsibilities

Landfill Operation and Maintenance

The Contractor for the San Bernardino solid waste system is responsible for the daily operation and maintenance of all active landfills, including:

- Landfilling waste;
- Operating septic waste facilities;
- Load checking;
- Surveying;
- Litter control;
- Recycling;

- Excavation of cover material;
- Construction and maintenance of internal water and electrical systems;
- Leachate collection and drainage systems;
- Maintenance of access and haul roads; and,
- Coordinating with the County scale operators.

Landfill Recycling Requirements

The existing recycling activities were to continue. Tires, white goods and scrap metal are required to be collected at all facilities.

Inactive/Closed Landfill Responsibilities

The contractor is responsible for conducting monthly inspections, submitting monthly reports, conducting post-rainfall inspections and operating and maintaining the leachate collection systems, as well as general site maintenance.

Transfer Station Recycling Requirements

The contractor is responsible for operating and maintaining the County transfer stations.

County Responsibilities

The County is responsible for managing or separately contracting for:

- Overall system planning and administration;
- Public relations and education programs;
- Scale operations and customer billing;
- Landfill gas system operation and maintenance; and,
- Capital projects, such as engineering, design and construction for site closures and expansions, and environmental remediation projects.

Results

San Bernardino County entered into a seven-year agreement (plus three one-year extensions) with Burrtec Waste Industries for the operation of its solid waste system. The County increased control over the solid waste system by replacing the previous operations contract with a contract with a narrower operator role.

SECTION VI: VALUATION ANALYSIS

Summary of Solid Waste System Economics

The County's 10-year economic model was updated and extended for 40 years, through FY 50/51, as shown in the attached valuation model for Scenario 1 and Scenario 2. The County provided a projection of site-specific costs reflecting land acquisition, landfill expansion, gas-to-energy costs and projected gas-to-energy revenues (landfill capital costs and capacity estimates were reviewed by Bryan A. Stirrat & Associates, a Tetra Tech company ("BAS") as described in Appendix G.). The primary goal was to calculate the range of values of the system facilities sold. The model considered two scenarios as follows:

Scenario 1: This scenario was based on the sale of the Badlands and Lamb Canyon Landfills and the existing tonnage growth is limited to the approximate growth in population – 1.9%.

It is possible with economic recovery that tonnage could increase significantly from current levels. However, this could be offset over the intermediate term with new recycling programs in response to recently approved State legislation to increase the statewide diversion goal to 75% by 2020.

Scenario 2: This scenario was based on the sale of the Badlands and Lamb Canyon landfills and assumes disposal quantities increase by 7.3% per year for five years (FY 11/12 through FY 15/16) to increase in-County disposal to the FY 05/06 level, and a 1.9% annual increase thereafter based on estimated population growth from FY 16/17 through FY 50/51.

The cash flow for the entire solid waste system was projected under each scenario and the projected revenues and expenses for operations retained by the County were deducted to reflect the cash flow of the facilities sold. The operations assumed to be retained by the County for valuation purposes are identified in Table 13.

The results of the analysis are summarized in Table 12.

Table 12: Estimated Range of Value for the Solid Waste System Facilities Sold

Scenario	Scenarios					
	1: 1.9% per Year Tonnage Growth			2: Tonnage Growth of 7.3% for Five Years then 1.9% per Year		
Sale of Badlands and Lamb Canyon	$ 122,000,000	to	$ 214,000,000	$ 181,000,000	to	$ 330,000,000

Sensitivity Analysis

The value of the solid waste system assets sold is highly dependent on the quantity of refuse delivered to the landfills. For example, if tonnage delivered to the County landfills remained at current levels for the 40-year period, rather than increasing by 1.9% annually as shown in Scenario 1, the estimated value of the sale of the Badlands and Lamb Canyon landfills would be $82 million to $122 million. If tonnage increased immediately in year 1 to the maximum daily permitted limit for the Badlands and Lamb

Canyon landfills, representing a 145% increase in annual system tonnage, the estimated value of the Badlands and Lamb Canyon landfills would be $399 million to $663 million. This is a theoretical calculation to show the importance of the tonnage on the valuation and it is highly unlikely any potential buyer could maximize waste flow to the landfills in the near term.

Cost of Activities Retained by the County

The County may retain certain costs in the sale or lease of the system, depending on which system assets are sold or leased, and which activities the County desires to continue to perform. Table 13 presents a summary of the activities that could be retained by the County and the annual funding requirements at current levels.

Table 13: Summary of the Estimated Revenues and Cost of Activities that May be Retained by the County Assuming Sale of the Badlands and Lamb Canyon Landfills [1]

Line	Reference	Description	Revenue	Expenses	Net (Revenue) Expenses
1		**Overhead Costs:**			
2	Attachment 3	Headquarters & Departmental Overhead	$ -	$ 1,186,000	$ 1,186,000
3	Attachment 3	General Fund Transfers		1,296,000	1,296,000
4	Attachment 3	Environmental, Engineering & Monitoring		401,000	401,000
5	Attachment 3	CVAG, RCOG and Other County Costs		407,000	407,000
6	Sum (L2:L5)	Subtotal - Overhead Costs		3,290,000	3,290,000
7		**Gate Fee, Load Check and Jurisdictional Reporting** [2]			
8	Attachment 3	El Sobrante Landfill		774,000	774,000
9	Attachment 3	Desert Landfills		174,000	174,000
10	Attachment 3	Inactive/Closed Sites		2,000	2,000
11	Attachment 3	Administrative Expenses		515,000	515,000
12	SUM(L8:L11)	Subtotal - Gate Fee, Load Check and Jurisdictional Reporting	-	1,465,000	1,465,000
13		**El Sobrante Operation and Oversight Revenue and Costs:**			
14	Att 3(L29)-E4A(L159)	El Sobrante Costs Oversight Costs		261,000	261,000
15	E1A(L21) E4A(L200)-Att 3(L6)	El Sobrante In-County Revenue and Expense	(17,911,000)	14,748,000	(3,163,000)
16	Sum (L14:L15)	Subtotal - El Sobrante Operation and Oversight Revenue and Costs	(17,911,000)	15,009,000	(2,902,000)
17		**Other Operations and Programs:**			
18	Attachment 3	Monitoring and Control of Illegal Dumping		561,000	561,000
19	Attachment 3	HHW, Recycling and ABOP		2,640,000	2,640,000
20	Att 3(L29) -Att 3(L6)	Maintenance of Cost of Inactive/Closed Landfills		4,115,000	4,115,000
21	E1A(L22) Att 3	Operation of Desert Landfills	(499,000)	2,606,000	2,107,000
22	Sum (I18:L21)	Subtotal - Other Operations and Programs	(499,000)	9,922,000	9,423,000
23	L6+L12+L16+L22	Net (Revenue) Expenses	$ (18,410,000)	$ 29,686,000	$ 11,276,000

[1]) FY 10/11 costs

[1] Excludes the cost of operation for gate fee, load check and jurisdictional reporting for the Badlands and Lamb Canyon landfills totaling $347,000 for FY 10/11.

As an example, if the County sold only the Badlands and Lamb Canyon landfills and retained all of the other facilities and activities shown in Table 14, it would require funding of approximately $11.3 million annually, at current funding levels, to support those activities.

Valuation Methodology and Period

The cash flows were estimated for a 40-year period. The valuation does not include cash flows that would occur after 40 years, as they would be extremely speculative and would have minimal impact on the discounted net present value. We note that the system may have significant remaining capacity at the time due to the significant expansion potential of certain landfills.

The valuation of the Riverside County solid waste system is based on the Income Approach. This method considers the potential return on investment as defined by the net present value of the net cash flows over a projected 40-year period.

The income approach consists of a projection of the revenue and costs of the solid waste system. The projected revenues include:

- Tipping fees,
- The landfill gas to energy revenues; and
- Other revenues.

The projected costs of the County solid waste system include:

- The cost of operating the landfills,
- Disposal cost at the El Sobrante Landfill,
- Landfill expansion and improvements
- Closure, post closure and corrective action costs of the active and inactive landfills and disposal sites;
- Costs to operate the recycling, HHW and ABOP programs; and
- Overhead costs.

The revenues and costs were projected over the 40-year period from FY 11/12 to FY 50/51 and the resulting projected net cash flows were used to calculate the net present value using a range of estimated discount rates of eight percent (8%) to twelve percent (12%).

The cash flow from the solid waste system is dependent on the quantity of the tonnage received and therefore the value of the solid waste system is highly dependent on the quantity of tonnage. The potential loss of County tonnage to out-of-county landfills would reduce the cash flow and reduce the value of the solid waste system to a potential buyer. Additionally, the ability to receive tonnage is dependent on the disposal capacity of the landfills, which is highly dependent upon obtaining permits for landfill expansion. Although the landfills may have significant potential disposal capacity beyond 40 years, the certainty of obtaining the necessary permits and the changing economic environment is extremely speculative and may significantly influence the potential cash flows.

Valuation Analysis Assumptions

In order to project revenues and expenses for the Riverside County solid waste system from fiscal year 11/12 to FY 50/51 for Scenario 1 and Scenario 2, we made certain key assumptions. The key assumptions are described below.

Projected Capital Costs and Expenditures

County staff provided a projection of capital costs for land acquisition, landfill expansion and gas-to-energy development costs with a projection of related gas-to-energy revenues for the forty-year period from FY 10/11 to FY 49/50 for the Badlands, Lamb Canyon, Blythe and Mecca II landfills and the Edom

Hill gas-to-energy facility. Landfill expansion costs and related airspace calculations were reviewed and verified by BAS and used in the valuation model.

The County provided capital cost estimates using two alternative tonnage assumptions: one set of estimates assumed annual tonnage growth of 1.9% per year; a second set assumed tonnage growth of 7.3% for five years to increase tonnage to FY 05/06 levels with 1.9% tonnage growth per year thereafter.

Operating Expenses and Revenues

Operating expenses and revenues were provided by County staff for FY 10/11 and projected for the forty-year period. With the assistance of County staff, certain expenses were adjusted by the growth in tonnage volume and others remained constant through the forty-year period.

County staff allocated expenses between the various activities performed by the WMD, such as operation of the various active landfills (Badlands, Lamb Canyon and the other active landfills), the inactive/closed sites, the permanent HHW collection and the ABOP facilities and overhead costs. These allocated costs were used to estimate the costs that may be retained by the County for certain activities, as shown in Table 13.

Inflation/Interest Rate

The inflation rate and interest rate projections are summarized Table 14:

Table14: Summary of Inflation and Interest Income Assumptions for the 40-Years from FY 11/12 to FY 50/51

Fiscal Year	Inflation Rate	Fiscal Year	Interest Income Rate
FY 11/12	1.5%	FY 11/12	1.0%
FY 12/13	2.0%	FY 12/13	2.0%
FY 13/14	2.5%	FY 13/14	3.0%
FY 13/15 thereafter	3.0%	FY 14/15	4.0%
		FY 15/16 there after	4.5% [(1)]

[(1)] Beginning with FY 15/16 the annual rate for interest income was assumed to be 1.5% above the projected inflation rate of 3%.

Closure/ Post Closure/Remediation Contributions

The Closure/Post Closure/Remediation Contributions per ton of waste disposed was projected by County staff to be unchanged for the modeling period, as reflected below.

Closure	$1.60
Post Closure	0.15
Remediation	0.05
Total	$1.80

Pass-Through Costs (Rate per Ton)

The pass-through costs to cover Habitat and Environmental Mitigation, payments to the Board of Equalization, the Local Enforcement Agency and the Code Enforcement Department total $3.18 per ton, as shown below and were projected by County staff to remain constant for the modeling period.

Pass-Through Costs per Ton

Habitat and Environmental Mitigation	$1.00
Board of Equalization	1.40
Local Enforcement Agency	0.43
Code Enforcement	0.35
Total	$3.18

County Revenues

County staff provided a projection of the tipping fees per ton for FY 10/11, FY 11/12 and FY 12/13; thereafter the revenues per ton were projected using the assumed inflation rate. County staff also projected "Other Revenues", including Bark Beetle Project Revenue, the sale of miscellaneous material (gas-to-energy revenues) and other miscellaneous revenues.

Tonnage

Actual landfill tonnage for FY 10/11 was used as a starting point for the projection of tonnage.

Mecca Landfill II

Based on discussions with County staff, if the Badlands and Lamb Canyon landfills are sold, it is unlikely that the Mecca II landfill will be expanded. Existing WDAs with the transfer stations allow the County to direct waste to County landfills, including Mecca II. However, if the Badlands and Lamb Canyon landfills were sold, the transfer stations may cancel the WDA, allowing the transfer stations to use other disposal options. Other landfill opportunities in the area are either permitted or in the process of being permitted and would provide substantial competition for the waste that could go to Mecca II. Accordingly, Mecca II capital costs for acquisition, expansion and G2E and the related G2E revenue were excluded from the model. While Mecca II has over 5 million tons in potential expansion capacity, it is unlikely that the landfill would be expanded based on current market conditions.

Unrestricted and Restricted Cash

The beginning unrestricted and restricted cash balances for FY 10/11 are based on the balances provided in the Comprehensive Annual Financial Report for the year ended June 30, 2010.

SECTION VII: CONCLUSION AND LIMITATIONS

CONCLUSIONS

Based on our findings and analysis in the previous sections, we conclude the following:

1. The County Waste Management Department ("WMD") Enterprise Fund supports a variety of activities, including:
   - operation of the active landfills and related activities;
   - monitoring and maintenance of the inactive/closed sites;
   - operating the HHW and ABOP facilities and certain recycling programs;
   - providing financial support for CVAG, WRCOG, and other County agencies; and
   - monitoring and cleanup of illegal dumping.

   The WMD Enterprise Fund protects the General Fund from incurring costs for these on-going activities, as well as potential unknown future costs for remediation and corrective action.

2. The value of the landfill system is highly dependent on the quantity of waste delivered to the system. The operation and valuation assumptions used in this analysis are described in Section VI of this report.

3. The entire existing system, including all of the active and inactive landfills, and the other activities performed by the department, if valued based on its projected cash flows, assuming 1.9% annual tonnage growth (Scenario 1), is $(10) million to $11 million. This assumes that all existing activities and obligations are transferred to a purchaser (except for the transfer station master leases). Under Scenario 2 tonnage assumptions, with disposal quantities assumed to increase to FY 05/06 levels in the next five years, and increased by 1.9% annually thereafter (Scenario 2) the value would range from $49 million to $127 million. However, due to the uncertain nature of costs and liabilities associated with the inactive landfills, it is reasonably possible that including the inactive landfills in the purchase may discourage potential buyers from proposing or significantly reduce the values proposed.

4. The primary value in the County-owned solid waste system assets is represented by two landfills: Badlands and Lamb Canyon. The estimated range of combined values for these two landfills is $122 million to $214 million under Scenario 1 and $181 million and $330 million under Scenario 2.

5. Terms of the transfer station waste delivery agreements and the El Sobrante agreement, make it difficult to structure a sale or lease that will maximize value. If the County's landfills are sold, the transfer station operators may terminate the waste delivery agreements with the County and deliver waste to landfills outside the County, reducing its value to potential buyers. If tonnage controlled by the waste delivery agreements for the three County transfer stations operated by Burrtec left the system, total system tonnage could be reduced by approximately 716,000 tons (41% of total in-County tons for FY2010/11) or approximately $19 million (37% of FY 2010/11 tipping fee revenue). If the system is leased, the lessee would be limited in its ability to import out-of-County waste by the 225,000 ton/year restriction on import waste to County-owned landfills under the El Sobrante agreement (unless El Sobrante reaches its "Practical Maximum" disposal capacity as described later in this report). For these reasons, it is unclear whether a sale or a lease would

generate more value. If the County decides to proceed with a Request for Qualifications/ Letter of Interest, we recommend that the County solicit proposals under both structures.

6. If the County proceeds with a sale or lease of some or all of the active landfills, the County may desire to retain certain functions as described in this report. Potential activities that the County may desire or be required to retain include, but are not limited to:
   - performing gate fee, load check, and jurisdictional reporting for the active landfills;
   - operating the desert landfills
   - maintenance of inactive/closed sites;
   - HHW, recycling and ABOP programs;
   - monitoring and control of illegal dumping; and
   - managing and monitoring the El Sobrante contract.

   If all of the above activities and related department overhead were retained by the County, the annual funding requirements for County activities would be $11.3 million annually at current funding levels. (This excludes the gate fee and load check functions at the Badlands and Lamb Canyon landfills that totaled $347,000 for FY 2010/11). Funding for these activities currently is provided through the WMD Enterprise Fund and would require an alternative funding source in the future if the regional landfills were sold.

7. If the Badlands and Lamb Canyon Landfills are sold and the purchaser assumes the related closure and post closure liabilities for these sites, the known unfunded liabilities for the remaining sites are estimated by the WMD as of June 30, 2011 at approximately $18 million, net of existing reserves for these activities (Estimated liability based on the percentage of capacity used of $40 million, less the total amount in escrow of $22 million).

8. The County may be able to meet its short-term funding objectives by continued County ownership of the landfills and loaning reserves from the WMD to the General Fund (assuming that the loaning of WMD restricted reserves complies with applicable statutes regarding the use of funds). The WMD sets aside reserves for future obligations for landfill closure, post closure maintenance, and corrective action, and much of these reserves are not anticipated to be utilized for a very long time. For example, based on site development plans, Badlands, with potential expansions, may not close until 2183, and Lamb Canyon, with potential expansions, may not close until 2074. The closure, post closure and corrective action reserves are estimated at $88.5 million as of June 30, 2011 and are estimated to increase to $137 million by 2021 (Exhibit 8A). There is an estimated additional $50 million in unrestricted reserves as of June 30, 2011 in excess of the operating target that could be loaned to the General Fund, and this amount is projected to be $26.6 million by 2021 (Exhibit 1A).

9. The County may be able to attract out-of-County waste to the County-owned landfills in order to generate net income that may be able to be used by the General Fund. The likelihood of attracting out-of-county waste will increase after the closure of the Puente Hills landfill in October of 2013 and the termination of the Orange County import agreements in 2016 or if San Bernardino County does not renew its waste delivery agreements. If Riverside County could attract the maximum of 225,000 tons/year allowed to the County-owned landfills under the El Sobrante Agreement, the County may be able to generate income of between $1,125,000 and $3,375,000 per year, assuming net revenue ranging between $5 and $15 per ton for the out-of-County waste, after allowance for disposal-related expenses. The ability to attract this tonnage would likely depend on an increase in regional

tonnage associated with an economic recovery, and the timing of such a recovery is highly uncertain.

10. The County could consider a landfill operations contract with a private operator with continued County-ownership of the landfills. It is possible, but not certain, that such an arrangement may lower the overall cost of operations and increase the overall cost effectiveness of the system, allowing the WMD to loan additional reserves to the general fund, and potentially generate higher net revenues from out-of-County waste if such waste is delivered to the system. A private operator, if also a regional waste hauler, may be able to deliver out-of-County waste to the system if the contractual arrangements are structured to provide an incentive to do so. The direct cost of personnel and equipment at the landfills is approximately $8.5 million per year (Attachment 3). For example purposes, if these costs were reduced by 10% through an operations contract, the annual cost savings would be approximately $850,000.

11. There is value in the transfer station master leases because the County will retain ownership of these facilities constructed on County-owned land when the leases expire. Since the term of these leases is very long, we believe the County would receive significantly better value by considering a sale of the properties or renegotiating lease terms closer to the lease termination dates, which range from 2029 to 2050, including extensions. The master lease for the Coachella Valley Transfer Station provides the lessee with an option for an additional 25 years at the end of the initial term of 25 years.

LIMITATIONS

County Counsel should review applicable legal statutes that may affect the use of the County's funds from a sale or lease, such as propositions 218 and 26. We also recommend that County Counsel review applicable statutes to confirm that the Waste Management Department may provide net revenues from acceptance of out-of-County waste to the General Fund.

We understand that County Counsel has confirmed in a memorandum dated July 27, 2011 that tipping fee revenues may be loaned to the General Fund as long as the funds are repaid before they are needed to be expended for their original purpose.

With respect to the valuation of the landfill system, proposers may propose significantly higher or lower values than the amounts estimated in this report, based on their own operations and projections which could be significantly different and unique to each proposer. Further, the valuation is based on projections over the next 40 years, and different proposers may make significantly different assumptions regarding the pricing, costs and demand for disposal capacity over that time which would have a material impact on the valuation. For reasons described above, the value of the master transfer station leases was not included in the estimates.

EXHIBITS

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VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
MINIMUM TONNAGE GROWTH - 1.9% PER YEAR

	Description	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22
1	**Cash Flow from Revised County Model**	$ 9,468,034	$ (18,729,647)	$ 2,000,599	$ 1,406,614	$ 2,228,455	$ 6,430,951	$ 1,934,788	$ 2,532,988	$ 3,231,161	$ (34,181,863)	$ 11,083,702	$ 12,606,004
2	**Adjustments for Retained Operations:**												
3	**Non-Site Specific Costs (Inflation Adjusted):**												
4	Department Overhead	3,804,664	3,861,734	3,937,827	4,036,749	4,158,498	4,284,052	4,413,410	4,546,573	4,683,541	4,824,314	4,968,891	5,117,273
5	Monitoring of El Sobrante Landfill Operations	1,035,251	1,050,780	1,071,485	1,098,401	1,131,529	1,165,693	1,200,891	1,237,125	1,274,394	1,312,698	1,352,038	1,392,413
6	Monitoring and Control of Illegal Dumping	561,083	569,499	580,721	595,309	613,264	631,779	650,856	670,494	690,693	711,453	732,774	754,657
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	2,640,307	2,730,830	2,838,370	2,964,607	3,111,563	3,265,803	3,427,689	3,597,600	3,775,933	3,963,106	4,159,557	4,365,746
8	Operation of Desert Landfills (Includes1.9% Growth)	2,778,938	2,874,214	2,987,401	3,120,266	3,274,938	3,437,277	3,607,663	3,786,495	3,974,192	4,171,193	4,377,959	4,594,974
9	Maintenance Cost of Inactive/Closed Landfills	4,117,354	4,179,114	4,261,461	4,368,513	4,500,268	4,636,141	4,776,131	4,920,238	5,068,463	5,220,805	5,377,264	5,537,841
10	CARB costs for Desert Landfills	-	-	-	-	-	-	1,160,000	1,195,000	1,231,000	1,268,000	1,306,000	1,345,000
11													
12	**Site Specific Costs (Inflation Adjusted):**												
13	Cost for In-County Tons Delivered to El Sobrante	14,748,415	15,040,271	15,587,401	16,243,879	17,004,413	17,802,381	18,639,185	19,516,314	20,435,278	21,397,636	22,404,990	23,458,991
14	Desert Landfills	150,117	41,615	755,550	155,967	-	-	-	29,875	-	20,690,865	457,100	-
15	Inactive/Closed Landfills	(554,272)	470,118	226,665	9,512,926	95,091	97,962	100,920	103,965	107,097	110,316	113,622	117,015
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	3,718,805	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	457,100	-
19													
20	**Less Estimated Revenues (Inflation Adjusted):**												
21	Revenue for In-County Tons Delivered to El Sobrante	(17,910,633)	(19,995,275)	(20,375,176)	(21,280,092)	(22,336,628)	(23,440,577)	(24,601,223)	(25,820,787)	(27,101,528)	(28,445,773)	(29,855,921)	(31,342,802)
22	Desert Landfills - Operating Revenue	(499,364)	(508,863)	(518,534)	(541,586)	(568,482)	(596,598)	(626,135)	(657,176)	(689,773)	(723,982)	(759,860)	(797,712)
23	Edom Hill Landfill - G2E	-	-	-	(463,974)	(477,968)	(492,399)	(507,267)	(522,573)	(538,315)	(554,495)	(571,113)	(588,167)
24	Blythe Landfill - G2E	-	-	-	-	-	-	-	-	-	-	-	-
25	Mecca II - G2E	-	-	-	-	-	-	-	-	-	-	(154,448)	(159,060)
26	Total Adjustments for Components Not for Sale	10,871,860	10,314,037	11,353,171	23,529,770	10,506,486	10,791,514	12,242,120	12,603,143	12,910,975	33,946,136	14,365,953	13,796,169
27	Adjusted Cash Flow - Base Case	$ 20,339,894	$ (8,415,610)	$ 13,353,770	$ 24,936,384	$ 12,734,941	$ 17,222,465	$ 14,176,908	$ 15,136,131	$ 16,142,135	$ (235,726)	$ 25,449,655	$ 26,402,172
28													
29	**Net Present Value - Projected Cash Flow**												
30	Net Present Value - 40 years (Upper Limit)	$ 11,000,000											
31	Net Present Value - 40 years (Lower Limit)	$ (10,000,000)											
32													
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**												
34	Net Present Value - 40 years (Upper Limit)	$ 214,000,000											
35	Net Present Value - 40 years (Lower Limit)	$ 122,000,000											
36													
37	Discount Rate (Upper Limit)	8%											
38	Discount Rate (Lower Limit)	12%											
39													

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
MINIMUM TONNAGE GROWTH - 1.9% PER YEAR

	Description	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33
1	**Cash Flow from Revised County Model**	$ 13,750,792	$ 14,928,737	$ 2,517,295	$ (58,465,604)	$ (26,481,456)	$ (23,085,514)	$ 22,006,937	$ 480,778	$ (58,951,819)	$ 27,714,935	$ (17,762,876)
2	**Adjustments for Retained Operations:**											
3	**Non-Site Specific Costs (Inflation Adjusted):**											
4	Department Overhead	5,269,460	5,429,256	5,592,856	5,760,261	5,931,471	6,110,290	6,292,914	6,483,147	6,677,185	6,878,833	7,084,284
5	Monitoring of El Sobrante Landfill Operations	1,433,823	1,477,303	1,521,819	1,567,370	1,613,956	1,662,613	1,712,305	1,764,068	1,816,866	1,871,734	1,927,637
6	Monitoring and Control of Illegal Dumping	777,100	800,665	824,792	849,480	874,728	901,099	928,031	956,085	984,701	1,014,438	1,044,737
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	4,582,156	4,809,293	5,047,690	5,297,904	5,560,521	5,836,156	6,125,454	6,429,093	6,747,783	7,082,271	7,433,339
8	Operation of Desert Landfills (Includes1.9% Growth)	4,822,747	5,061,811	5,312,725	5,576,077	5,852,483	6,142,591	6,447,079	6,766,661	7,102,084	7,454,134	7,823,635
9	Maintenance Cost of Inactive/Closed Landfills	5,702,535	5,875,464	6,052,510	6,233,674	6,418,955	6,612,471	6,810,104	7,015,971	7,225,956	7,444,176	7,666,513
10	CARB costs for Desert Landfills	1,385,000	1,427,000	1,470,000	1,514,000	1,559,000	1,606,000	1,654,000	1,704,000	1,755,000	1,808,000	1,862,000
11												
12	**Site Specific Costs (Inflation Adjusted):**											
13	Cost for In-County Tons Delivered to El Sobrante	24,561,397	25,730,660	26,952,546	28,228,936	29,561,819	30,971,221	32,441,903	33,994,750	35,613,970	37,321,348	39,100,545
14	Desert Landfills	-	-	13,849,655	-	-	-	578,900	23,830,920	-	632,800	651,700
15	Inactive/Closed Landfills	120,495	124,149	127,890	131,718	135,633	139,722	143,898	148,248	152,685	157,296	161,994
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	514,500	-	-	-	578,900	-	-	632,800	651,700
19												
20	**Less Estimated Revenues (Inflation Adjusted):**											
21	Revenue for In-County Tons Delivered to El Sobrante	(32,900,996)	(34,533,098)	(36,241,898)	(38,039,207)	(39,928,499)	(41,903,914)	(43,978,150)	(46,164,680)	(48,448,118)	(50,852,127)	(53,371,106)
22	Desert Landfills - Operating Revenue	(837,436)	(878,979)	(922,481)	(968,195)	(1,016,285)	(1,066,600)	(1,119,366)	(1,175,008)	(1,233,126)	(1,294,318)	(1,358,431)
23	Edom Hill Landfill - G2E	(605,659)	(624,026)	(642,830)	(662,071)	(681,749)	(702,303)	(723,293)	(745,158)	(767,460)	(790,637)	(814,251)
24	Blythe Landfill - G2E	-	-	-	-	-	-	-	-	-	-	-
25	Mecca II - G2E	(163,790)	(168,757)	(347,684)	(358,091)	(368,735)	(379,851)	(586,806)	(604,545)	(622,639)	(855,256)	(1,101,001)
26	Total Adjustments for Components Not for Sale	14,146,832	14,530,741	29,112,090	15,131,856	15,513,298	15,929,495	17,305,873	40,403,552	17,004,887	18,505,492	18,763,295
27	Adjusted Cash Flow - Base Case	$ 27,897,624	$ 29,459,478	$ 31,629,385	$ (43,333,748)	$ (10,968,158)	$ (7,156,019)	$ 39,312,810	$ 40,884,330	$ (41,946,932)	$ 46,220,427	$ 1,000,419
28												
29	**Net Present Value - Projected Cash Flow**											
30	Net Present Value - 40 years (Upper Limit)											
31	Net Present Value - 40 years (Lower Limit)											
32												
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**											
34	Net Present Value - 40 years (Upper Limit)											
35	Net Present Value - 40 years (Lower Limit)											
36												
37	Discount Rate (Upper Limit)											
38	Discount Rate (Lower Limit)											
39												

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
MINIMUM TONNAGE GROWTH - 1.9% PER YEAR

	Description	FY 33/34	FY 34/35	FY 35/36	FY 36/37	FY 37/38	FY 38/39	FY 39/40	FY 40/41	FY 41/42	FY 42/43	FY 43/44
1	**Cash Flow from Revised County Model**	$ (82,031,070)	$ 18,879,617	$ 27,774,332	$ 51,501,569	$ 54,661,014	$ 57,995,522	$ (70,346,669)	$ 66,025,784	$ 69,162,572	$ 73,312,428	$ 77,432,329
2	**Adjustments for Retained Operations:**											
3	**Non-Site Specific Costs (Inflation Adjusted):**											
4	Department Overhead	7,297,346	7,514,211	7,738,687	7,970,771	8,210,465	8,457,768	8,712,681	8,975,202	9,245,334	9,523,074	9,808,424
5	Monitoring of El Sobrante Landfill Operations	1,985,611	2,044,621	2,105,701	2,168,851	2,234,072	2,301,363	2,370,725	2,442,157	2,515,660	2,591,233	2,668,877
6	Monitoring and Control of Illegal Dumping	1,076,157	1,108,139	1,141,243	1,175,469	1,210,817	1,247,288	1,284,880	1,323,595	1,363,432	1,404,391	1,446,472
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	7,801,810	8,188,546	8,594,452	9,020,479	9,467,624	9,936,934	10,429,508	10,946,499	11,489,117	12,058,633	12,656,379
8	Operation of Desert Landfills (Includes1.9% Growth)	8,211,453	8,618,495	9,045,714	9,494,110	9,964,733	10,458,685	10,977,122	11,521,258	12,092,367	12,691,786	13,320,918
9	Maintenance Cost of Inactive/Closed Landfills	7,897,085	8,131,774	8,374,698	8,625,857	8,885,250	9,152,878	9,428,741	9,712,838	10,005,170	10,305,737	10,614,539
10	CARB costs for Desert Landfills	1,918,000	1,975,000	2,034,000	2,095,000	2,158,000	2,223,000	2,290,000	2,359,000	2,430,000	2,503,000	2,578,000
11												
12	**Site Specific Costs (Inflation Adjusted):**											
13	Cost for In-County Tons Delivered to El Sobrante	40,974,292	42,925,696	44,978,383	47,136,332	49,403,557	51,784,324	54,282,900	56,903,821	59,651,714	62,531,298	65,547,535
14	Desert Landfills	671,300	-	711,900	-	-	-	-	-	-	-	-
15	Inactive/Closed Landfills	166,866	171,825	176,958	182,265	187,746	193,401	199,230	205,233	211,410	217,761	224,286
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	671,300	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	711,900	-	-	-	-	-	-	-	-
19												
20	**Less Estimated Revenues (Inflation Adjusted):**											
21	Revenue for In-County Tons Delivered to El Sobrante	(56,019,879)	(58,792,738)	(61,705,130)	(64,762,438)	(67,981,390)	(71,345,379)	(74,882,994)	(78,601,035)	(82,494,269)	(86,581,512)	(90,870,200)
22	Desert Landfills - Operating Revenue	(1,425,885)	(1,496,421)	(1,570,527)	(1,648,330)	(1,730,249)	(1,815,845)	(1,905,836)	(2,000,510)	(2,099,591)	(2,203,612)	(2,312,673)
23	Edom Hill Landfill - G2E	(838,740)	(863,666)	(889,467)	(916,142)	(943,692)	(972,116)	(1,001,415)	(1,031,589)	(1,062,637)	(1,094,560)	(845,518)
24	Blythe Landfill - G2E	(89,797)	(92,466)	(95,228)	(98,084)	(101,033)	(104,076)	(107,213)	(110,444)	(113,768)	(117,185)	(120,697)
25	Mecca II - G2E	(1,134,113)	(1,167,818)	(1,443,245)	(1,486,528)	(1,531,230)	(1,577,352)	(1,624,892)	(1,673,852)	(1,724,231)	(1,776,029)	(1,829,246)
26	Total Adjustments for Components Not for Sale	19,162,806	18,265,198	19,910,039	18,957,612	19,434,670	19,940,873	20,453,437	20,972,173	21,509,708	22,054,015	22,887,096
27	Adjusted Cash Flow - Base Case	$ (62,868,264)	$ 37,144,814	$ 47,684,371	$ 70,459,180	$ 74,095,684	$ 77,936,395	$ (49,893,232)	$ 86,997,958	$ 90,672,280	$ 95,366,443	$ 100,319,426
28												
29	**Net Present Value - Projected Cash Flow**											
30	Net Present Value - 40 years (Upper Limit)											
31	Net Present Value - 40 years (Lower Limit)											
32												
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**											
34	Net Present Value - 40 years (Upper Limit)											
35	Net Present Value - 40 years (Lower Limit)											
36												
37	Discount Rate (Upper Limit)											
38	Discount Rate (Lower Limit)											
39												

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
MINIMUM TONNAGE GROWTH - 1.9% PER YEAR

	Description	FY 44/45	FY 45/46	FY 46/47	FY 47/48	FY 48/49	FY 49/50	FY 50/51
1	**Cash Flow from Revised County Model**	$ 82,099,482	$ 86,981,006	$ (90,031,735)	$ 91,499	$ 118,225,745	$ (64,689,206)	$ 131,639,372
2	**Adjustments for Retained Operations:**							
3	**Non-Site Specific Costs (Inflation Adjusted):**							
4	Department Overhead	10,101,383	10,405,756	10,717,738	11,037,330	11,368,336	11,710,756	12,060,785
5	Monitoring of El Sobrante Landfill Operations	2,748,591	2,831,411	2,916,302	3,003,263	3,093,330	3,186,503	3,281,746
6	Monitoring and Control of Illegal Dumping	1,489,675	1,534,562	1,580,571	1,627,702	1,676,516	1,727,013	1,778,633
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	13,283,756	13,942,232	14,633,348	15,358,723	16,120,055	16,919,126	17,757,807
8	Operation of Desert Landfills (Includes1.9% Growth)	13,981,236	14,674,286	15,401,690	16,165,152	16,966,459	17,807,486	18,690,203
9	Maintenance Cost of Inactive/Closed Landfills	10,931,575	11,260,963	11,598,586	11,944,444	12,302,654	12,673,216	13,052,012
10	CARB costs for Desert Landfills	2,655,000	2,735,000	2,817,000	2,901,000	2,988,000	3,078,000	3,170,000
11								
12	**Site Specific Costs (Inflation Adjusted):**							
13	Cost for In-County Tons Delivered to El Sobrante	68,705,482	72,035,725	75,519,276	79,161,753	82,995,711	87,028,692	91,240,539
14	Desert Landfills	-	-	-	54,826,083	-	-	-
15	Inactive/Closed Landfills	230,985	237,945	245,079	252,387	259,956	267,786	275,790
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	-	-	-	-	-
19								
20	**Less Estimated Revenues (Inflation Adjusted):**							
21	Revenue for In-County Tons Delivered to El Sobrante	(95,380,820)	(100,108,872)	(105,075,821)	(110,277,191)	(115,749,446)	(121,489,021)	(127,505,866)
22	Desert Landfills - Operating Revenue	(2,427,422)	(2,547,730)	(2,674,129)	(2,806,489)	(2,945,717)	(3,091,786)	(3,244,844)
23	Edom Hill Landfill - G2E	(870,772)	(897,010)	(923,904)	(951,454)	(979,988)	(1,009,505)	(1,039,679)
24	Blythe Landfill - G2E	(124,302)	(128,047)	(131,886)	(135,819)	(139,892)	(144,106)	(148,413)
25	Mecca II - G2E	(1,883,882)	(1,940,647)	(1,998,831)	(1,715,361)	(1,766,804)	(1,820,021)	(1,874,421)
26	Total Adjustments for Components Not for Sale	23,440,485	24,035,574	24,625,019	80,391,523	26,189,170	26,844,139	27,494,292
27	Adjusted Cash Flow - Base Case	$ 105,539,968	$ 111,016,580	$ (65,406,716)	$ 80,483,022	$ 144,414,916	$ (37,845,067)	$ 159,133,664
28								
29	**Net Present Value - Projected Cash Flow**							
30	Net Present Value - 40 years (Upper Limit)							
31	Net Present Value - 40 years (Lower Limit)							
32								
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**							
34	Net Present Value - 40 years (Upper Limit)							
35	Net Present Value - 40 years (Lower Limit)							
36								
37	Discount Rate (Upper Limit)							
38	Discount Rate (Lower Limit)							
39								

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
7.3% GROWTH FOR FIVE YEARS, 1.9% GROWTH THEREAFTER

	Description	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22
1	**Cash Flow from Revised County Model**	$ 8,579,361	$ (16,558,266)	$ 5,005,432	$ 5,858,926	$ 8,391,207	$ 14,584,499	$ 10,549,438	$ 1,641,929	$ 8,280,062	$ (134,051)	$ 21,809,048	$ 23,933,341
2	**Adjustments for Retained Operations:**												
3	**Non-Site Specific Costs (Inflation Adjusted):**												
4	Department Overhead	3,804,664	3,861,734	3,937,827	4,036,749	4,158,498	4,284,052	4,413,410	4,546,573	4,683,541	4,824,314	4,968,891	5,117,273
5	Monitoring of El Sobrante Landfill Operations	1,035,251	1,050,780	1,071,485	1,098,401	1,131,529	1,165,693	1,200,891	1,237,125	1,274,394	1,312,698	1,352,038	1,392,413
6	Monitoring and Control of Illegal Dumping	561,083	569,499	580,721	595,309	613,264	631,779	650,856	670,494	690,693	711,453	732,774	754,657
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	2,640,307	2,875,545	3,147,169	3,461,335	3,825,433	4,227,830	4,437,404	4,657,366	4,888,232	5,130,542	5,384,863	5,651,791
8	Operation of Desert Landfills (Includes1.9% Growth)	2,778,938	3,026,527	3,312,413	3,643,075	4,026,290	4,449,815	4,670,392	4,901,903	5,144,890	5,399,922	5,667,596	5,948,539
9	Maintenance Cost of Inactive/Closed Landfills	4,117,354	4,179,114	4,261,461	4,368,513	4,500,268	4,636,141	4,776,131	4,920,238	5,068,463	5,220,805	5,377,264	5,537,841
10	CARB costs for Desert Landfills	-	-	-	-	-	-	1,160,000	1,195,000	1,231,000	1,268,000	1,306,000	1,345,000
11													
12	**Site Specific Costs (Inflation Adjusted):**												
13	Cost for In-County Tons Delivered to El Sobrante	14,748,415	15,836,691	17,283,238	18,965,606	20,905,666	23,046,548	24,129,868	25,265,379	26,455,022	27,700,856	29,004,940	30,369,429
14	Desert Landfills	150,117	41,615	755,550	155,967	-	-	-	29,875	-	20,690,865	457,100	-
15	Inactive/Closed Landfills	(554,272)	470,118	226,665	9,512,926	95,091	97,962	100,920	103,965	107,097	110,316	113,622	117,015
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	3,718,805	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	457,100	-
19													
20	**Less Estimated Revenues (Inflation Adjusted):**												
21	Revenue for In-County Tons Delivered to El Sobrante	(17,910,633)	(21,054,891)	(22,591,901)	(24,845,658)	(27,461,230)	(30,345,623)	(31,848,186)	(33,427,006)	(35,084,990)	(36,825,201)	(38,650,729)	(40,575,614)
22	Desert Landfills - Operating Revenue	(499,364)	(535,798)	(574,888)	(632,250)	(698,784)	(772,163)	(810,384)	(850,549)	(892,760)	(937,022)	(983,476)	(1,032,475)
23	Edom Hill Landfill - G2E	-	-	-	(463,974)	(477,968)	(492,399)	(507,267)	(522,573)	(538,315)	(554,495)	(571,113)	(588,167)
24	Blythe Landfill - G2E	-	-	-	-	-	-	-	-	-	-	-	-
25	Mecca II - G2E	-	-	-	-	-	-	-	-	-	-	(154,448)	(159,060)
26	Total Adjustments for Components Not for Sale	10,871,860	10,320,934	11,409,740	23,614,804	10,618,057	10,929,635	12,374,035	12,727,790	13,027,267	34,053,053	14,462,422	13,878,642
27	Adjusted Cash Flow - Base Case	$ 19,451,221	$ (6,237,332)	$ 16,415,172	$ 29,473,730	$ 19,009,264	$ 25,514,134	$ 22,923,473	$ 14,369,719	$ 21,307,329	$ 33,919,001	$ 36,271,470	$ 37,811,983
28													
29	**Net Present Value - Projected Cash Flow**												
30	Net Present Value - 40 years (Upper Limit)	$ 127,000,000											
31	Net Present Value - 40 years (Lower Limit)	$ 49,000,000											
32													
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**												
34	Net Present Value - 40 years (Upper Limit)	$ 330,000,000											
35	Net Present Value - 40 years (Lower Limit)	$ 181,000,000											
36													
37	Discount Rate (Upper Limit)	8%											
38	Discount Rate (Lower Limit)	12%											
39													

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
7.3% GROWTH FOR FIVE YEARS, 1.9% GROWTH THEREAFTER

	Description	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33
1	**Cash Flow from Revised County Model**	$ (43,987,390)	$ (14,266,593)	$ (24,269,519)	$ 31,784,621	$ (41,576,955)	$ 36,384,811	$ (3,935,660)	$ (83,705,278)	$ 18,526,188	$ 56,255,297	$ 59,900,103
2	**Adjustments for Retained Operations:**											
3	**Non-Site Specific Costs (Inflation Adjusted):**											
4	Department Overhead	5,269,460	5,429,256	5,592,856	5,760,261	5,931,471	6,110,290	6,292,914	6,483,147	6,677,185	6,878,833	7,084,284
5	Monitoring of El Sobrante Landfill Operations	1,433,823	1,477,303	1,521,819	1,567,370	1,613,956	1,662,613	1,712,305	1,764,068	1,816,866	1,871,734	1,927,637
6	Monitoring and Control of Illegal Dumping	777,100	800,665	824,792	849,480	874,728	901,099	928,031	956,085	984,701	1,014,438	1,044,737
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	5,931,950	6,225,997	6,534,620	6,858,541	7,198,519	7,555,350	7,929,869	8,322,953	8,735,522	9,168,542	9,623,027
8	Operation of Desert Landfills (Includes1.9% Growth)	6,243,408	6,552,894	6,877,721	7,218,650	7,576,478	7,952,044	8,346,227	8,759,949	9,194,180	9,649,936	10,128,283
9	Maintenance Cost of Inactive/Closed Landfills	5,702,535	5,875,464	6,052,510	6,233,674	6,418,955	6,612,471	6,810,104	7,015,971	7,225,956	7,444,176	7,666,513
10	CARB costs for Desert Landfills	1,385,000	1,427,000	1,470,000	1,514,000	1,559,000	1,606,000	1,654,000	1,704,000	1,755,000	1,808,000	1,862,000
11												
12	**Site Specific Costs (Inflation Adjusted):**											
13	Cost for In-County Tons Delivered to El Sobrante	31,796,566	33,310,295	34,892,128	36,544,512	38,270,025	40,094,606	41,998,489	44,008,758	46,104,935	48,315,263	50,618,561
14	Desert Landfills	-	-	13,849,655	-	-	-	578,900	23,830,920	-	632,800	651,700
15	Inactive/Closed Landfills	120,495	124,149	127,890	131,718	135,633	139,722	143,898	148,248	152,685	157,296	161,994
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	514,500	-	-	-	578,900	-	-	632,800	651,700
19												
20	**Less Estimated Revenues (Inflation Adjusted):**											
21	Revenue for In-County Tons Delivered to El Sobrante	(42,592,801)	(44,705,719)	(46,917,902)	(49,244,657)	(51,690,481)	(54,247,809)	(56,933,031)	(59,763,645)	(62,719,696)	(65,831,864)	(69,092,861)
22	Desert Landfills - Operating Revenue	(1,083,870)	(1,137,628)	(1,193,907)	(1,253,129)	(1,315,359)	(1,380,393)	(1,448,684)	(1,520,713)	(1,595,917)	(1,675,115)	(1,758,113)
23	Edom Hill Landfill - G2E	(605,659)	(624,026)	(642,830)	(662,071)	(681,749)	(702,303)	(723,293)	(745,158)	(767,460)	(790,637)	(814,251)
24	Blythe Landfill - G2E	-	-	-	-	-	-	-	-	-	-	-
25	Mecca II - G2E	(163,790)	(168,757)	(347,684)	(358,091)	(368,735)	(379,851)	(586,806)	(604,545)	(622,639)	(855,256)	(1,101,001)
26	Total Adjustments for Components Not for Sale	14,214,217	14,586,893	29,156,168	15,160,258	15,522,441	15,923,839	17,281,823	40,360,038	16,941,318	18,420,946	18,654,210
27	Adjusted Cash Flow - Base Case	$ (29,773,173)	$ 320,299	$ 4,886,649	$ 46,944,878	$ (26,054,515)	$ 52,308,650	$ 13,346,162	$ (43,345,241)	$ 35,467,506	$ 74,676,243	$ 78,554,313
28												
29	**Net Present Value - Projected Cash Flow**											
30	Net Present Value - 40 years (Upper Limit)											
31	Net Present Value - 40 years (Lower Limit)											
32												
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**											
34	Net Present Value - 40 years (Upper Limit)											
35	Net Present Value - 40 years (Lower Limit)											
36												
37	Discount Rate (Upper Limit)											
38	Discount Rate (Lower Limit)											
39												

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
7.3% GROWTH FOR FIVE YEARS, 1.9% GROWTH THEREAFTER

	Description	FY 33/34	FY 34/35	FY 35/36	FY 36/37	FY 37/38	FY 38/39	FY 39/40	FY 40/41	FY 41/42	FY 42/43	FY 43/44
1	**Cash Flow from Revised County Model**	$ (45,153,067)	$ 68,112,004	$ 71,714,035	$ 76,706,441	$ 81,221,548	$ 85,981,423	$ (57,109,854)	$ 80,056,822	$ 92,867,075	$ (33,560,525)	$ 126,818,465
2	**Adjustments for Retained Operations:**											
3	**Non-Site Specific Costs (Inflation Adjusted):**											
4	Department Overhead	7,297,346	7,514,211	7,738,687	7,970,771	8,210,465	8,457,768	8,712,681	8,975,202	9,245,334	9,523,074	9,808,424
5	Monitoring of El Sobrante Landfill Operations	1,985,611	2,044,621	2,105,701	2,168,851	2,234,072	2,301,363	2,370,725	2,442,157	2,515,660	2,591,233	2,668,877
6	Monitoring and Control of Illegal Dumping	1,076,157	1,108,139	1,141,243	1,175,469	1,210,817	1,247,288	1,284,880	1,323,595	1,363,432	1,404,391	1,446,472
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	10,100,040	10,600,699	11,126,176	11,677,701	12,256,565	12,864,123	13,501,798	14,171,082	14,873,543	15,610,825	16,384,654
8	Operation of Desert Landfills (Includes1.9% Growth)	10,630,342	11,157,288	11,710,355	12,290,837	12,900,094	13,539,552	14,210,708	14,915,133	15,654,476	16,430,468	17,244,926
9	Maintenance Cost of Inactive/Closed Landfills	7,897,085	8,131,774	8,374,698	8,625,857	8,885,250	9,152,878	9,428,741	9,712,838	10,005,170	10,305,737	10,614,539
10	CARB costs for Desert Landfills	1,918,000	1,975,000	2,034,000	2,095,000	2,158,000	2,223,000	2,290,000	2,359,000	2,430,000	2,503,000	2,578,000
11												
12	**Site Specific Costs (Inflation Adjusted):**											
13	Cost for In-County Tons Delivered to El Sobrante	53,044,240	55,570,476	58,227,821	61,021,400	63,956,509	67,038,559	70,273,172	73,666,144	77,223,443	80,951,278	84,855,988
14	Desert Landfills	671,300	-	711,900	-	-	-	-	-	-	-	-
15	Inactive/Closed Landfills	166,866	171,825	176,958	182,265	187,746	193,401	199,230	205,233	211,410	217,761	224,286
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	671,300	-	-	-	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	711,900	-	-	-	-	-	-	-	-
19												
20	**Less Estimated Revenues (Inflation Adjusted):**											
21	Revenue for In-County Tons Delivered to El Sobrante	(72,521,858)	(76,111,530)	(79,881,819)	(83,839,670)	(88,006,868)	(92,361,761)	(96,941,493)	(101,754,766)	(106,794,779)	(112,086,018)	(117,638,000)
22	Desert Landfills - Operating Revenue	(1,845,386)	(1,936,736)	(2,032,657)	(2,133,308)	(2,239,287)	(2,350,026)	(2,466,519)	(2,588,972)	(2,717,197)	(2,851,868)	(2,993,214)
23	Edom Hill Landfill - G2E	(838,740)	(863,666)	(889,467)	(916,142)	(943,692)	(972,116)	(1,001,415)	(1,031,589)	(1,062,637)	(1,094,560)	(845,518)
24	Blythe Landfill - G2E	(89,797)	(92,466)	(95,228)	(98,084)	(101,033)	(104,076)	(107,213)	(110,444)	(113,768)	(117,185)	(120,697)
25	Mecca II - G2E	(1,134,113)	(1,167,818)	(1,443,245)	(1,486,528)	(1,531,230)	(1,577,352)	(1,624,892)	(1,673,852)	(1,724,231)	(1,776,029)	(1,829,246)
26	Total Adjustments for Components Not for Sale	19,028,393	18,101,817	19,717,023	18,734,419	19,177,408	19,652,601	20,130,403	20,610,761	21,109,856	21,612,107	22,399,491
27	Adjusted Cash Flow - Base Case	$ (26,124,674)	$ 86,213,821	$ 91,431,058	$ 95,440,860	$ 100,398,955	$ 105,634,025	$ (36,979,450)	$ 100,667,583	$ 113,976,931	$ (11,948,418)	$ 149,217,955
28												
29	**Net Present Value - Projected Cash Flow**											
30	Net Present Value - 40 years (Upper Limit)											
31	Net Present Value - 40 years (Lower Limit)											
32												
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**											
34	Net Present Value - 40 years (Upper Limit)											
35	Net Present Value - 40 years (Lower Limit)											
36												
37	Discount Rate (Upper Limit)											
38	Discount Rate (Lower Limit)											
39												

VALUATION MODEL - ADJUSTED CASHFLOW AND NET PRESENT VALUE
7.3% GROWTH FOR FIVE YEARS, 1.9% GROWTH THEREAFTER

	Description	FY 44/45	FY 45/46	FY 46/47	FY 47/48	FY 48/49	FY 49/50	FY 50/51
1	**Cash Flow from Revised County Model**	$ (47,557,690)	$ 141,130,463	$ 68,299,978	$ 101,859,734	$ 140,878,729	$ 158,256,019	$ 194,476,342
2	**Adjustments for Retained Operations:**							
3	**Non-Site Specific Costs (Inflation Adjusted):**							
4	Department Overhead	10,101,383	10,405,756	10,717,738	11,037,330	11,368,336	11,710,756	12,060,785
5	Monitoring of El Sobrante Landfill Operations	2,748,591	2,831,411	2,916,302	3,003,263	3,093,330	3,186,503	3,281,746
6	Monitoring and Control of Illegal Dumping	1,489,675	1,534,562	1,580,571	1,627,702	1,676,516	1,727,013	1,778,633
7	HHW, Recycling and ABOP Services (Includes 1.9% Growth)	17,196,841	18,049,288	18,943,991	19,883,045	20,868,648	21,903,107	22,988,844
8	Operation of Desert Landfills (Includes1.9% Growth)	18,099,757	18,996,962	19,938,641	20,926,999	21,964,350	23,053,123	24,195,866
9	Maintenance Cost of Inactive/Closed Landfills	10,931,575	11,260,963	11,598,586	11,944,444	12,302,654	12,673,216	13,052,012
10	CARB costs for Desert Landfills	2,655,000	2,735,000	2,817,000	2,901,000	2,988,000	3,078,000	3,170,000
11								
12	**Site Specific Costs (Inflation Adjusted):**							
13	Cost for In-County Tons Delivered to El Sobrante	88,944,209	93,255,439	97,765,147	102,480,616	107,443,956	112,664,931	118,117,484
14	Desert Landfills	-	-	-	54,826,084	-	-	-
15	Inactive/Closed Landfills	230,985	237,945	245,079	252,387	259,956	267,786	275,790
16	Edom Hill Landfill - G2E Capital Costs	-	-	-	-	-	-	-
17	Blythe Landfill - G2E Capital Costs	-	-	-	-	-	-	-
18	Mecca II Landfill - G2E Capital Costs	-	-	-	-	-	-	-
19								
20	**Less Estimated Revenues (Inflation Adjusted):**							
21	Revenue for In-County Tons Delivered to El Sobrante	(123,477,362)	(129,598,162)	(136,028,232)	(142,761,807)	(149,846,040)	(157,276,319)	(165,065,581)
22	Desert Landfills - Operating Revenue	(3,141,818)	(3,297,582)	(3,461,192)	(3,632,555)	(3,812,766)	(4,001,846)	(4,200,016)
23	Edom Hill Landfill - G2E	(870,772)	(897,010)	(923,904)	(951,454)	(979,988)	(1,009,505)	(1,039,679)
24	Blythe Landfill - G2E	(124,302)	(128,047)	(131,886)	(135,819)	(139,892)	(144,106)	(148,413)
25	Mecca II - G2E	(1,883,882)	(1,940,647)	(1,998,831)	(1,715,361)	(1,766,804)	(1,820,021)	(1,874,421)
26	Total Adjustments for Components Not for Sale	22,899,880	23,445,878	23,979,010	79,685,874	25,420,256	26,012,638	26,593,050
27	Adjusted Cash Flow - Base Case	$ (24,657,810)	$ 164,576,341	$ 92,278,989	$ 181,545,608	$ 166,298,985	$ 184,268,656	$ 221,069,392
28								
29	**Net Present Value - Projected Cash Flow**							
30	Net Present Value - 40 years (Upper Limit)							
31	Net Present Value - 40 years (Lower Limit)							
32								
33	**Net Present Value - Sale of Badlands and Lamb Canyon Landfills**							
34	Net Present Value - 40 years (Upper Limit)							
35	Net Present Value - 40 years (Lower Limit)							
36								
37	Discount Rate (Upper Limit)							
38	Discount Rate (Lower Limit)							
39								

ATTACHMENTS

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Attachment 1

SOLID WASTE DISPOSAL SITES
ACTIVE AND INACTIVE/CLOSED

	NAME	SWIS #	FINANCIAL ASSURANCE (Escrow #) [1]	ACREAGE [2]	DATE OPENED	DATE CLOSED	OWNERSHIP	SITESTATUS	Site Address	LONGITUDE	LATITUDE
	Active Disposal Sites - County Facility										
1	BADLANDS SANITARY LANDFILL	33-AA-0006	091	1168.32	1966	Open	COUNTY OF RIVERSIDE	OPEN	31125 Ironwood Ave., Moreno Valley, Ca	-117.112173	33.94959505
2	LAMB CANYON SANITARY LANDFILL	33-AA-0007	079	1189.07	1970	Open	COUNTY OF RIVERSIDE	OPEN	16411 Lamb Canyon Rd., Beaumont, Ca. 92223	-117.00138	33.88318419
3	BLYTHE SANITARY LANDFILL	33-AA-0017	085	334.8	1958	Open	COUNTY OF RIVERSIDE	OPEN	1000 Midland Rd., Blythe, Ca 92225	-114.6227213	33.70173331
4	OASIS SANITARY LANDFILL	33-AA-0015	077	156.18	1972	Open	COUNTY OF RIVERSIDE	OPEN-LIMITED USE	84-505 84th Ave., Oasis, Ca. 92274	-116.0830135	33.43702597
5	DESERT CENTER LANDFILL	33-AA-0016	083	161.77	1972	Open	LEASED FROM BLM	OPEN-LIMITED USE	17-991 Kaiser Rd., Desert Center, Ca. 92239	-115.4075119	33.77607218
6	MECCA LANDFILL II	33-AA-0071	080	80.13	1982	Open	COUNTY OF RIVERSIDE	OPEN-LIMITED USE	95250 66th Ave., Mecca, Ca. 92254	-116.0043719	33.57147869
	Active Disposal Sites - Privately Owned										
7	EL SOBRANTE LANDFILL	33-AA-0217		1227.14	1986	Open	PRIVATE OWNER	OPEN	10910 Dawson Canyon Rd., Corona, Ca	-117.4643679	33.79785071
	Inactive/Closed Landfill and Disposal Sites										
1	ANZA SANITARY LANDFILL	33-AA-0013	078	52.25	1955	1999	COUNTY OF RIVERSIDE	CLOSED/TRANSFER STATION-RESIDENTIAL ONLY	40329 Terwilliger Rd., Anza, Ca. 92539	-116.6257824	33.53692407
2	IDYLLWILD DISPOSAL SITE	33-AA-0010	n/a	26.05	1967	1986	COUNTY OF RIVERSIDE	CLOSED/TRANSFER STATION-RESIDENTIAL ONLY	28100 Saunder's Meadow Rd. Idyllwild Ca. 92549	-116.7179164	33.72496505
3	COACHELLA VALLEY DISPOSAL SITE	33-AA-0012	084	642.72	1972	1997	COUNTY OF RIVERSIDE	CLOSED/TRANSFER STATION	87-011 Landfill Rd., Coachella, Ca 92236	-116.1380135	33.72215729
4	EDOM HILL SANITARY LANDFILL	33-AA-0011	082	435.20	1967	2004	COUNTY OF RIVERSIDE	CLOSED/TRANSFER STATION	70-100 Edom Hill Rd., Cathedral City, Ca. 92234	-116.4343798	33.87981833
5	CORONA DISPOSAL SITE	33-AA-0004	CA	76.86	1951	1986	COUNTY OF RIVERSIDE & CITY OF CORONA	CLOSED	NA - MAGNOLIA AVE 7 SHERBORN ST	-117.5357156	33.86366807
6	DOUBLE BUTTE DISPOSAL SITE	33-AA-0008	075	577.94	1973	1994	COUNTY OF RIVERSIDE	CLOSED	31710 Grand Ave., Winchester, Ca.	-117.1097561	33.72143586
7	ELSINORE SANITARY LANDFILL	33-AA-0005	CA	45.07	1953	1986	CITY OF LAKE ELSINORE	CLOSED	NA - GRUNDER DR & FRANKLIN ST	-117.3066308	33.67466811
8	HIGHGROVE SANITARY LANDFILL	33-AA-0003	074	248.64	1947	1998	COUNTY OF RIVERSIDE	CLOSED	1420 Highgrove Pass Rd., Riverside, Ca.	-117.2833494	34.00384889
9	MEAD VALLEY DISPOSAL SITE	33-AA-0009	076	237.75	1974	1997	COUNTY OF RIVERSIDE	CLOSED	22376 Forrest Rd., Perris, Ca. 92570	-117.2851471	33.79733224
10	MECCA LANDFILL	33-AA-0014	n/a	20.09	1950	1982	COUNTY OF RIVERSIDE	CLOSED	NA - LINCOLN ST & 72ND AVE	-116.0800333	33.53012352
11	WEST RIVERSIDE SANITARY LANDFILL	33-AA-0002	CA	72.51	1965	1983	COUNTY OF RIVERSIDE	CLOSED	NA - HALL AVE & 28TH ST	-117.3868393	34.00693828
12	BEAUMONT LF	33-CR-0036	CA	10.68	1962	1970	COUNTY OF RIVERSIDE	CLOSED	NA - 4TH ST IN BEAUMONT	-116.9979177	33.92914106
13	BELLTOWN I	33-AA-0128	n/a	14.11	1956	1964	PRIVATE OWNER	CLOSED	NA - HALL & 26TH	-117.3891723	34.01172901
14	BUNDY CANYON	33-CR-0002	n/a	83.88	Unknown	1953	COUNTY OF RIVERSIDE	CLOSED	NA - BUNDY CYN RD & CANYON RANCH RD	-117.2607159	33.62993367
15	CATHEDRAL CITY	33-CR-0031	n/a	67.04	1955	1967	PRIVATE OWNER	CLOSED	NA - 30TH AVE & DA VALL DR	-116.4377217	33.83243365
16	CRESTMORE	n/a	n/a	5.37	1965	1972	PRIVATE OWNER	CLOSED	NA - HALL AVE 7 MARKET ST	-117.3846499	34.01333592
17	DESERT HOT SPRINGS	33-CR-0032	CA	191.85	1955	1968	COUNTY OF RIVERSIDE	CLOSED	NA - HACIENDA DR & LONG CANYON RD	-116.4459805	33.95005064
18	EAST COUNTY LINE	33-CR-0033	n/a	46.21	1956	1965	PRIVATE & SAN BERNARDINO COUNTY	CLOSED	NA - PHILADELPHIA AVE & PAULINE RD	-117.4995866	34.02868142
19	HEMET	33-CR-0006	CA	88.66	1958	1972	CITY OF HEMET	CLOSED	NA - WARREN RD 7 7TH ST	-117.0369433	33.77673466
20	HOMELAND	33-CR-0007	n/a	8.40	1948	1966	COUNTY/PRIVATE OWNER	CLOSED	NA - WATSON RD & BRANSON LN	-117.1202159	33.74864714
21	INDIO (DA #18) (INDIO CLOSED LANDFILL)	33-CR-0034	n/a	10.11	1953	1960	PRIVATE & COUNTY OF RIVERSIDE	CLOSED	NA - COMMERCE ST & 45TH AVE	-116.2014125	33.72008364
22	LAKEVIEW	33-AA-0010	n/a	7.51	1951	1971	COUNTY OF RIVERSIDE	CLOSED	NA - DAVIS RD & MARVIN RD	-117.1218084	33.84433969
23	MENIFEE	33-CR-0011	n/a	19.14	1948	1973	COUNTY OF RIVERSIDE	CLOSED	NA - SIMPSON RD & MENIFEE RD	-117.1561313	33.70958821
24	MIRA LOMA	33-CR-0012	n/a	7.79	1947	1956	COUNTY OF RIVERSIDE	CLOSED	NA - COUNTRY VILLAGE RD & GRANITE HILL DR	-117.5074225	34.02240286
25	OLD COACHELLA (COACHELLA CITY)	33-CR-0004	n/a	17.16	1954	1960	PRIVATE & COACHELLA REDEVELOPMENT AGENCY	CLOSED	NA - 52ND AVE & ENTERPRISE WAY	-116.1503471	33.67033941
26	OLD EAGLE MOUNTAIN	33-AA-0228	n/a	32.92	1972	1976	BLM	CLOSED	NA - KAISER TRUCK RD	-115.4753256	33.84210352
27	OLD IDYLLWILD BURN SITE	33-AA-0196	n/a	4.04	1950	1967	BLM	CLOSED	NA - SH 243 SOUTH OF SAUNDERS MEADOW RD	-116.7228245	33.72035547
28	PEDLEY	33-CR-0014	n/a	19.60	1932	1958	CITY OF RIVERSIDE & STATE OF CALIFORNIA	CLOSED	NA - JURUPA AVE & VAN BUREN BLVD	-117.4648814	33.96090135
29	TEMECULA	33-CR-0016	n/a	3.63	1955	1971	PRIVATE OWNER	CLOSED	NA- RAINBOW CANYON RD	-117.1294727	33.46113855
30	THERMAL	33-CR-0017	n/a	29.28	1948	1972	BROOKFIELD CALIF LAND HOLDINGS	CLOSED	NA - 59TH AVE & FILLMORE ST	-116.1362209	33.61838906
31	VALLE VISTA	33-CR-0018	n/a	26.06	1956	1957	LAKE HEMET WATER DIST	CLOSED	NA - CHICAGO AVE & CEDAR AVE	-116.8943505	33.76279281
32	PINON FLATS COLLECTION STATION			0.53	Unknown	1973	BLM	TRANSFER STATION - RESIDENTIAL ONLY	Pinion Flats Rd, Pinion Flats, Ca	-116.4507436	33.57913195
	Total Acres			7,446.46							

(1) CA - Corrective Action escrow

(2) Sites that include Right-of-Way in total acreage - Badlands Sanitary Landfill , Blythe Sanitary Landfill, Idyllwild Disposal Site and Mecca Landfill II

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RIVERSIDE COUNTY SOLID WASTE DISPOSAL SYSTEM STAKEHOLDERS

There are a number of stakeholders that may be affected by a potential sale, lease or operating contract. Table 1 lists the stakeholders and their interest in a transaction involving the County solid waste system.

Table 1: Stakeholders and Interest

	Stakeholder	Interest
1	Waste Haulers/Transfer Station Operators	User/Payer
2	Self Haulers	User/Payer
3	Residential, Commercial and Industrial Customers	Payer
4	County Board of Supervisors	Policy Makers
5	City Officials	Approve Hauler Contract and Local Rates
6	County Employees/Unions	Jobs/Wages/Benefits
7	Riverside County Solid Waste Advisory Council and Local Task Force	Policy Advisors
8	Waste Management, Inc (El Sobrante)	Owner of El Sobrante Landfill
9	Local Enforcement Agency	Regulator - Solid Waste Issues
10	State Waste Board (CalRecycle)	Regulator - Solid Waste Issues
11	State Water Board	Regulator - Water Quality Issues
12	Host Communities and Cities Adjacent to the Landfills	User/Payer/ Environmental Impact

The specific interest for the stakeholders identified in Table 1 is summarized as follows:

Waste Haulers: The waste haulers' interest under of each of the options will be based on the potential impact on the haulers' operating costs and the potential rate increases to customers.

Transfer Station Operators: The transfer station operator interest under each of the options will be based on the potential impact on the operators operating cost and the potential changes in the gate rates charged. Under option 1, the sale of the solid waste system landfills will activate the operators' option under the WDA to cancel the WDA, eliminating the transfer station operators' requirement to deliver disposal tonnage to County-specified landfills. This will significantly impact Burrtec as the lessee/operator of the County's three primary transfer stations and give Burrtec an opportunity to cancel its WDA with the County and export Riverside County waste to landfills in San Bernardino County, which Burrtec operates, or to a landfill in Imperial County, which Burrtec operates under a long-term lease.

WM, which operates the Moreno Valley Transfer Station, would likely deliver loads to the El Sobrante Landfill. CR&R, owner of the Perris Transfer Station does not operate a local landfill, but delivers its waste stream to the El Sobrante and Badlands landfills.

Residential, Commercial and Industrial Customers: The interests for residential, commercial and industrial customers for each of the options will center on the impact to services received and service rates paid. Sale of the system could increase customer rates, depending on terms of the sale agreement.

County Board of Supervisors: The County Board of Supervisors will be interested on the impact of the operation of the solid waste system on the financial position of the County and the impacts on interests of County residential, commercial and industrial customers for each of the options on services received

and service rates paid. The County Board of Supervisors is responsible for establishing policy in the County.

City Officials: City officials will be interested on the impact of services and costs to residential and businesses and the availability of disposal capacity for the city, residents and business, and the impact on the local environment.

County Employees/Unions: County employees and related unions will be concerned with the impact in each of the options for continued employment with competitive wages and the potential impact on work conditions.

Riverside County Solid Waste Advisory Council and Local Task Force: The Riverside County Solid Waste Advisory Council and the Local Task Force are responsible for providing advisory services to the County Supervisors, City Officials and City and County management related to the solid waste system and services in the County and will be interested in the impact of potential changes in the solid waste system.

Waste Management, Inc. (El Sobrante Landfill): WM will be interested in any potential impact on the waste stream received at the El Sobrante Landfill and any future impact on operating costs and gate fees. WM may oppose any effort by the County to increase import tonnage beyond the current limit of 225,000 tons.

The Local Enforcement Agency (LEA): The LEA's interest will focus on the impact of potential new reporting bodies, development of new working relationships and continued regulatory compliance.

The State Waste Board (CalRecycle): The CalRecycle's interest will be potentially new reporting bodies, development of new working relationships, adequate reserves for current and future closure/post closure and remediation costs and continued regulatory compliance.

The State Water Board: The State Water Board will be interested in maintaining the water quality in the County and will be interested in the impact of potential changes in the solid waste system on the regional groundwater system, adequate reserves for current and future closure/post closure and remediation costs and continued regulatory compliance.

Host Communities and Cities Adjacent to the County Landfills: The host communities and cities adjacent to the County landfills will be interested in the impact on the quality of life for their residents and business.

Attachment 3

ECONOMIC MODEL
ALLOCATION OF COST BY ACTIVITY

Row	Description	Potential Allocation Methodology	FY 10/11 Budget	FY 10/11 Actual	Major Active Landfills		Other Active Landfills (Blythe, Desert Center, Oasis & Mecca II)	El Sobrante Landfill	Inactive/ Closed Sites (32 sites)	HHW Recycling ABOP	Illegal Dumping
					Badlands	Lamb Canyon					
1	**Salaries/Benefits:**										
2	Direct Operations at the Sites	Site specific & allocation		$ 5,020,634	$ 2,139,642	$ 1,963,638	$ 535,781	$ -	$ 381,574		
3	Closure/PCL Remediation	Site specific & allocation		879,886	86,912	84,971	5,629	-	702,374		
4	Engineering Planning & Environmental Monitoring	Site specific & allocation		2,859,680	797,804	728,987	416,062	82	916,745		
5	HHW, Recycling, ABOP	Site specific & allocation		3,111,152	360,308	738,500	87,377	2,161	1,498	1,443,993	477,315
6	Gate Fee, Load Check & Jurisdictional Reporting	Site specific & allocation		1,298,228	166,673	180,669	173,823	774,718	2,346		
7	Overhead and Administration	Site specific & allocation		4,400,778	386,887	389,781	773,773	193,443	773,979		
8	**Total Salaries and Benefits**		**$ 19,570,804**	**17,570,360**	**3,938,225**	**4,086,546**	**1,992,445**	**970,405**	**2,778,516**	**1,443,993**	**477,315**
9	99900,02,05 -- Administrative	Site specific & allocation	$17,037,243	17,025,619	79,168	80,013	112,654	14,748,415	146,697	25,861	25,861
10	99903 -- Information Technology	Some can be allocated to sites	$456,400	297,474	40,273	44,751	55,546	15,661	51,363	12,840	12,840
11	99906 -- Gate Fee	Site specific & allocation	$83,790	69,001	21,052	13,461	8,346	25,381	762		
12	99912-99916 -- Closure & Post Closure	Site specific & allocation	$189,400	2,029	304	304	308	-	808		
13	99918-99924 -- Engineering	Site specific & allocation	$212,649	126,812	40,504	27,795	17,671	-	34,466		
14	99930-99938 -- Environmental	Site specific & allocation	$678,912	654,935	31,080	25,880	118,248	-	479,726		
15	99940 -- Alternative Energy	Badlands Primarily	$343,020	431,543	431,271	200			72		
16	99944-99948 -- Remediation	Site specific & allocation	$237,670	416,297	58,564	47,691	8,759	-	301,283		
17	99951 -- Warehouse	Site specific & allocation	$292,630	171,476	60,172	59,894	25,920	-	25,490		
18	99952 -- Fleet	Site specific & allocation	$4,012,430	2,990,754	1,219,407	1,318,564	329,621	-	123,162		
19	99953 -- Facilities Maintenance	Site specific & allocation	$354,400	201,528	41,128	41,208	33,162	312	48,900		36,818
20	99954 -- Landfill Operations	Site specific & allocation	$202,400	181,183	79,650	75,770	25,376	-	386		
21	99955,58 -- Litter & IDCUP	Site specific & allocation	$64,200	70,499	18,885	18,757	9,278	-	15,331		8,249
22	99957 -- Waste Inspection	Site specific & allocation	$101,181	64,826	11,836	20,030	9,596	23,364	-		
23	99959 -- Waste Recycling	Site specific & allocation	$104,772	139,100	32,508	64,321	14,168	-	14,052		
24	99960,62 -- Planning	Site specific & allocation	$301,875	100,905	24,984	50,032	289	129	25,245		
25	99964,72 -- Recycling, Grants (Annual Reports, etc.)	Mostly CVAG, RCOG, etc.	$117,280	60,722	4,510	4,510	17,550	-	4,510		
26	99966 -- Household Hazardous Waste	Mostly HHW Contract	$1,250,080	1,157,612						1,157,612	
27	Capital Assets	Pulled from Program Costs	$10,443,674	537,252	359,398	111,267	-		66,586		
28	**Total Expenses**		**$36,484,006**	**24,699,565**	**2,554,693**	**2,004,450**	**786,493**	**14,813,262**	**1,338,838**	**1,196,313**	**83,768**
29	**Total Costs (Salaries + Expenses)**		**$56,054,810**	**$ 42,269,925**	**$ 6,492,918**	**$ 6,090,995**	**$ 2,778,938**	**$ 15,783,666**	**$ 4,117,354**	**$ 2,640,307**	**$ 561,083**
30	Depreciation		$4,730,000	$ 5,940,352	$ 572,886	$ 1,665,201	$ 47,406	$ -	$ 439,194		
31	**"Revenue Distributions"**										
32	State Fees ($1.40/ton)				$ 735,165	$ 740,572	$ 24,215	$ 974,697			
33	Code Enforcement Fee				183,791	185,143	6,054	243,674			
34	RCA Fee				525,118	528,980	17,296	696,212			
35	**Total Revenue Distributions**				**$ 1,444,073**	**$ 1,454,695**	**$ 47,565**	**$ 1,914,583**			

Direct Operations at the Landfills (L2+L18+I19+I20+L22) **$ 8,458,925**

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ECONOMIC MODEL
ALLOCATION OF COST BY ACTIVITY

Row	Description	Potential Allocation Methodology	Overhead Costs [1]						
			Headquarters & Department Overhead (Mgmt, Acctg & Office)	General Fund Transfers	Environmental, Engineering & Monitoring	CVAG, RCOG, Other County Costs	Gate Fee, Load Check & Jurisdictional Reporting	Subtotal Overhead Costs	Total Costs
1	**Salaries/Benefits:**								
2	Direct Operations at the Sites	Site specific & allocation						$ -	$ 5,020,634
3	Closure/PCL Remediation	Site specific & allocation						-	879,886
4	Engineering Planning & Environmental Monitoring	Site specific & allocation						-	2,859,680
5	HHW, Recycling, ABOP	Site specific & allocation						-	3,111,152
6	Gate Fee, Load Check & Jurisdictional Reporting	Site specific & allocation						-	1,298,228
7	Overhead and Administration	Site specific & allocation	967,217		400,697		515,001	1,882,915	4,400,778
8	**Total Salaries and Benefits**		**967,217**	-	**400,697**	-	**515,001**	**1,882,915**	**17,570,360**
9	99900,02,05 -- Administrative	Site specific & allocation	129,306	1,295,574		382,070		1,806,950	17,025,619
10	99903 -- Information Technology	Some can be allocated to sites	64,201					64,201	297,474
11	99906 -- Gate Fee	Site specific & allocation						-	69,001
12	99912-99916 -- Closure & Post Closure	Site specific & allocation	304					304	2,029
13	99918-99924 -- Engineering	Site specific & allocation	6,376					6,376	126,812
14	99930-99938 -- Environmental	Site specific & allocation						-	654,935
15	99940 -- Alternative Energy	Badlands Primarily						-	431,543
16	99944-99948 -- Remediation	Site specific & allocation						-	416,297
17	99951 -- Warehouse	Site specific & allocation						-	171,476
18	99952 -- Fleet	Site specific & allocation						-	2,990,754
19	99953 -- Facilities Maintenance	Site specific & allocation						-	201,528
20	99954 -- Landfill Operations	Site specific & allocation						-	181,183
21	99955,58 -- Litter & IDCUP	Site specific & allocation						-	70,499
22	99957 -- Waste Inspection	Site specific & allocation						-	64,826
23	99959 -- Waste Recycling	Site specific & allocation	14,052					14,052	139,100
24	99960,62 -- Planning	Site specific & allocation	225					225	100,905
25	99964,72 -- Recycling, Grants (Annual Reports, etc.)	Mostly CVAG, RCOG, etc.	4,510			25,131		29,641	60,722
26	99966 -- Household Hazardous Waste	Mostly HHW Contract						-	1,157,612
27	Capital Assets	Pulled from Program Costs						-	537,252
28	**Total Expenses**		**218,974**	**1,295,574**	-	**407,201**	-	**1,921,749**	**24,699,565**
29	**Total Costs (Salaries + Expenses)**		**$ 1,186,191**	**$ 1,295,574**	**$ 400,697**	**$ 407,201**	**$ 515,001**	**$ 3,804,664**	**$ 42,269,925**
30	Depreciation		$ 3,215,666					3,215,666	5,940,352
31	**"Revenue Distributions"**								
32	State Fees ($1.40/ton)								$2,474,648
33	Code Enforcement Fee								$618,662
34	RCA Fee								$1,767,606
35	**Total Revenue Distributions**								**$4,860,917**

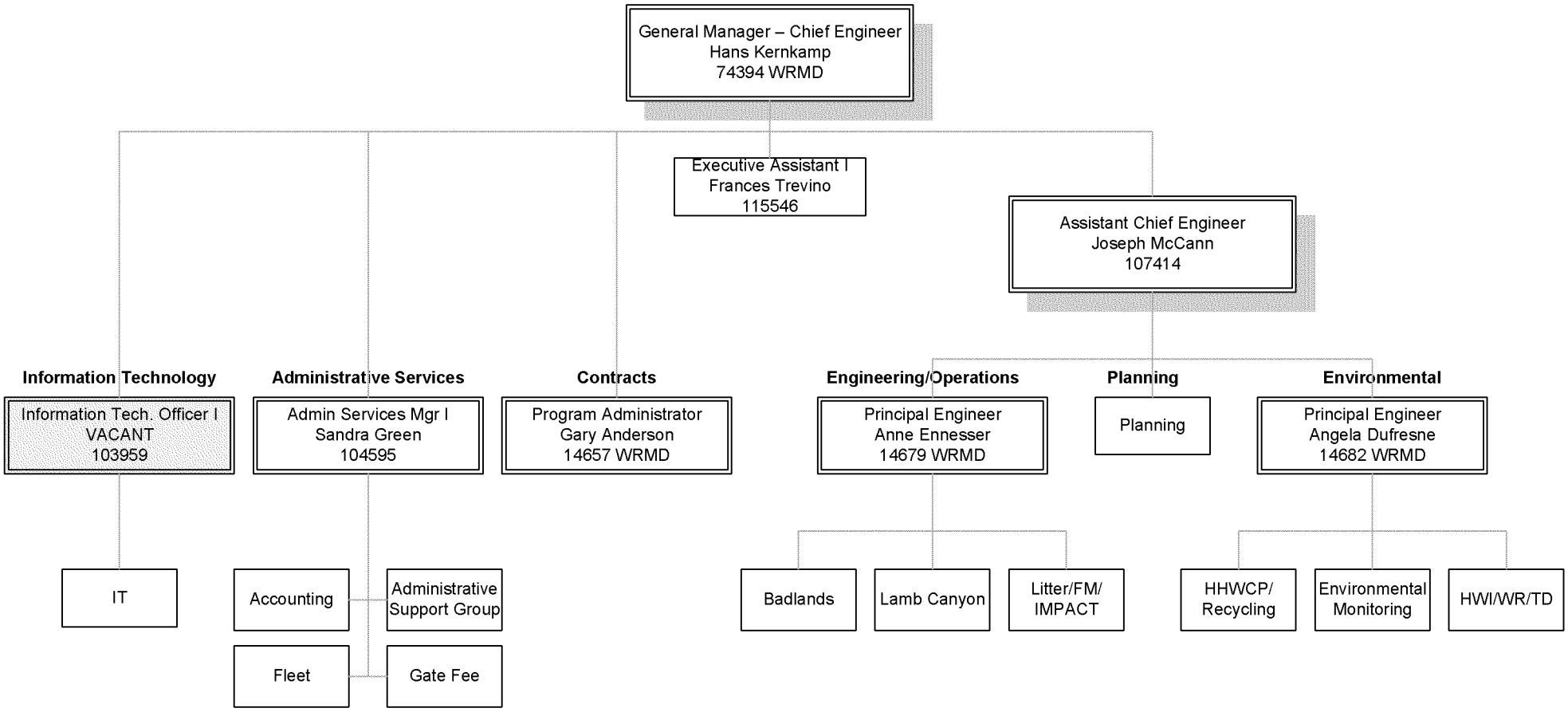
Direct Operations at the Landfills (L2+L18+I19+I20+L22) eral Overhead % = 9.0%
xtal Overhead % = 15.0%

ATTACHMENT 4

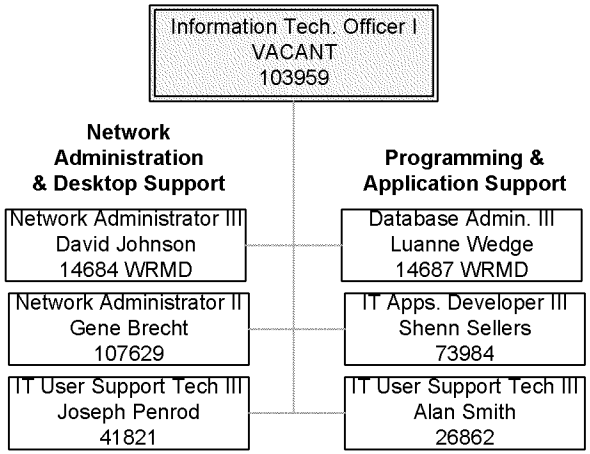
RIVERSIDE COUNTY WASTE MANAGEMENT DEPARTMENT

ORGANIZATION CHART

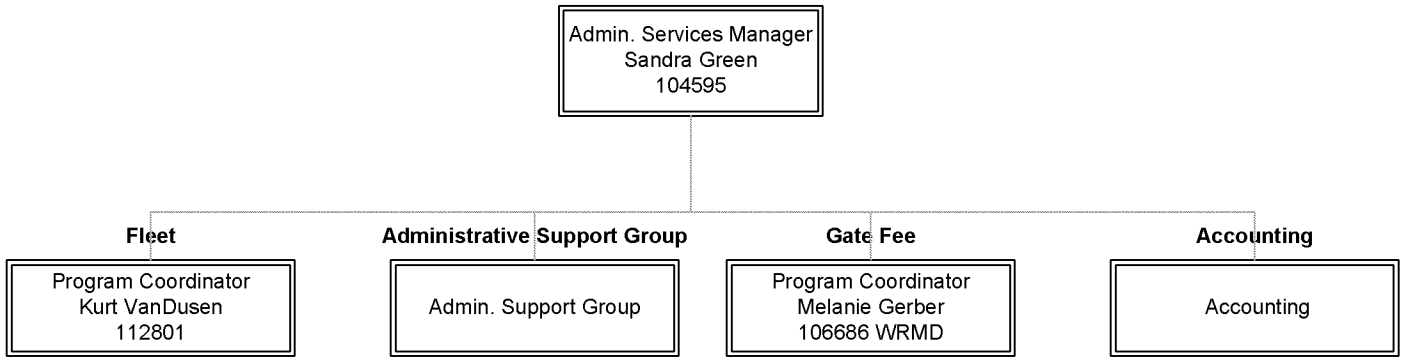
ADMINISTRATION
Pay Period 5/12



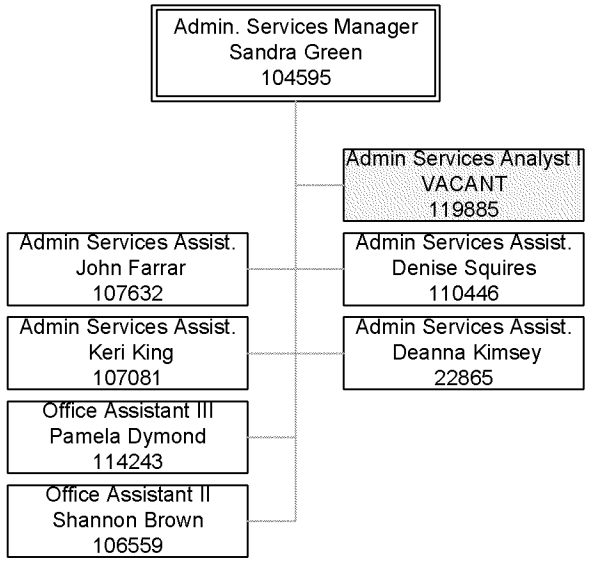
INFORMATION TECHNOLOGY
Pay Period 5/12



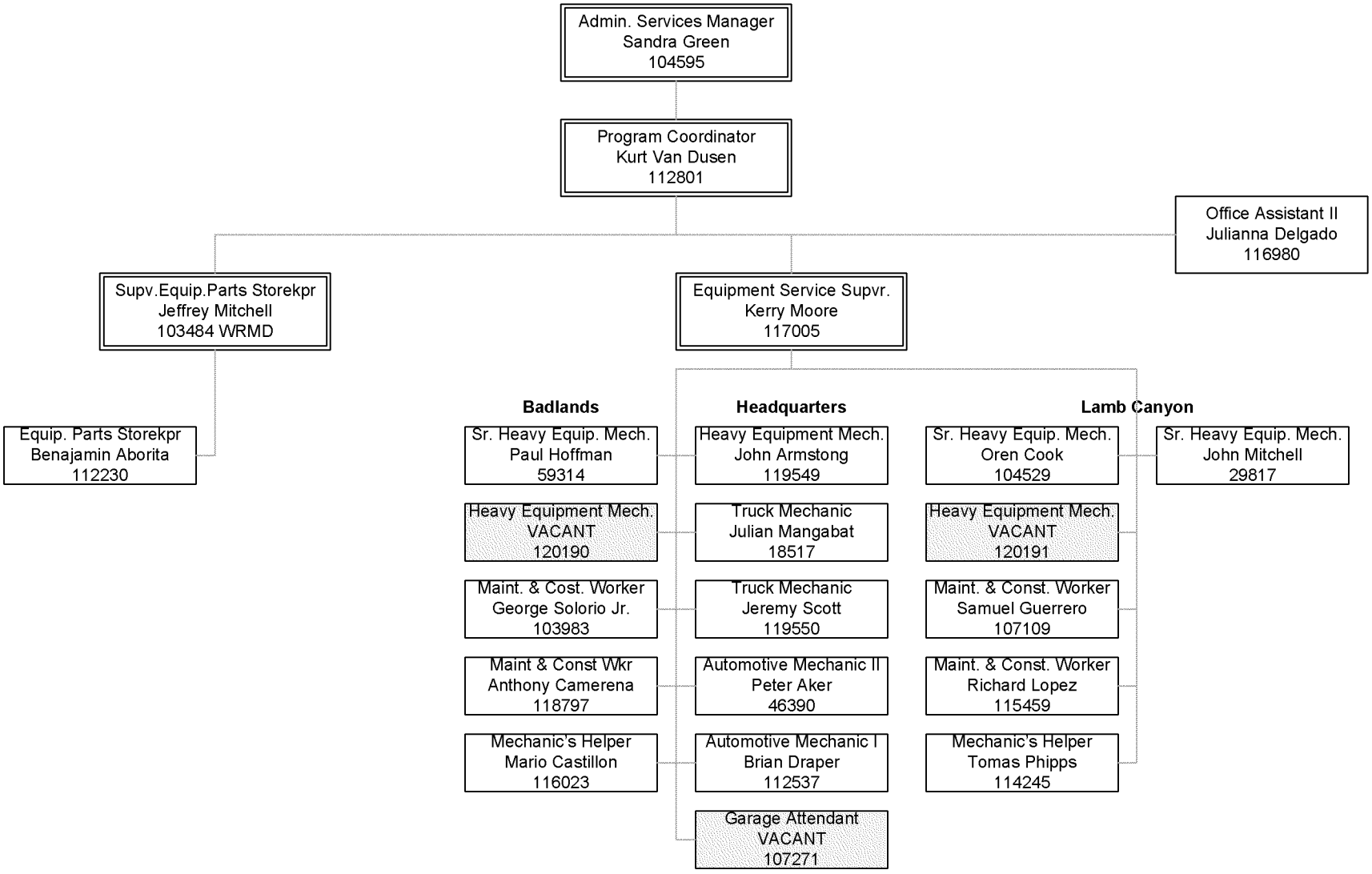
ADMINISTRATIVE SERVICES
Pay Period 5/12



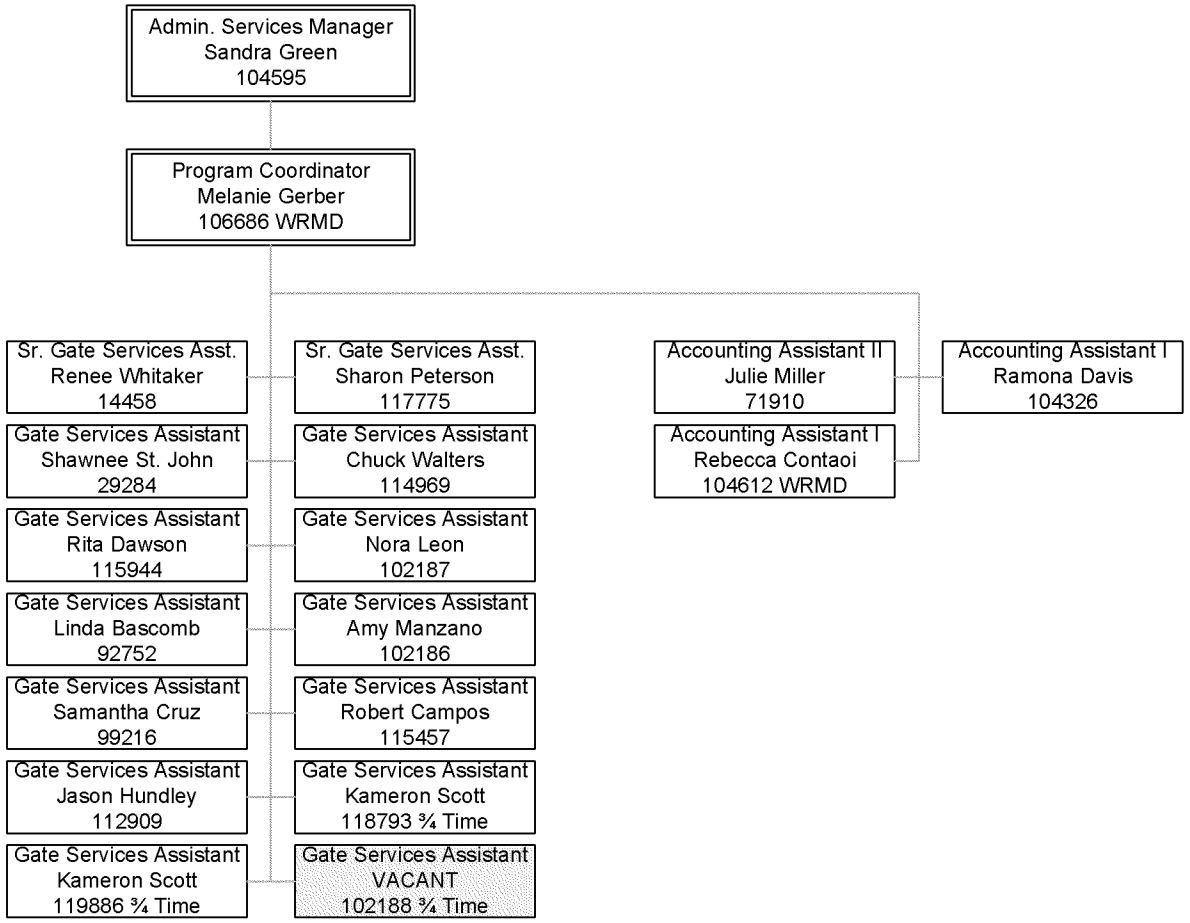
ADMINISTRATIVE SUPPORT
Pay Period 5/12



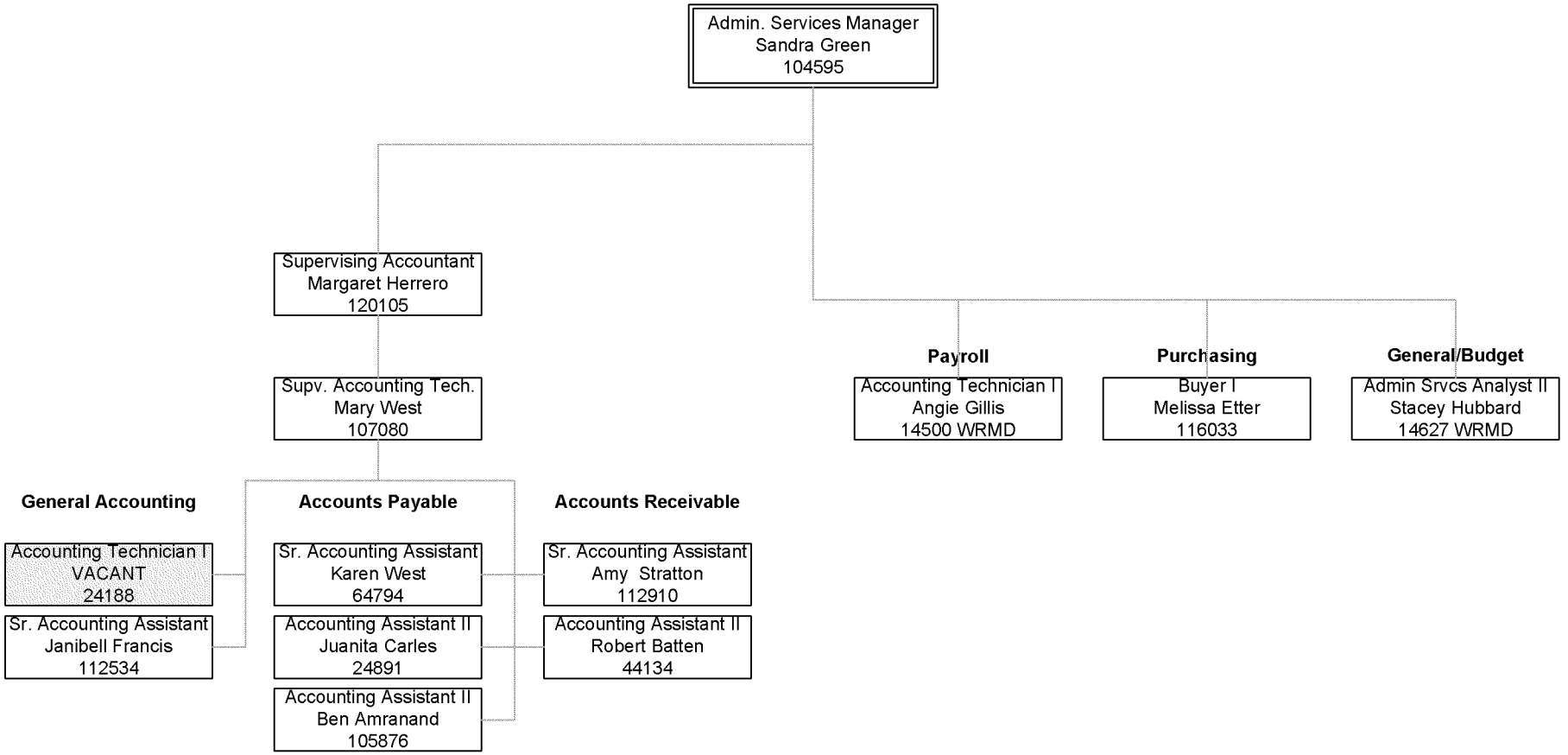
FLEET SERVICES
Pay Period 5/12



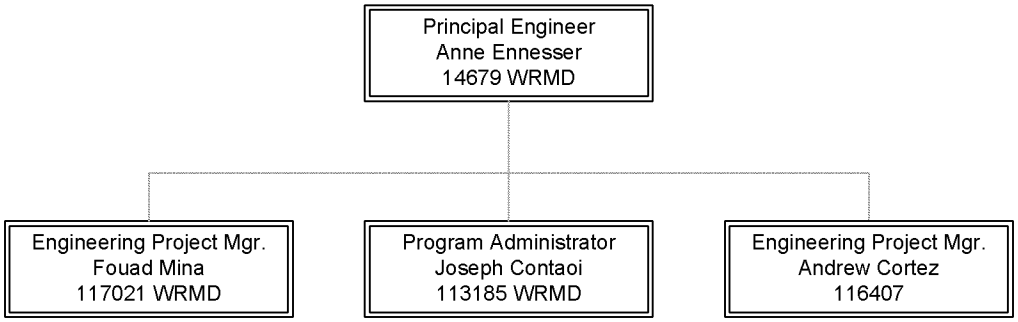
GATE FEE
Pay Period 5/12



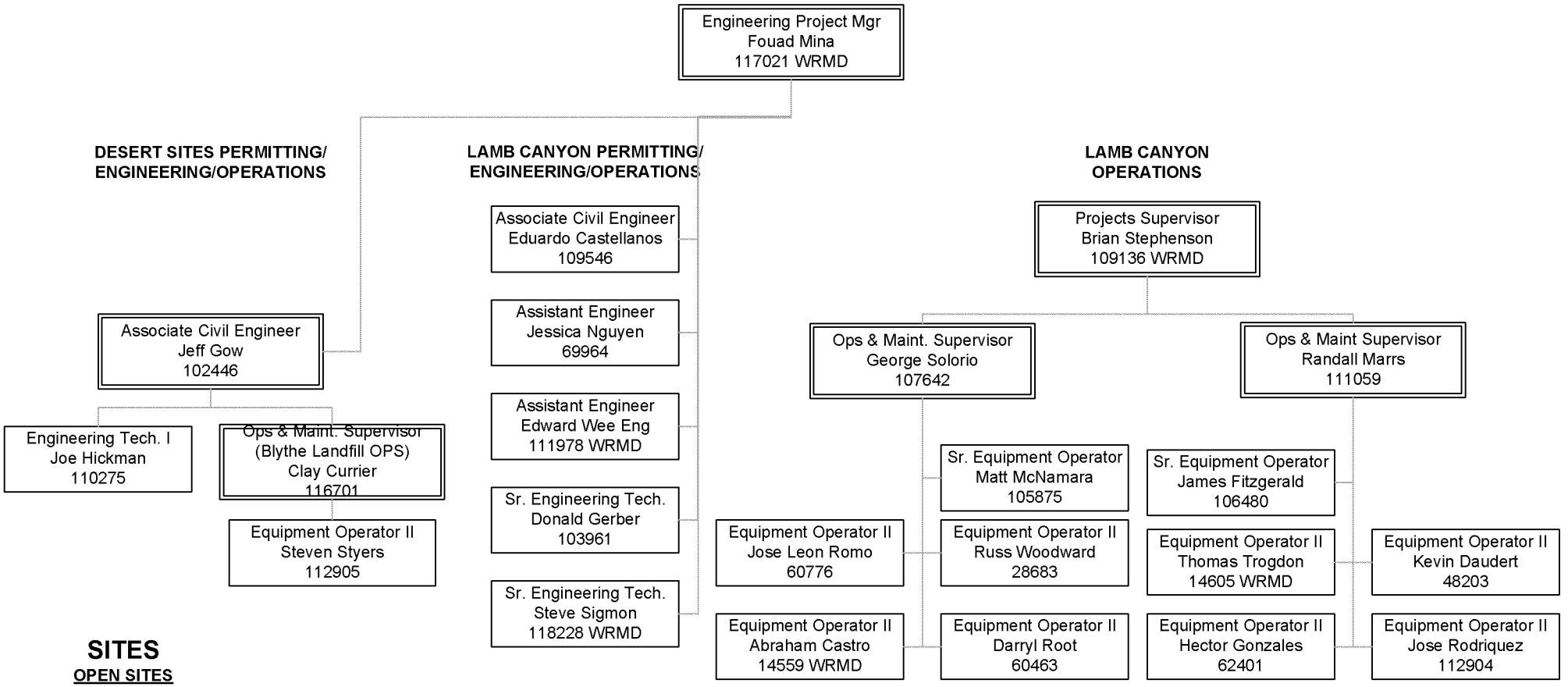
ACCOUNTING
Pay Period 5/12



ENGINEERING/OPERATIONS
Pay Period 5/12



LAMB CANYON & ACTIVE DESERT SITES
ENGINEERING & OPERATIONS
Pay Period 5/12



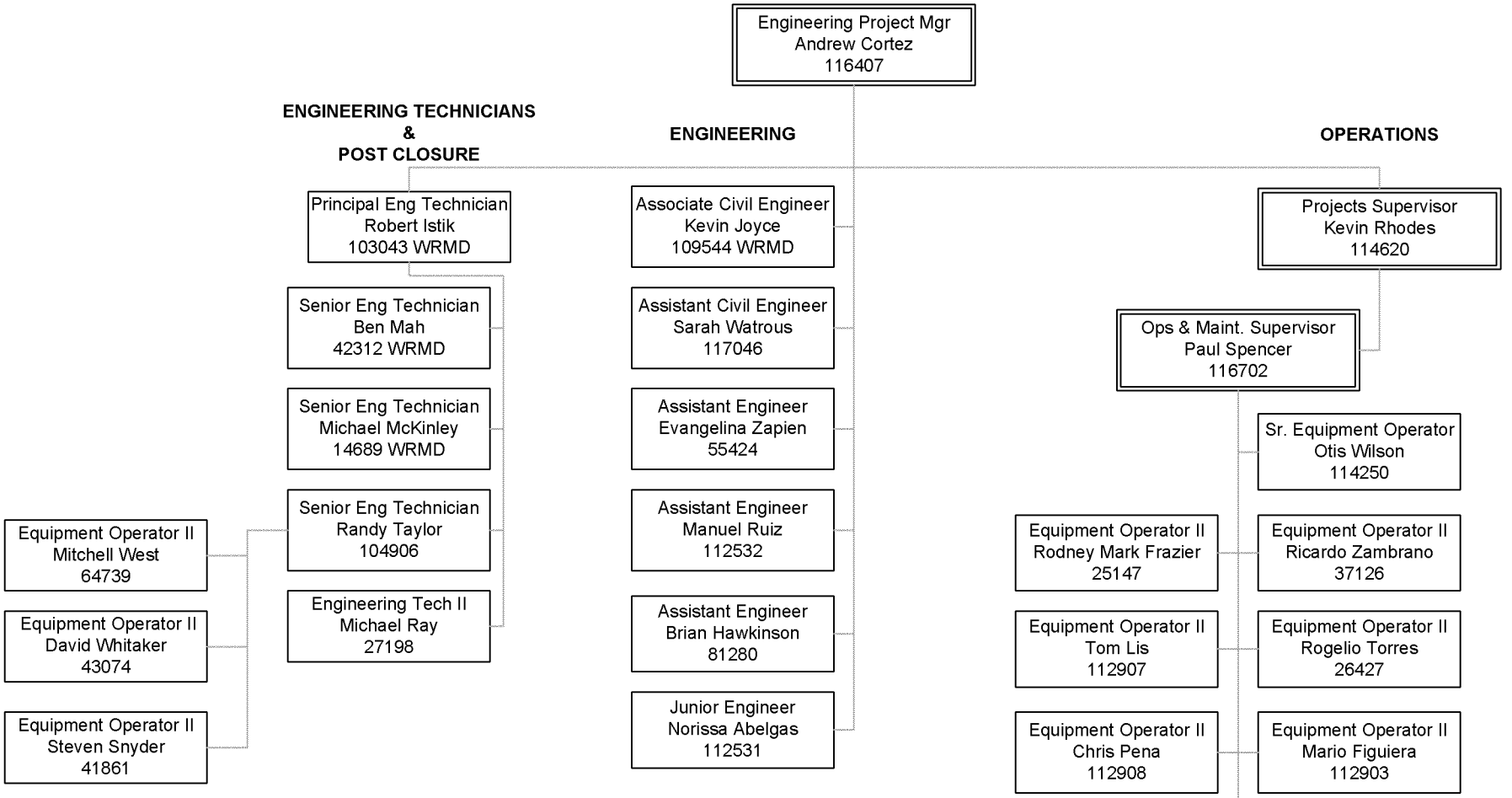
SITES

OPEN SITES
BLYTHE
LAMB CANYON
MECCA II
OASIS
DESERT CENTER

CLOSED (Escrow)
DOUBLE BUTTE
HIGHGROVE
WEST RIVERSIDE
LAKE ELSINORE

INACTIVE SITES
LAKEVIEW

BADLANDS
ENGINEERING, OPERATIONS & POST CLOSURE
Pay Period 5/12



SITES

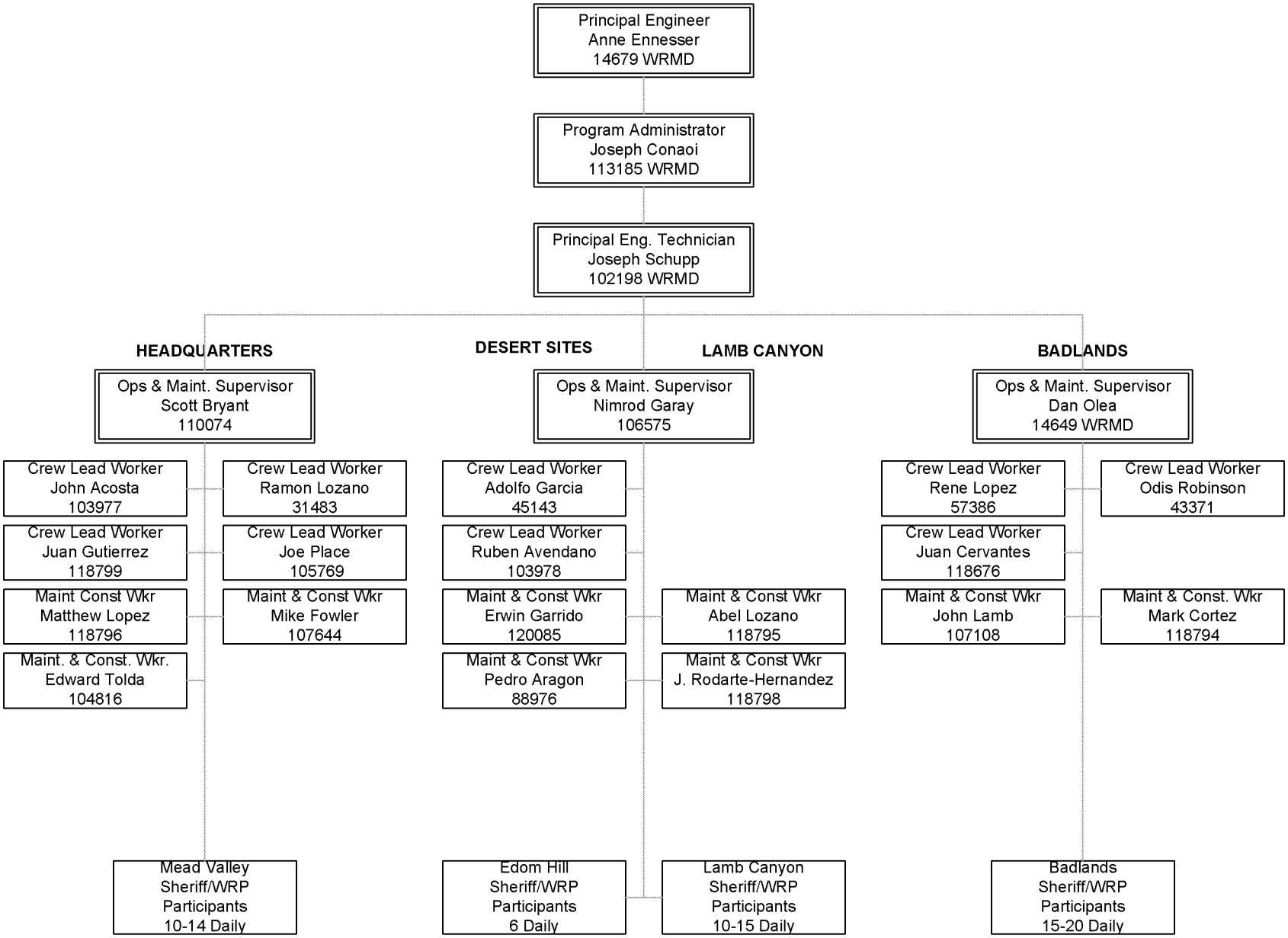
OPEN
BADLANDS
EL SOBRANTE

TRANSFER STATIONS
ANZA
COACHELLA
EDOM HILL
PINYON FLATS
IDYLLWILD
RAN

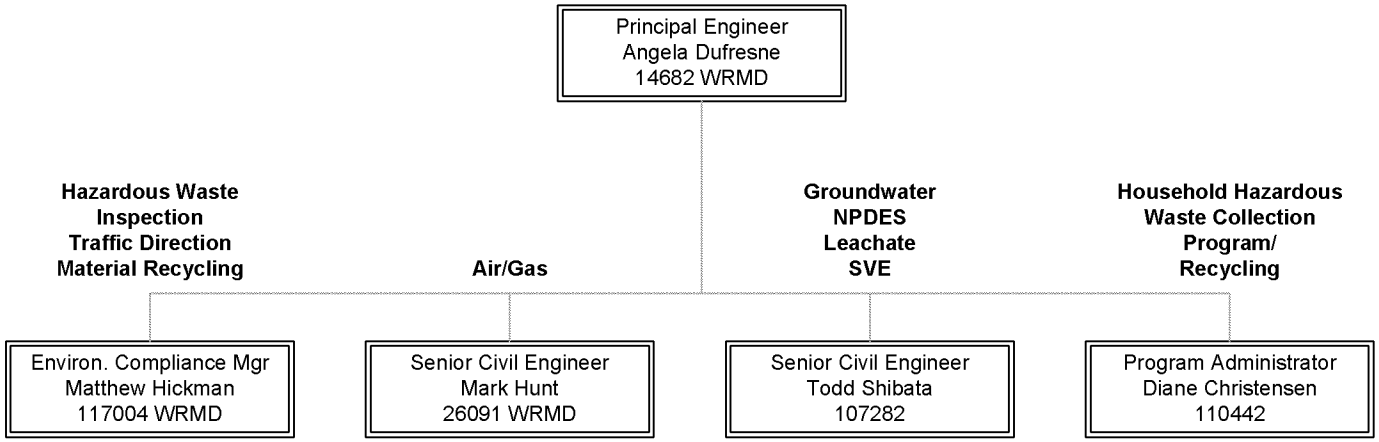
CLOSED (ESCROW)
MEAD VALLEY
ANZA
COACHELLA
EDOM HILL

INACTIVE
BEAUMONT
BELLTOWN
BUNDY CANYON
CATHEDRAL CITY
COACHELLA (OLD)
CORONA
CRESTMORE
DESERT HOT SPRINGS
EAST COUNTY LINE
HEMET
IDYLLWILD (burn dump)
HOMELAND
INDIO
MENIFEE
MIRA LOMA
OLD EAGLE MOUNTAIN
PEDLEY
PINON FLATS
TEMECULA
THERMAL
VALLE VISTA

REFUSE CONTROL
Pay Period 5/12



ENVIRONMENTAL
Pay Period 5/12



ENVIRONMENTAL MONITORING
Pay Period 5/12

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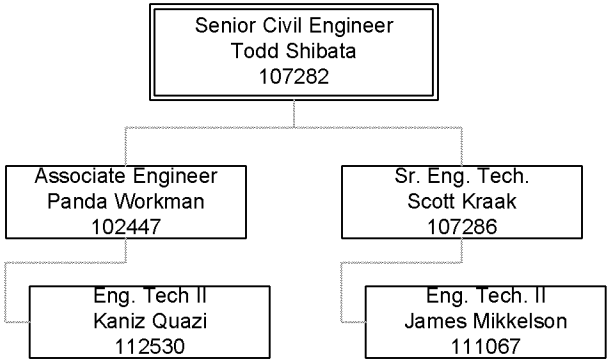

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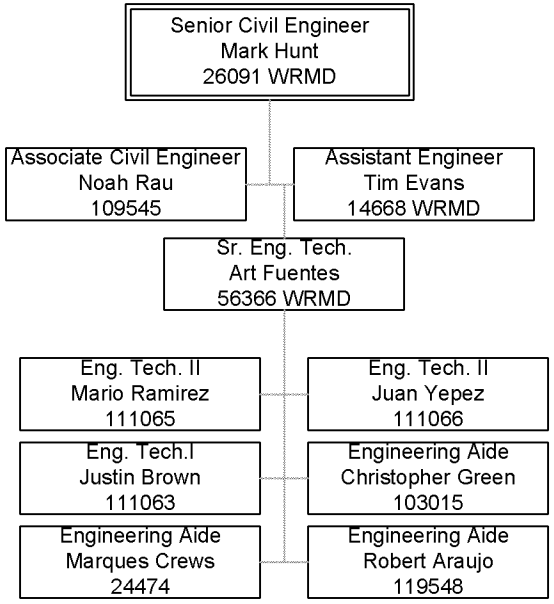
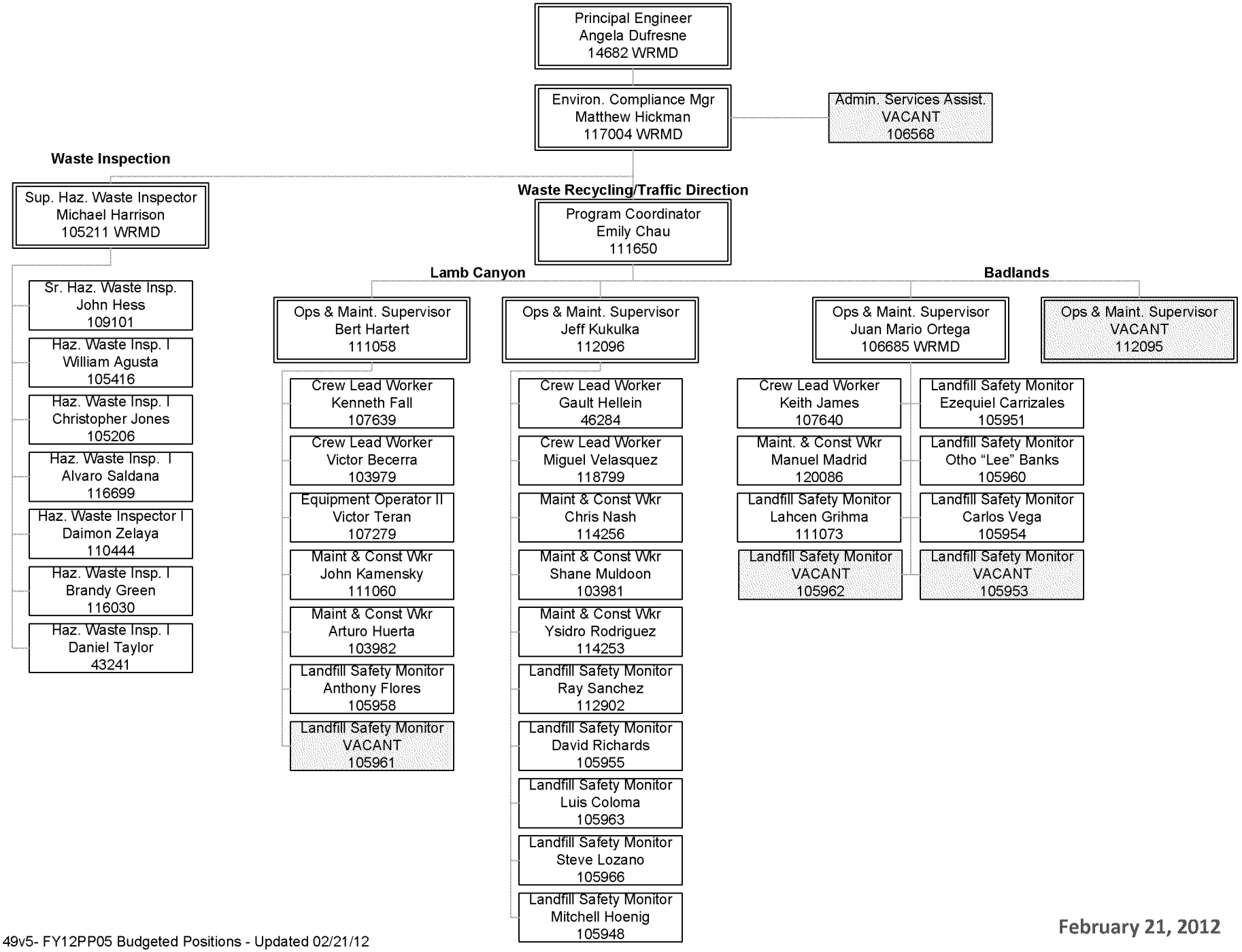
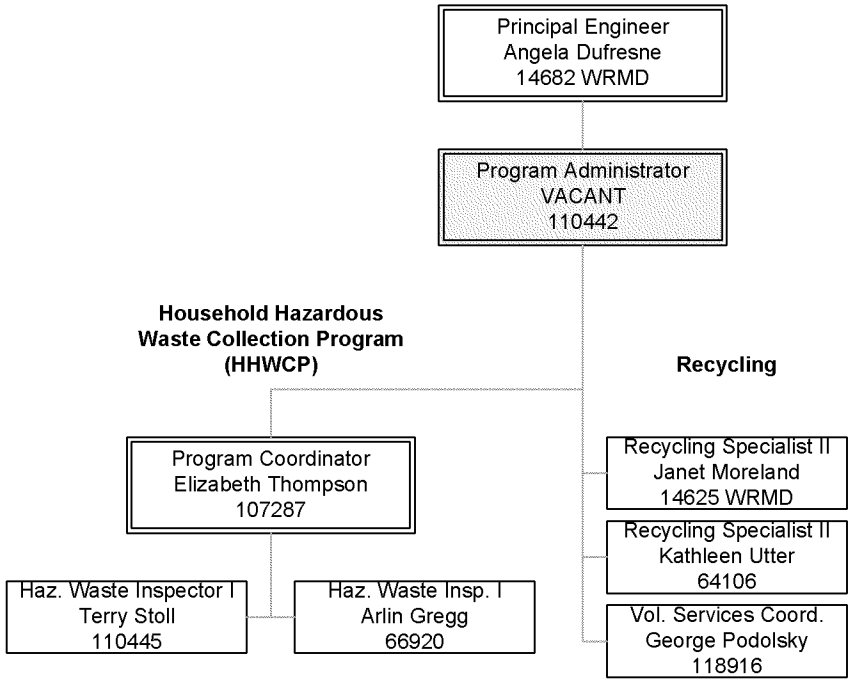


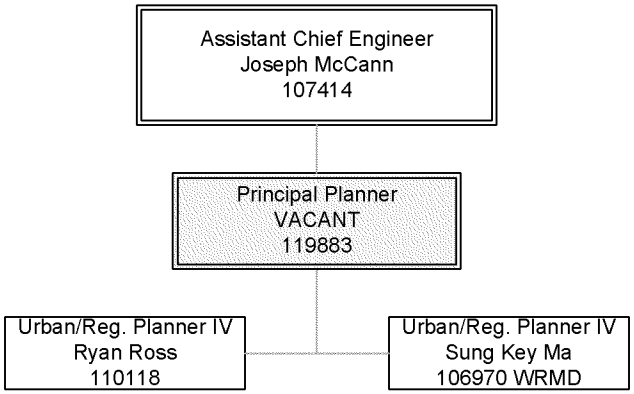
ENVIRONMENTAL
WASTE INSPECTION
WASTE RECYCLING/TRAFFIC DIRECTION
Pay Period 5/12



HHWCP/RECYCLING
Pay Period 5/12



PLANNING
Pay Period 5/12



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APPENDICES

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APPENDIX A

Description of Solid Waste Facilities Owned and Operated or Leased by the County

The following is a brief description of the solid waste facilities owned and operated or leased by the County (see Attachment 1):

1. The six (6) active County landfills:
    - Badlands Sanitary Landfill
    - Lamb Canyon Landfill
    - Blythe Sanitary Landfill
    - Oasis Sanitary Landfill
    - Mecca II Sanitary Landfill
    - Desert Center Sanitary Landfill
2. 32 Inactive/Closed Landfills and Disposal Sites
3. Transfer Station/MRFs Under Lease –Owned by the County
    - Robert A. Nelson Transfer Station
    - Edom Hill Transfer Station
    - Coachella Valley Transfer Station
    - Idyllwild Transfer Station (Lease) and Pinyon Flats Transfer Station (Operating Agreement)
    - Anza Transfer Station

Six Active County Landfills

Badlands Sanitary Landfill ("Badlands")

31125 Ironwood Avenue, Moreno Valley, CA
6 miles East of the City of Moreno Valley; Latitude: 33.95349, Longitude: -117.11758
SWIS: #33-AA-0006

Badlands is an active, Class III landfill that accepts mixed municipal waste, green materials, industrial waste, construction/demolition waste, agricultural waste, ash, inert materials, metals, tires, wood waste and dead animals. Badlands does not accept hazardous waste. The landfill is open six days per week. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Badlands began operations in 1966.

Badlands accepts solid waste from commercial and private haulers. During fiscal year (FY) 10/11, Badlands received 525,123 tons of solid waste (Exhibit 6A) with a daily average of approximately 1,711 tons. The site is equipped with a gate and scalehouse. Also located on the site are office space and a recyclable material and white goods collection area.

Badlands is located in an unincorporated area of Riverside County, adjacent to the City of Moreno Valley, and is bordered by rural, residential and non-irrigated open space.

APPENDIX A

The County operates a recycling program at Badlands. The County is an approved electronic waste collector and a Certified Appliance Recycler.

A. **Permitted Hours of Operation:** Open to the public: 6:00 AM to 4:30 PM, Monday through Saturday, 307 days per year, except the landfill is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 1,168.32 acres (Includes Right-of-Way)
C. **Design Capacity:** 33,561,000 Cubic Yards
D. **Permitted Maximum Elevation:** 2,460 feet
E. **Maximum Permitted Depth:** 275 feet
F. **Permitted Acres:** Total - 278 acres; Disposal – 150 acres
G. **Estimated Permitted Closure Date:** 2024
H. **Permitted Tons:** 4,000 tons per day
I. **Permitted Vehicles per Day:** 612
J. **Estimated Cubic Yards in Place:** 16,935,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 16,626,000 cubic yards
L. **Estimated Capacity in Tons (6/30/2011):** 17,619,521 tons [1]
M. **Estimated Tons in Place (6/30/2011):** 8,891,227 tons (50.46%)[1]
N. **Estimated Tons Remaining:** 8,728,294 tons

Lamb Canyon Sanitary Landfill ("Lamb Canyon")

16411 Lamb Canyon Rd, Beaumont, CA 92223
7 miles South of Beaumont; Latitude: 33.88389, Longitude: -116.99722
SWIS: #33-AA-0007

Lamb Canyon is an active, Class III landfill that accepts mixed municipal waste, green materials, industrial waste, construction/demolition waste, agricultural waste, inert materials, metals, tires and dead animals. Lamb Canyon does not accept hazardous waste. The landfill is open six days per week. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Lamb Canyon began operations in 1970. The landfill is bordered by rural, residential and non-irrigated open space.

Lamb Canyon accepts solid waste from commercial and private haulers. During FY 10/11, Lamb Canyon received 528,972 tons of solid waste with a daily average of approximately 1,723 tons. The site is equipped with a gate and scalehouse. Also located on the site are office space, recyclable material area and white goods bin.

The County operates recycling programs at Lamb Canyon. The County is an approved electronic waste collector and a Certified Appliance Recycler.

[1] Exhibit 3 - 2011 Engineering and Environmental Financial Assurance Estimates

A. **Permitted Hours of Operation:** Open to the public: 6:00 AM to 4:30 PM, Monday through Saturday, 307 days per year, except the landfill is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 1,189.07 acres
C. **Design Capacity:** 33,041,000 cubic yards
D. **Permitted Maximum Elevation:** 2,410 feet
E. **Maximum Permitted Depth:** 300 feet
F. **Permitted Acres:** Total – 580.5 acres; Disposal - 144.6 acres
G. **Estimated Permitted Closure Date:** 2021
H. **Permitted Tons:** 5,000 tons per day
I. **Permitted Vehicles per Day:** 913
J. **Estimated Cubic Yards in Place:** 15,351,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 17,690,000 cubic yards
L. **Capacity in Tons (6/30/2011):** 15,646,000 tons [2]
M. **Estimated Tonnage in Place (6/30/2011):** 7,268,209 tons (46.45%) [2]
N. **Estimated Tons Remaining:** 8,87,791 tons

Blythe Sanitary Landfill ("Blythe")

1000 Midland Road, Blythe, CA 92225
6 miles North of Blythe; Latitude: 33.70478 Longitude: -114.62673
SWIS #: 33-AA-0017

Blythe is an active, Class III landfill that accepts mixed municipal waste, green materials, industrial waste, construction/demolition waste, agricultural waste, inert materials, liquid waste, metals, tires and dead animals. Blythe does not accept hazardous waste. The landfill is open five days per week and the first Saturday of each month. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Blythe began operations in 1958.

Blythe accepts solid waste from commercial and private haulers. During FY 10/11, Blythe received 15,951 tons of solid waste with a daily average of approximately 59 tons. The site is equipped with a gate and scalehouse. Also located on the site are office space, recyclable material area and white goods bin.

The County operates recycling programs at Blythe. The County is an approved electronic waste collector and a Certified Appliance Recycler.

A. **Permitted Hours of Operation:** Open to the public: 8:00 AM to 4:00 PM, Monday through Friday and the first Saturday of each month, 272 days per year, except the Site is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 334.8 acres (Includes Right-of-Way)
C. **Design Capacity:** 6,034,148 cubic yards
D. **Permitted Maximum Elevation:** 525 feet

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[2] Ibid

E. **Maximum Permitted Depth:** 420 feet
F. **Permitted Acres:** Total – 335 acres; Disposal – 78.1 acres
G. **Estimated Permitted Closure Date:** 2047
H. **Permitted Tons**: 400 tons per day
I. **Permitted Vehicles per Day:** 140
J. **Estimated Cubic Yards in Place:** 2,018,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 4,016,000 cubic yards
L. **Capacity in Tons (6/30/2011):** 1,942,858 tons [3]
M. **Estimated Tons in Place (6/30/2011):** 649,717 tons (33.4%) [3]
N. **Estimated Remaining Tons:** 1,293,141 tons

Oasis Sanitary Landfill ("Oasis")

84-505 84th Avenue, Oasis, CA 92274
5 miles South of Oasis; Latitude: 33.43923, Longitude: -116.0818
SWIS #: 33-AA-0015

Oasis is an active, Class III landfill that accepts mixed municipal waste, green materials, construction/demolition waste, agricultural waste, inert materials, metals and wood waste. Oasis does not accept hazardous waste. The landfill is open two days per week. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Oasis began operations in 1972. The landfill is bordered by rural, residential and non-irrigated open space and desert.

Oasis accepts solid waste from commercial and private haulers. During FY 10/11, Oasis received 1,307 tons of solid waste with a daily average of approximately 13 tons. The site is equipped with a gate. Also located on the site are office space, recyclable material area and white goods bin.

Oasis is located in an unincorporated area of Riverside County, adjacent to the City of Oasis.

The County operates a recycling program at Oasis.

A. **Permitted Hours of Operation:** Open to the public: 8:00 AM to 4:30 PM, Every Wednesday and Saturday, 104 days per year, except the Site is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 156.18 acres
C. **Design Capacity:** 1,484,466 cubic yards
D. **Permitted Maximum Elevation:** -60 feet
E. **Maximum Permitted Depth:** -105 feet
F. **Permitted Acres:** Total – 166.6 acres; Disposal – 23.3 acres
G. **Estimated Permitted Closure Date:** 2021
H. **Permitted Tons:** 400 tons per day, plus 50 tons per day of beneficial use/green waste
I. **Permitted Vehicles per Day:** 400

[3] Ibid

J. **Estimated Cubic Yards in Place:** 1,072,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 412,000 cubic yards
L. **Capacity in Tons (6/30/2011):** 247,411 tons [4]
M. **Estimated Tons in Place (6/30/2011):** 178,785 tons (72.3%) [4]
N. **Estimated Remaining Tons:** 68,626 tons

Mecca II Sanitary Landfill ("Mecca II")

95250 66th Avenue, Mecca, CA 92254
4 miles East of Mecca; Latitude: 33.57194, Longitude: -116.00306
SWIS #: 33-AA-0071

Mecca II is an active, Class III landfill that accepts mixed municipal waste, green materials, construction/demolition waste, agricultural waste, inert materials, metals and wood waste. Mecca II does not accept hazardous waste. The landfill is open two days per year. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Mecca II began operations in 1982. The landfill is bordered by agriculture, irrigated and non-irrigated open space and desert.

Mecca II accepts solid waste from commercial and private haulers. During FY 10/11, Mecca II received 2 tons of solid waste with a daily average of approximately 1 ton. The site is equipped with a gate. Also located on the site are office space, recyclable material and white goods area.

A. **Permitted Hours of Operation:** Open to the public: 8:00 AM to 4:30 PM, The second Saturday in April and October, 2 days per year, except the Site is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 80.13 acres (Includes Right-of-Way)
C. **Design Capacity:** 372,480 cubic yards
D. **Permitted Maximum Elevation:** 70 feet
E. **Maximum Permitted Depth:** -25 feet
F. **Permitted Acres:** Total - 80 acres; Disposal – 19 acres
G. **Estimated Permitted Closure Date:** 2005
H. **Permitted Tons:** 400 tons per day
I. **Permitted Vehicles per Day:** 613
J. **Estimated Cubic Yards in Place:** 370,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 2,000 cubic yards
L. **Capacity in Tons (6/30/2011):** 229,427 tons [5]
M. **Estimated Tons in Place (6/30/2011):** 228,096 tons (99.4%) [5]
N. **Estimated Remaining Tons**: 1,331 tons

Desert Center Sanitary Landfill ("Desert Center")

17991 Kaiser Road, Desert Center, CA

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[4] Ibid
[5] Ibid

APPENDIX A

54 miles East of Coachella, 52 miles West of Blythe, North of Interstate 10
Latitude: 33.77754, Longitude: -115.40867
SWIS #: 33-AA-0016

Desert Center is an active, Class III landfill that accepts mixed municipal waste, green materials, construction/demolition waste, agricultural waste, inert materials, metals and wood waste. Desert Center does not accept hazardous waste. The landfill is open two days per year. Customers are subject to a random inspection of their load under the County's Load Check Program. The landfill also accepts appliances and e-waste. Desert Center began operations in 1972.

Desert Center accepts solid waste from commercial and private haulers. During FY 10/11, Desert Center received 37 tons of solid waste with a daily average of approximately 18 tons. The site is equipped with a gate. Also located on the site are office space, recyclable material and white goods area.

A. **Permitted Hours of Operation:** Open to the public: 8:00 AM to 4:30 PM, The first Thursday in February and August, 2 days per year, except the Site is closed New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
B. **Acreage:** 161.77 acres
C. **Design Capacity:** 117,032 cubic yards
D. **Permitted Maximum Elevation:** 740 feet
E. **Maximum Permitted Depth:** 689 feet
F. **Permitted Acres:** Total - 162 acres; Disposal – 7 acres
G. **Estimated Permitted Closure Date:** 2011
H. **Permitted Tons:** 60 tons per day
I. **Permitted Vehicles per Day:** 110
J. **Estimated Cubic Yards in Place:** 81,000 cubic yards
K. **Estimated Remaining Capacity (Cubic Yards):** 36,000 cubic yards
L. **Capacity in Tons (6/30/2011):** 58,516 tons [6]
M. **Estimated Tons in Place (6/30/2011):** 40,494 tons (69.2%) [6]
N. **Estimated Remaining Tons:** 18,022 tons

Closed Landfills and Disposal Sites

The County is responsible for 32 inactive/closed landfills and disposal sites. Information for these facilities is provided in Attachment 1.

[6] Ibid

APPENDIX B

Transfer Stations/MRFs under Lease – Owned by the County

Robert A. Nelson Transfer Station/MRF

1830 Agua Mansa Rd., Riverside, CA 92509
3 miles North East of Rubidoux and 2 miles north of the State Route 60
Latitude: 34.02106, Longitude: -117.3853
SWIS #: 33-AA-0258
Operator – Agua Mansa MRF, LLC, a Burrtec company

The Robert A. Nelson Transfer Station/MRF (RAN) is also known as the Agua Mansa Transfer Station/MRF. The property is owned by County and leased to Agua Mansa MRF, LLC ("Agua Mansa MRF") for the development and operation of the transfer station/MRF. Agua Mansa MRF pays the County one dollar ($1.00) per year for the lease. The improvements transfer to the County on the termination of the lease for one dollar ($1.00). Agua Mansa MRF has the first right of refusal in the event the County chooses to sell the lease (land and improvements).

RAN also has a Waste Delivery Agreement (WDA) with the County for the disposal of waste. Waste from the facility is to be delivered to a designated County landfill. The designated landfills are the Badlands Landfill and the El Sobrante Landfill. The facility's residue shall be delivered to the landfill sites as directed by the County. The County may direct a maximum of 50% of the waste stream to the El Sobrante Landfill, providing however for short periods of time to meet the landfills operating needs. The waste may be directed entirely to the Badlands or El Sobrante Landfills. Agua Mansa MRF may terminate the WDA, if the County relinquishes ownership of a landfill used by the facility. If the lease property is sold by the County, then, under the terms of the lease, the lessee has first right of refusal to purchase the transfer station.

Lease Term: Expires March 10, 2029

Activity: Large volume transfer/processing facility

Maximum Permitted Throughput: 4,000 tons per day

Permitted Capacity: 4,000 tons per day

Total Acreage: 22.03 acres

Edom Hill Transfer Station

70-100 Edom Hill Road, Cathedral City, CA 92234

8 miles North of Cathedral City and 2 miles North of Interstate 10;
Latitude 33.88534, Longitude -116.44027
SWIS #: 33-AA-0296
Operator: Burrtec Recovery and Transfer, LLC (BRT)

The Edom Hill Transfer Station (Edom Hill) is adjacent to the closed Edom Hill Landfill. The property is owned by County and leased to BRT for the development and operation of the transfer station/MRF. BRT pays the County one dollar ($1.00) per year for the lease. The improvements transfer to the County on the termination of the lease for one dollar ($1.00).

BRT also has a WDA with the County for the disposal of waste. Waste from the facility is to be delivered to a designated County landfill. The designated landfills are the Badlands, Lamb Canyon and El Sobrante

Landfills. BRT may terminate the WDA, if the County relinquishes ownership of a landfill used by the facility. If the lease property is sold by the County, the lessee (BRT) does *not* have first right of refusal to purchase the transfer station.

Lease Term: Expiring thirty (30) years from commencement (November 2032)

Activity: Large volume transfer/processing facility, composting facility (green waste)

Maximum Permitted Throughput: 3,500 tons per day

Permitted Capacity: 3,500 tons per day

Total Acreage: 21.9 acres

Coachella Valley Transfer Station

87011-A Landfill Road, Coachella, CA 92236
3 miles North of Interstate 10 and 6 miles north of the city of Coachella;
Latitude 33.7279, Longitude -116.14362
SWIS #33-AA-0248
Lessee: Coachella/Indio Waste Transfer Station Authority ("Authority")
Operator: Burrtec Waste Industries, Inc.

The Coachella Valley Transfer Station is adjacent to the closed Coachella Landfill. The property is owned by County and leased to the Authority for the development and operation of the transfer station/MRF. The Authority pays the County one dollar ($1.00) per year for the lease. The improvements transfer to the County on the termination of the lease for one dollar ($1.00). The Authority has the first right of refusal in the event the County chooses to sell the lease (land and improvements). The Authority has an option to purchase the premises from the County or renew the lease for a second 25-year term. The Authority subleases the facility to BWI to develop and operate the transfer station for a term of twenty (20) years, expiring June 30, 2021, unless extended by mutual agreement of BWI and the Authority. At the termination of the sublease, the land and equipment will be transferred to the Authority for a payment of one dollar ($1.00).

The Authority also has a WDA with the County for the disposal of waste. Waste from the facility is to be delivered to a designated County landfill. The designated landfills are the Badlands and Lamb Canyon Landfills. The Authority may terminate the WDA, if the County relinquishes ownership of a landfill used by the facility. If the lease property is sold by the County, then, under the terms of the lease, the Authority has first right of refusal to purchase the transfer station.

Lease Term: Expiring twenty-five (25) years from commencement (June 2026)

WDA Term: Twenty (20) years from date document is executed by the Board of Supervisors (June 2021)

Activity: Large volume transfer/processing facility

Maximum Permitted Throughput: 1,100 tons per day

Permitted Capacity: 12,685 Cubic yards per day

Total Acreage: 14.5 acres

APPENDIX B

Idyllwild Collection Station & Pinyon Flats Transfer Station

Idyllwild Collection Station:

28100 Saunders Meadow Road, Idyllwild, CA 92549
Latitude: 33.72532, Longitude: -116.71823
SWIS #33-AA-0221
Lessee/Operator: Waste Management ("WM")

Lease/Operating Agreement Term: Concurrent with the County's Franchise Agreement for Franchise Area #8, including extensions

Activity: Medium volume transfer/processing facility

Maximum Permitted Throughput: 99.9 tons per day

Permitted Capacity: 26,074 tons per year

Total Acreage: 5.2 acres

Pinyon Flats Transfer Station:

¼ mile South Highway 74, Pinyon Pines, CA 92561
Latitude: 33.57923, Longitude -116.45048

SWIS #33-AA-0018
Operator: WM

Terms of Operating Agreement: Concurrent with the County's Franchise Agreement for Franchise Area #8, including extensions

Activity: Limited volume transfer operation

Maximum Permitted Throughput: 14.4 tons per day

Permitted Capacity: <1,000 tons per year

Total Acreage: 2.72 acres

The County entered into a master lease for the Idyllwild Transfer Station and an operations agreement for the Pinyon Flats Transfer Station with WM. WM pays the County $1,500 per year for the lease/operations agreement. The Exclusive Waste Delivery Agreement for Franchise Area 8 with WM covers the Idyllwild Collection Station, the Pinyon Flats Transfer Station and the Anza Collection Station and is also concurrent with the Franchise Agreement for Franchise Area #8. Any new improvements transfer to the County on termination of the lease/operations agreement for one dollar ($1.00).

Anza Collection Station

40329 Terwilliger Road, Anza, CA 92306
24 miles south of Idyllwild, adjacent to the closed Anza Landfill
Latitude: 33.53691, Longitude: -116.62676
SWIS #33-AA-0287
Lessee/Operator: WM

The Anza Collection Center (Anza) is adjacent to the closed Anza Landfill. The property is owned by County and leased to WM for the development and operation of the transfer station. WM pays the County $1,500 per year for the lease. Any new improvements transfer to the County on the termination of the lease for one dollar ($1.00).

Lease Term: Seven (7)
Activity: Medium Volume Transfer/Processing Facility
Maximum Permitted Throughput: 99.9 tons per day
Permitted Capacity: 25,474.5 tons per year
Total Acreage: 10.2 acres

Transfer Stations/MRFs – Not Owned by the County

Moreno Valley Solid Waste R & T Facility

17700 Indian Street, Moreno Valley, CA 92551
Latitude: 33.86278, Longitude: -117.23454
SWIS #33-AA-0234
Lessee/Operator: WM

The Moreno Valley Transfer Station (MVTS) is located on the south side on the City of Moreno Valley, just east of I-215. The property is owned and operated by WM. WM has a WDA with the County for the disposal of waste. Waste from the facility is to be delivered to a system landfill. The designated landfills are the El Sobrante, Badlands and Lamb Canyon Landfills. The WDA may be terminated at the option of the operator if the County relinquishes ownership in a landfill used by the transfer station.

Per Section 11 of the Second Amendment to the Second El Sobrante Landfill Agreement WM is required to deliver no less than 9,000 tons per calendar month from the MVTS to a landfill owned or operated by the County. The monthly minimum requirement of 9,000 tons is increased by two and one-half percent (2 ½%) each year.

WDA Term: 20 years from date document is executed by the Board of Supervisors (8/29/2020)
Activity: Large volume transfer/processing facility
Maximum Permitted Throughput: 2,000 tons per day
Permitted Capacity: 2,600 tons per day
Total Acreage: 19.9 acres

Perris Transfer Station and MRF

1706 Goetz Road, Perris, CA 92570
Latitude: 33.77019, Longitude: -117.2294
SWIS #33-AA-0239
Lessee/Operator: CR&R Incorporated (CR&R)

The Perris Transfer Station (PTS) is located on the south side on the City of Perris, just west of I-215. The property is owned and operated by CR&R. CR&R has a WDA with the County for the disposal of waste. Waste from the facility is to be delivered to a system landfill. The designated landfills are the El Sobrante, Badlands and Lamb Canyon Landfills. The WDA may be terminated at the option of the operator if the County relinquishes ownership in a landfill used by the transfer station.

WDA Term: 20 years from date document is executed by the Board of Supervisors (8/20/2016)
Activity: Large volume transfer/processing facility

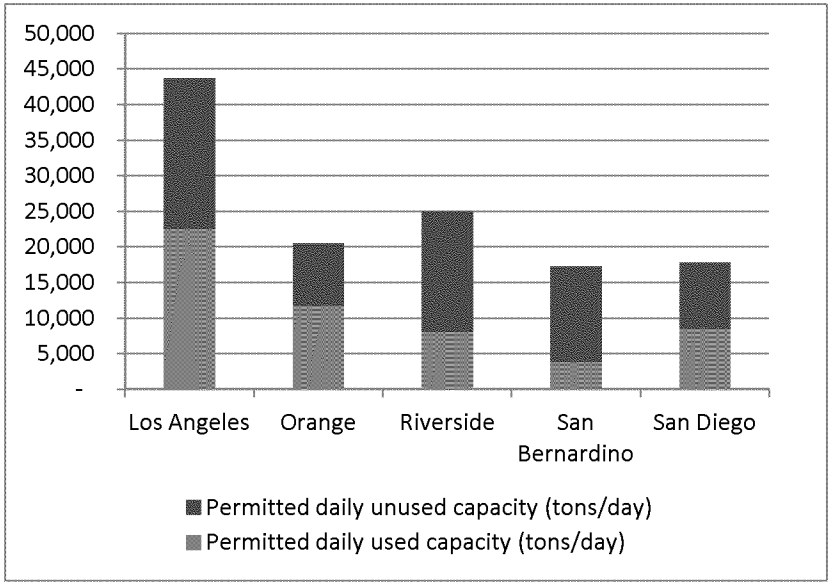
APPENDIX B

Maximum Permitted Throughput: 3,000 tons per day

Permitted Capacity: 3,287 tons per day

Total Acreage: 52.2 acres

Regional Capacity and Use (2009 data, actual)(1)



County	Permitted daily used capacity (tons/day)	Permitted daily unused capacity (tons/day)	Daily permitted capacity (tons/day)
Los Angeles	22,536	21,154	43,690
Orange	11,757	8,743	20,500
Riverside	8,065	16,989	25,054
San Bernardino	3,797	13,503	17,300
San Diego	8,475	9,320	17,795
Total Region	**54,631**	**69,708**	**124,339**

(1) The active landfill population excluded the following facilities:

a) Small facilities with 50 tons per day or less in permitted capacity:

- Pebbly Beach (Avalon) Disposal Site (Los Angeles County)
- Mitsubishi Cement Plant Cushenbury L.F. (San Bernardino)
- Borrego Landfill (San Diego County)
- San Clemente Island Landfill (Los Angeles)

b) Facilities used exclusively by the local military bases:

- USMC - 29 Palms Disposal Facility (San Bernardino)
- Fort Irwin Sanitary Landfill (San Bernardino)
- Las Pulgas Landfill (San Diego County)
- San Onofre Landfill (San Diego County)

c) Remote facilities that only service the areas of immediate surroundings:

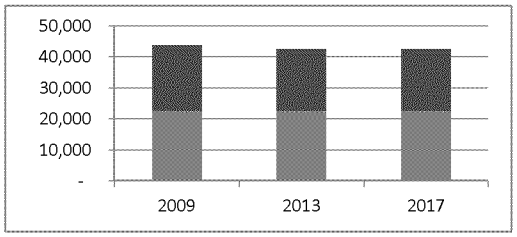
- Blythe Sanitary Landfill (Riverside)
- Desert Center Landfill (Riverside)
- Mecca Landfill II (Riverside)
- Oasis Sanitary Landfill (Riverside)

d) Facility for which the permitted daily capacity was not available through CalRecycle:

- California Street Landfill (San Bernardino)

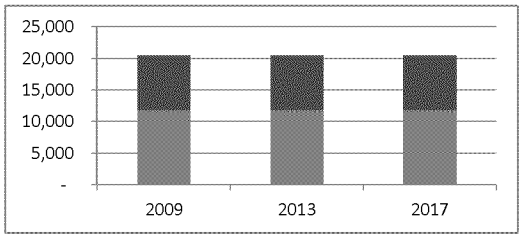
Assumption: Landfilled tonnage remains at the 2009 levels through 2017.

Los Angeles County



	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day) (1)
2009	22,536	21,154	43,690
2013	22,536	19,954	42,490
2017	22,536	19,954	42,490

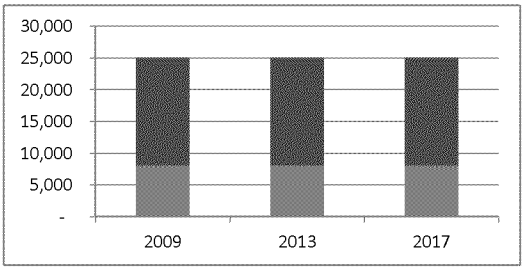
Orange County



	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day)
2009	11,757	8,743	20,500
2013	11,757	8,743	20,500
2017	11,757	8,743	20,500

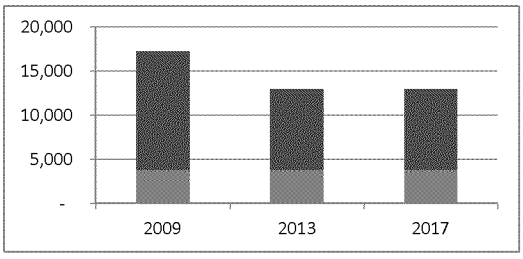
(1) Assumes the following landfill closures:
Puente Hills Landfill (2013)
Assumes Mesquite Regional Landfill becomes available in 2013 at 12,000 TPD of permitted capacity.

Riverside County



	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day)
2009	8,065	16,989	25,054
2013	8,065	16,989	25,054
2017	8,065	16,989	25,054

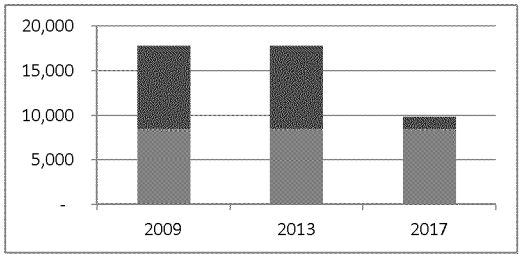
San Bernardino County



	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day)
2009	3,797	13,503	17,300
2013	3,797	9,203	13,000
2017	3,797	9,203	13,000

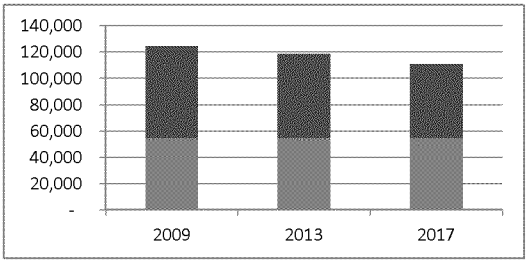
(2) Assumes the following landfill closures:
Landers Sanitary Landfill (2013)
Colton Sanitary Landfill (2013)

San Diego County



	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day)
2009	8,475	9,320	17,795
2013	8,475	9,320	17,795
2017	8,475	1,320	9,795

Regional Summary



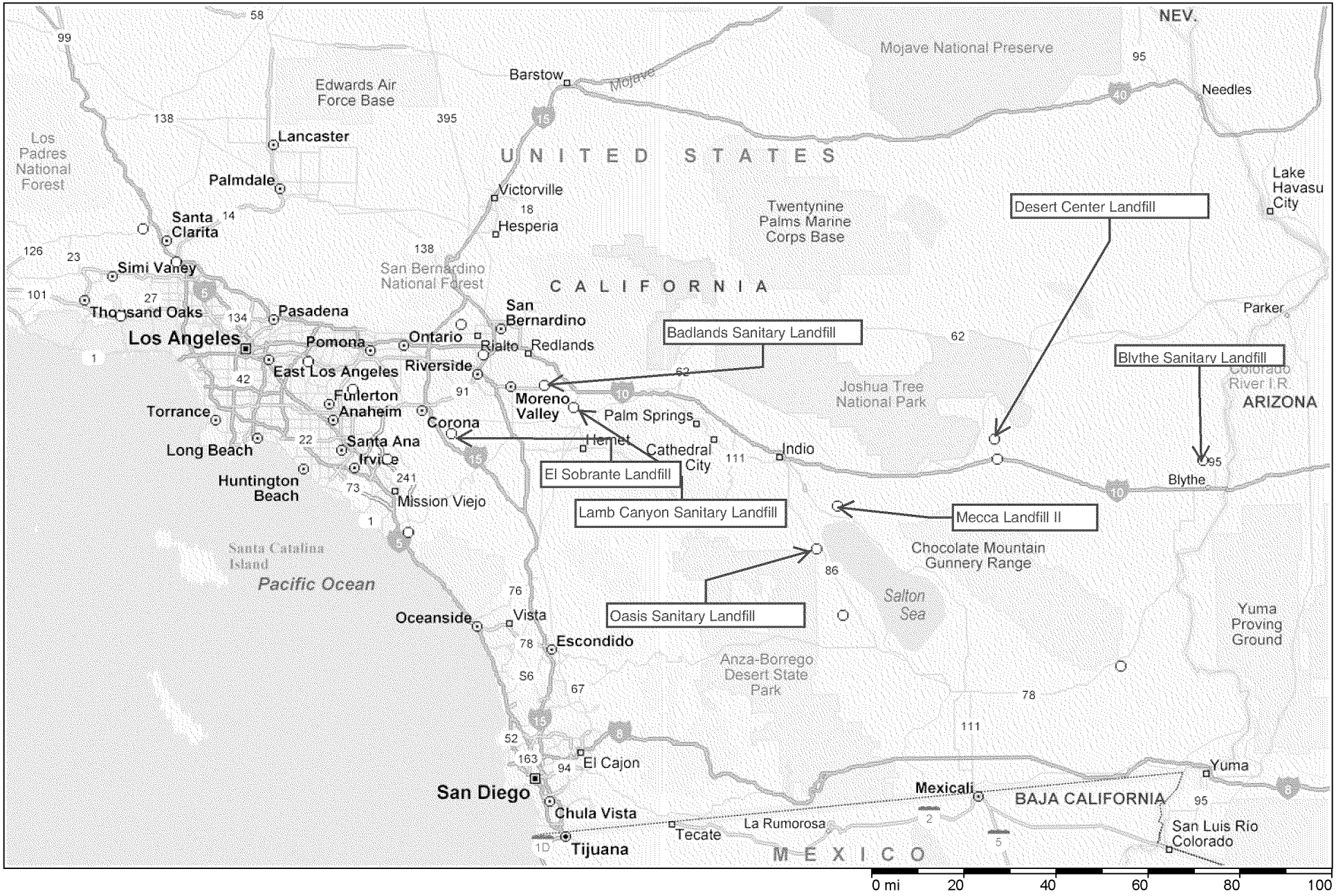
	Daily used capacity (tons/day)	Permitted daily available capacity (tons/day)	Permitted daily capacity (tons/day)
2009	54,631	69,708	124,339
2013	54,631	64,208	118,839
2017	54,631	56,208	110,839

(3) Assumes the following landfill closures:
West Miramar Sanitary Landfill (2017)

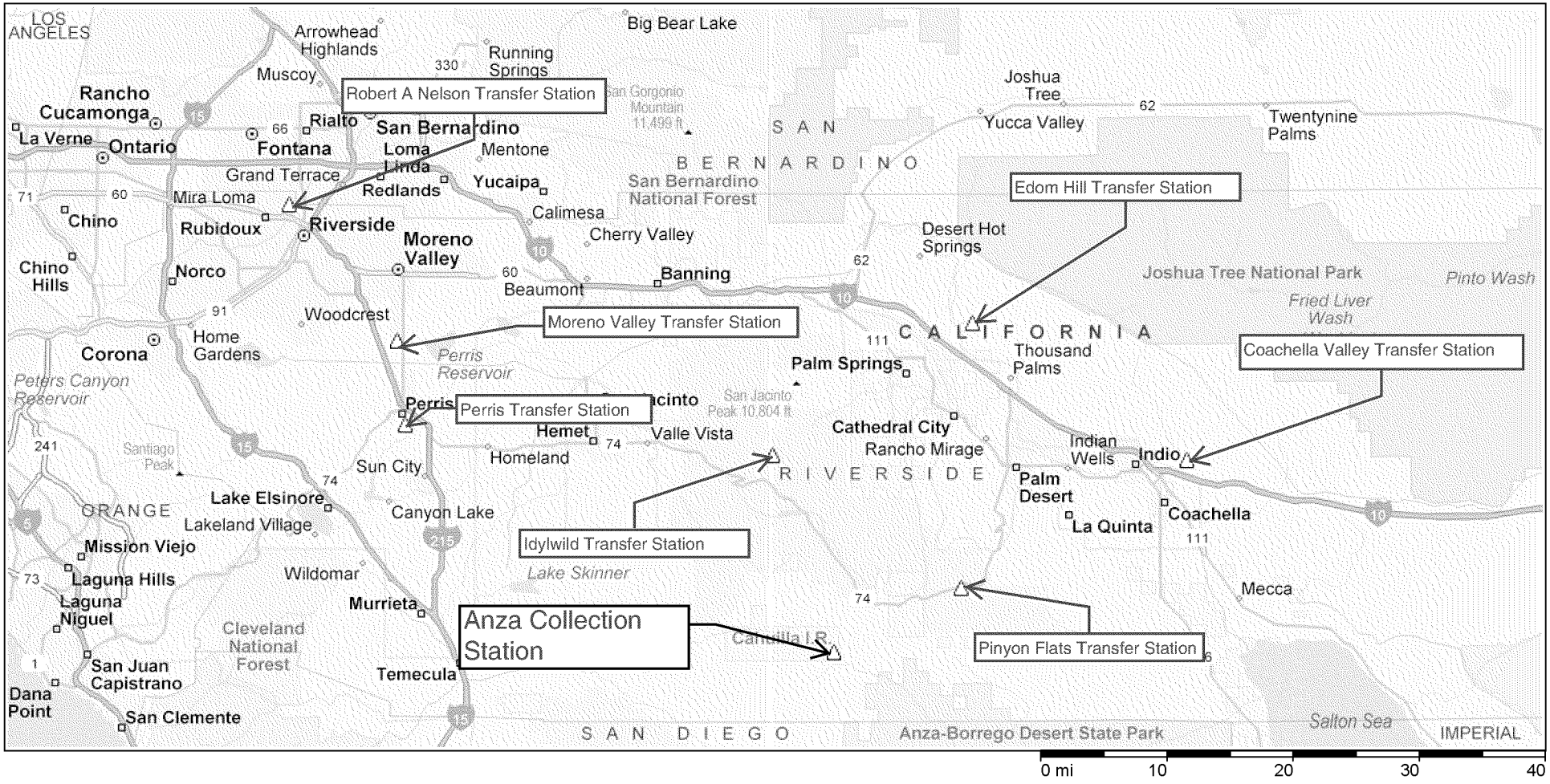
Legend:
Daily available capacity (tons/day)
Daily used capacity (tons/day)

Assumptions:
Disposal tonnage remains at 2009 levels through 2017.

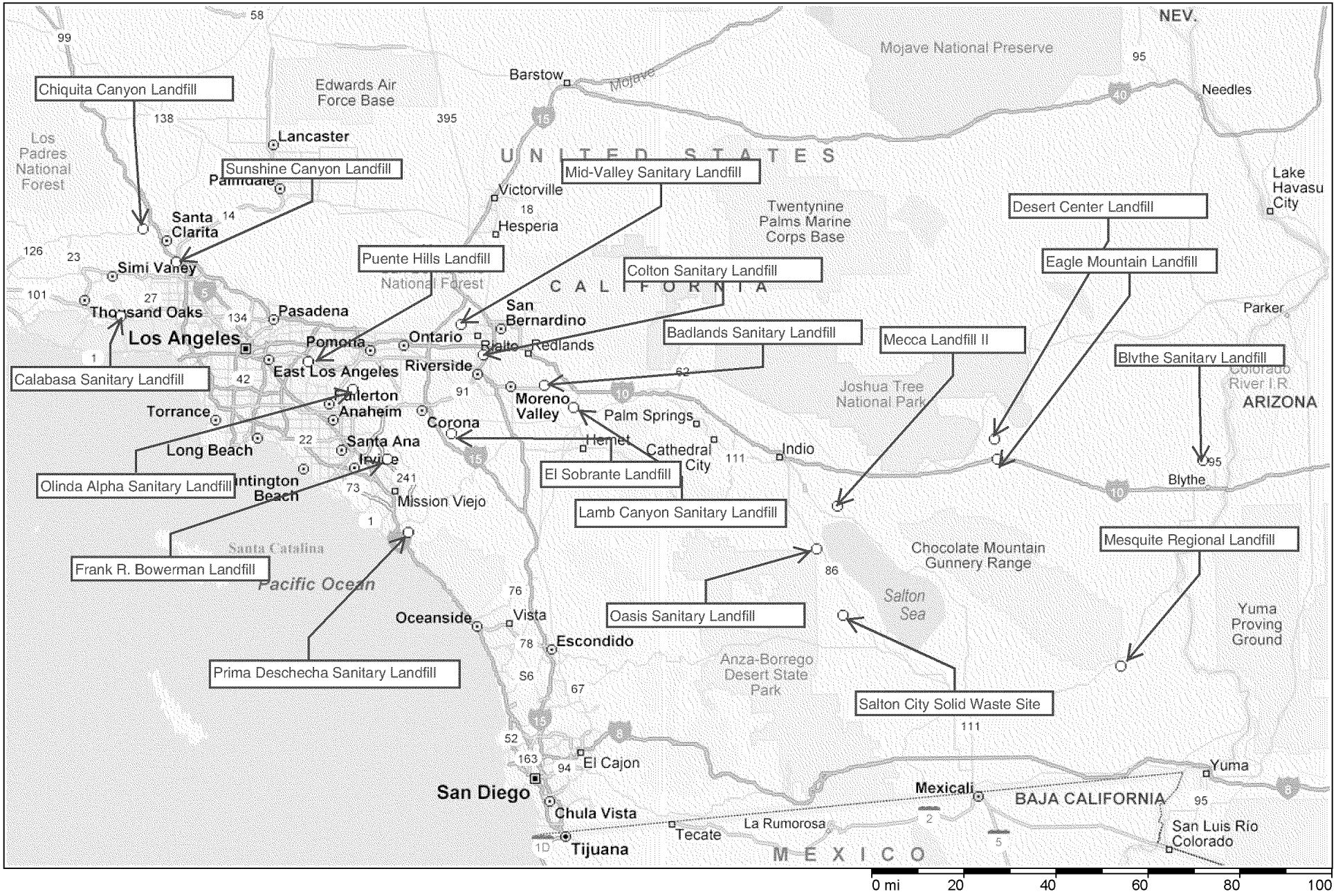
RIVERSIDE COUNTY ACTIVE LANDFILLS



Riverside County Transfer Stations



SOUTHERN CALIFORNIA LANDFILLS



APPENDIX G

BAS REPORTS

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Riverside County
Waste Management Department

SOLID WASTE SYSTEM STUDY

Badlands Sanitary Landfill

197-2011-0059

Prepared for:

Riverside County
Waste Management Department
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SOLID WASTE SYSTEM STUDY
BADLANDS SANITARY LANDFILL

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Separation Page

Riverside County Landfills

CORE Assessment

FINAL REPORT

March 26, 2012

Prepared for:

Riverside County
Waste Management Department
14310 Frederic Street
Moreno Valley, CA 92553

Prepared by:

Blue Ridge Services, Inc.
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1 INTRODUCTION

As a result of the current economic recession, the waste tonnage received at Riverside County's landfills has decreased an average of **26%** from its high in 2005.

In October, 2011, we, Blue Ridge Services, began an operations review of three landfills in Riverside County: Blythe, Badlands and Lamb Canyon. In soliciting for this work, the County's stated goal was to: *"…reduce costs, maximize landfill life, and improve the overall efficiency of the landfill system. "*

Our understanding of landfill operations comes from 3 ½ decades of work in the heavy construction and landfill industry – and experience of working on hundreds of landfill projects across the Country and abroad. In California alone, we've provided operational consulting at landfills in at least 34 counties. We have performed detailed operational studies at more than 50 landfills in the past 5 years alone.

We've been hired as landfill operational efficiency experts by scores of municipal and private landfill owners/operators. Our list of private clients includes: Waste Management, Republic Services, Waste Connections and, Recology (formerly Norcal Waste Systems) …as well as many smaller companies.

And based on that history, we've found that all landfills have room for improvement – every single one. And so our approach when evaluating these operations was to look for opportunities to cut costs and improve efficiency.

During the evaluation, we closely examined key aspects of the operation. Most of the focus was on the waste handling operation – as that is where the bulk of the resources and money are spent at the landfills. It should be noted that the focus of the assessment was to look for inefficiencies, and some were found. The following report identifies areas or specific activities where improvements can be made. And in doing so, it addresses a wide range of operational issues – many of which are inter-related. Thus, in order to properly understand individual findings, it is necessary for the reader to see how each one fits into the whole. So, we strongly recommend that the entire report be read before taking a position based on a single issue.

Finally, despite the areas within the operation where we identified room for improvement, – *which was in fact what we were looking for* – it should also be noted that there were many more things being done correctly and efficiently. It is with pleasure that we present this report in that context.

2 APPROACH

To perform this work, we gathered information and visited all three facilities. We observed and videoed the operation of each landfill, spoke with various staff, and took hundreds of photographs. We then conducted numerous efficiency analyses, performed computer modeling, presented preliminary findings to County staff and finally, prepared this report to present our findings and recommendations.

Various analyses of this data were then conducted including the following:

1. Developed estimated hourly machine "Owning and Operating" costs
2. Determined equipment utilization for all machines at each landfill
3. Performed various "Process Studies" to measure performance and efficiency
    a. Time-Motion Studies to measure basic productivity of various tasks
    b. Activity Sampling – to determine overall work efficiency
    c. Value Stream Mapping – to identify and communicate core activities and non-value added tasks
4. Compared these operations to other similar landfills in the region
    a. Number of machines
    b. Types of machines
    c. Inbound tonnage
5. Evaluated inbound tonnage to develop basis of daily work load
6. Prepared production analyses for selected activities
    a. Comparison based on empirical performance standards (from prior experience)
    b. Comparison based on ideal – From Caterpillar performance estimate
    c. Comparison to other facilities

As we began work on this project we focused our attention first, on understanding the characteristics – even the personality – of each individual landfill. We've learned that while all landfills are unique, they share many similarities in regard to efficiency …and inefficiency. For example, in our experience, all landfills use too much cover soil …and all landfills have inherent inefficiencies in regard to machine utilization.

This was our expectation coming into this project: That we'd find areas within the operations that could be improved – and we did. But we also found that many of the recommendations we would normally make for improving the operation – were already being implemented.

The range of things we examine during an operational review may shift, depending on how sophisticated a given landfill is. In some instances, we'll work hard to communicate even the most basic concepts of waste compaction or the great value of airspace. However, during this review, we were able to quickly affirm that foundational issues were being handled efficiently …and then focus on a more in-depth level of review. As an example, because the landfill team already recognized the value of optimizing tarp usage, we were able to focus on fine-tuning that part of the operation – rather than spending time convincing the landfill team to consider some form of ADC.

3 EXECUTIVE SUMMARY

All of the landfills present a positive first impression. It is obvious that considerable thought and effort has gone into the designing and planning of the landfills. Badlands and Lamb Canyon both need to have more attention dedicated to the scraper haul roads and routes but otherwise were in good condition. At all landfills, there were examples of excellence.

For example, the deck grading at the Blythe landfill is perhaps as smooth and uniform as any landfill we've seen. This is only partly due to the dry climate, slow decomposition and associated lack of related differential settlement – and more a result of the excellent grading and machine operating capabilities of the manager of that landfill.

Similarly, with the exception of portable fencing at the face, the litter control fence network at Badlands and Lamb Canyon – as well as the performance of the cleanup crew is very good.

Based on our experience and understanding of the industry standard we've determined that the three Riverside County landfills are operating at a high level of efficiency – especially when compared to other similar municipal landfills. These findings are based on a comprehensive review of the following:

- Industry comparison
- Inbound tonnage
- Equipment
- Waste Handling
- Planning
- Staffing
- Safety
- Environmental Controls
- Scale Booth Operations
- Regulatory Compliance

Our findings – described throughout this report – show three landfills that are efficient, compliant and well-run. We found many indications that this trend toward lean efficiency has been happening for some time …and continues today.

So again: while it is true that every landfill has room for improvement, we found that these three landfills were already taking steps to *make* improvement. For example, in our experience we've found – generally – that the use of tarps as a form of ADC makes sense for most landfills – including these landfills. We were encouraged to find that Riverside County's landfill staff was already conducting various studies on the use of tarps prior to this project – and had in fact ordered several new tarps for each landfill prior to our beginning the study.

Additionally we found at these landfills – as we have with other landfills during this recessionary time – that there are too many machines (i.e., scrapers) …or the machine(s) being used are too large (i.e., the D10 at Badlands). But these findings are not a result of poor choices today, but are in fact left over from when inbound tonnage was much higher and more/larger machines were justified. This is affirmed by the fact that the average machine is approximately 10 ½ years old.

The following report presents a detailed discussion of our findings and recommendations.

4 FIRST IMPRESSION

All of the landfills present a positive first impression. The entrance areas were very clean and organized. Customer access roads, drainage facilities, litter control systems and overall site maintenance are typical of other landfills in the industry and appeared to be well within compliance with regulatory and industry standard.

At all landfills, there were examples of excellence.

For example, the deck grading at the Blythe landfill is perhaps as smooth and uniform as any landfill we've seen. This is only partly due to the dry climate, slow decomposition and associated lack of related differential settlement – and more a result of the excellent grading and machine operating capabilities of the manager of that landfill.

Similarly, with the exception of portable fencing at the face, the litter control fence network at Badlands and Lamb Canyon – as well as the performance of the cleanup crew appeared to be very good.

Clearly, there has been much thought and effort put into landfill planning and routine maintenance.

In our experience, even the most efficiently operated landfills will have room for improvement; during our landfill site visits we made the following observations.

The Badlands and Lamb Canyon sites had areas that the surface grading appeared to be rough. In our opinion the practice of un-delineated scraper travel across the deck is the primary cause of this rough grading. We also noticed that some of the scraper haul roads are too steep and have inadequate visibility for safe travel.

Also, there are some areas (i.e., at Blythe) where erosion repair is necessary.

Overall, it is our opinion that the landfills are maintaining a good balance between meeting minimum operational standards and minimizing operating costs. This is affirmed by the LEA inspection reports that generally show consistent improvement

5 INDUSTRY COMPARISON

As part of our review, we compared the existing landfills to other similar landfills we have worked with. We've been hired as landfill operational efficiency experts by scores of municipal and private landfill owners/operators. Our list of private clients includes: Waste Management, Republic Services, Waste Connections and, Recology (formerly Norcal Waste Systems) ...as well as many smaller companies.

Our firm has worked on hundreds of landfill projects and conducted operational studies at facilities ranging in size from 4 to 20,000 tons per day. We've performed detailed operational studies at more than 50 landfills in the past 5 years alone.

We've also worked for a host of municipal clients across the Country and abroad. In California alone, we've provided operational consulting at landfills in at least 34 counties.

The operations of the active Riverside County Landfills were compared to other similar landfills. These comparisons included number of machines, size of machines, and other simple, operational benchmarks. We understand that every landfill is unique, yet there is still much to be learned from this type of comparison. The results of our comparisons are presented later in this report.

6 LEA INSPECTIONS AND REGULATORY COMPLIANCE

As part of our assessment, we reviewed the periodic inspection reports from the Local Enforcement Agency (LEA). We found that since 2007, the number of Notices of Violation (NOV) and Areas of Concern (AOC) related to operational issues are decreasing. At Badlands and Lamb Canyon, landfill gas appears to be an increasing issue, but we consider this to be more of a landfill gas control system – rather than one of day-to-day operations.

So, in terms of operational performance, all of the landfills are performing better than they were 5 years ago. This affirms our findings that the landfill management team is improving performance, despite decreases in waste tonnage – and waste revenue.

In order to provide an understanding of how each landfill is performing, the inspection results of the three facilities are presented separately.

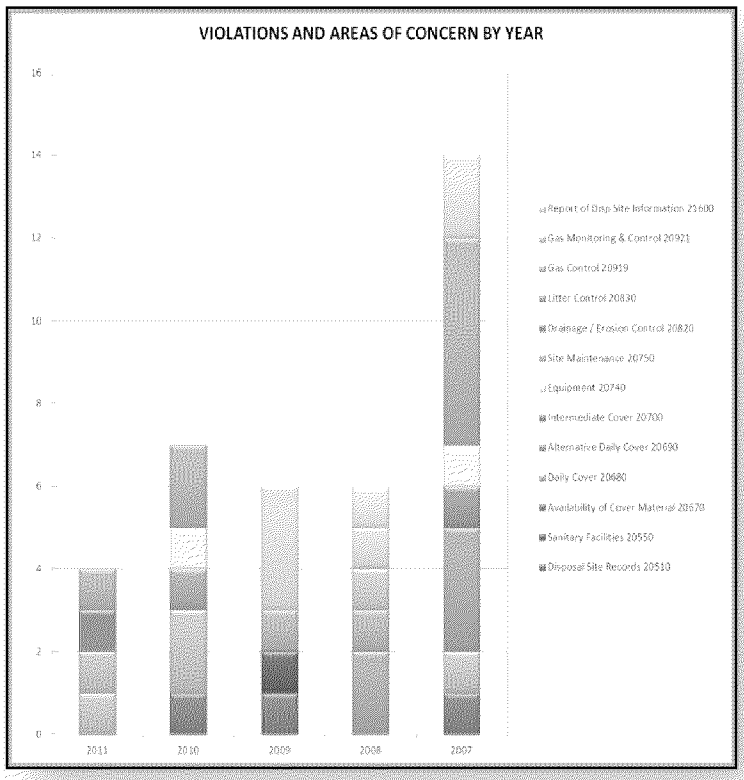
6.1 *BLYTHE INSPECTION HISTORY*

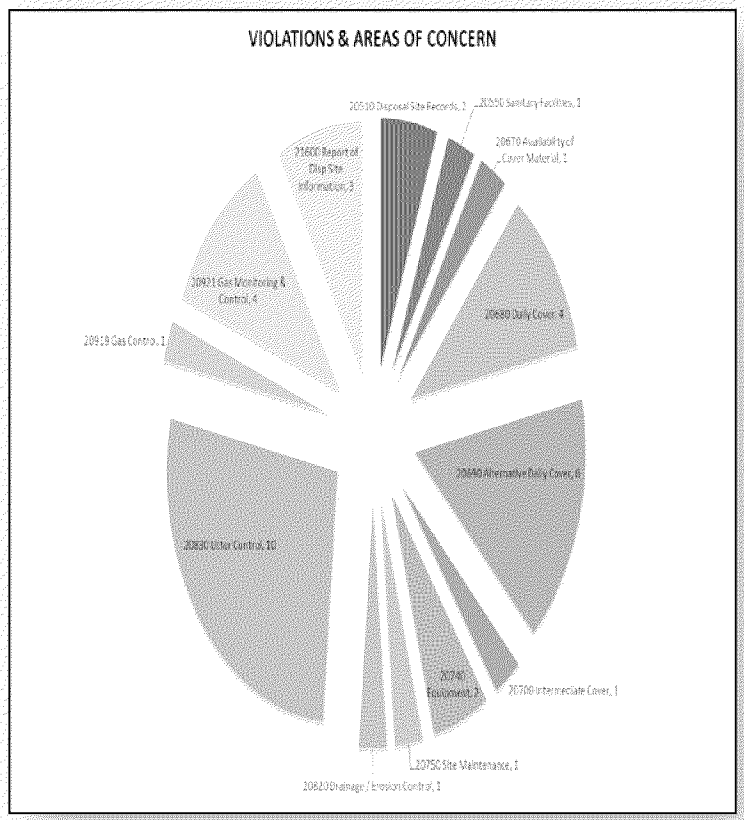
The inspection history at Blythe is improving. From a total of 14 NOVs or AOCs in 2007, Blythe is down to 4 in 2011 (as of 11/9/2011).

Inspection issues have historically ranked in the following order of frequency:

1. Litter
2. ADC
3. Gas Monitoring and Control
4. Daily Cover
5. RDSI

Blythe should focus on basic operational compliance issues of litter, ADC, site maintenance and daily cover.





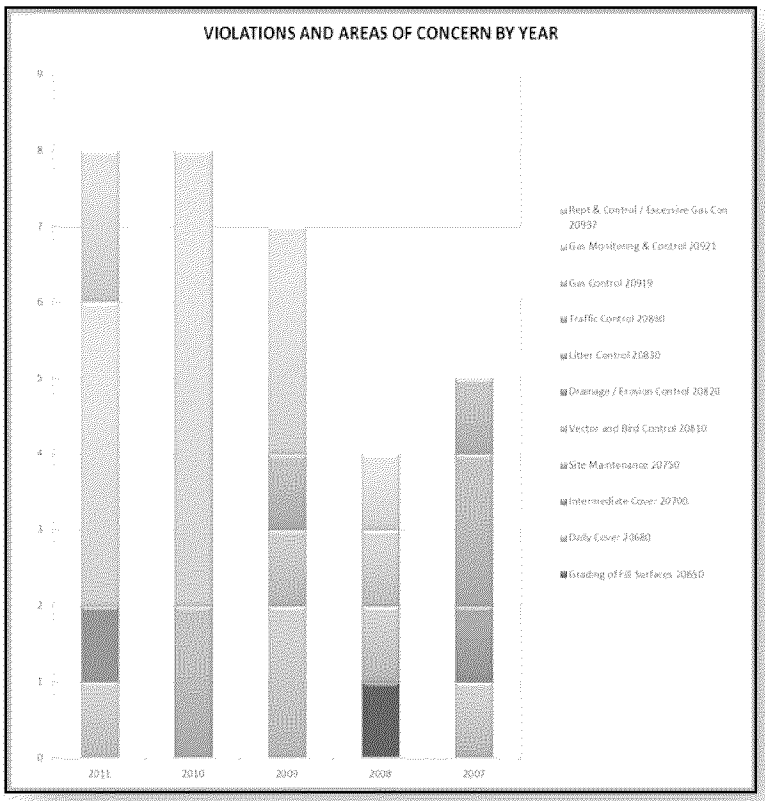
6.2 *BADLANDS INSPECTION HISTORY*

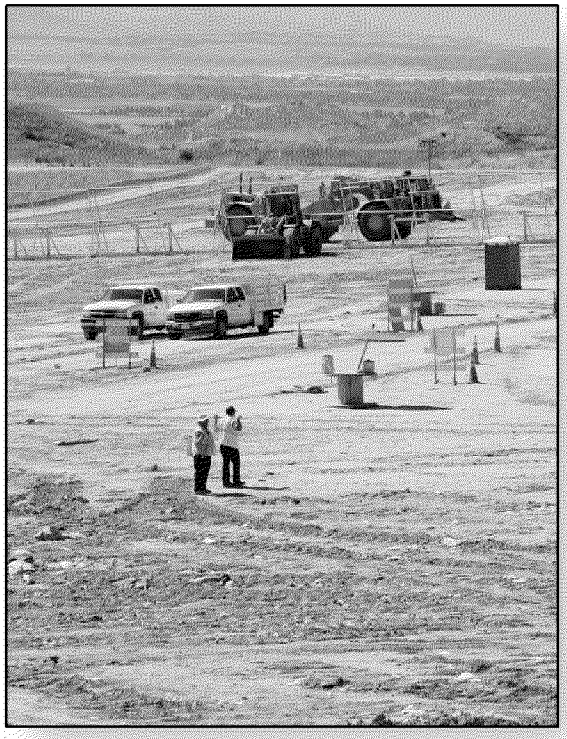
The inspection history at Badlands shows an increase in inspection issues, primarily due to increasing problems with landfill gas. However, from an operational perspective, the number of inspection issues is decreasing – if gas issues are ignored. From a total of 5 NOVs or AOCs in 2007, Badlands is down to 2 in 2011 (as of 10/25/2011).

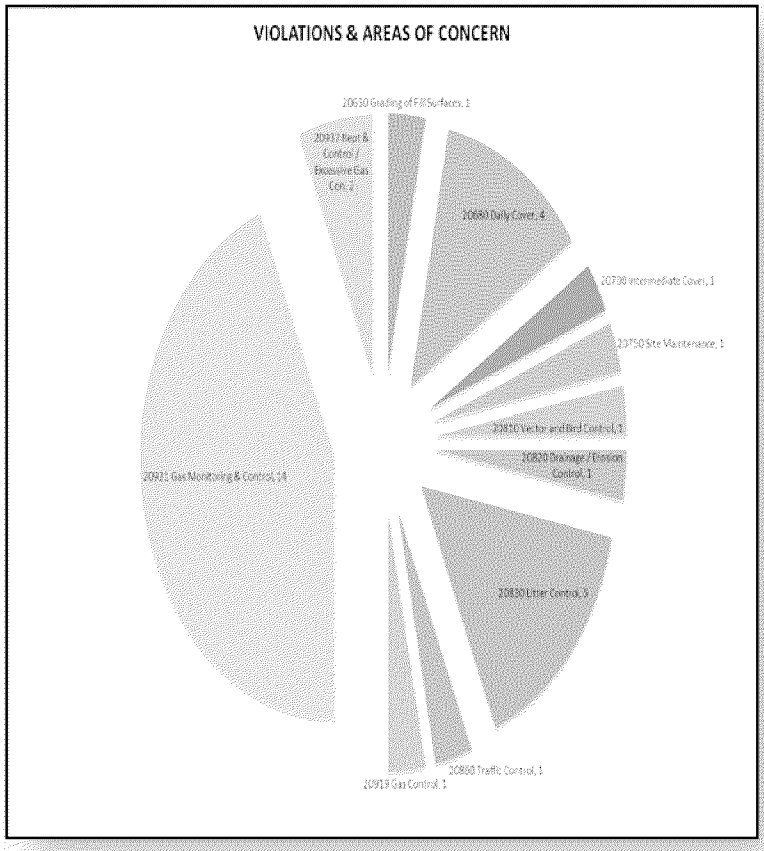
Inspection issues have historically ranked in the following order of frequency:

1. Gas Monitoring and Control
2. Litter
3. Daily Cover

Badlands should continue the good work operationally …and focus on gas control.







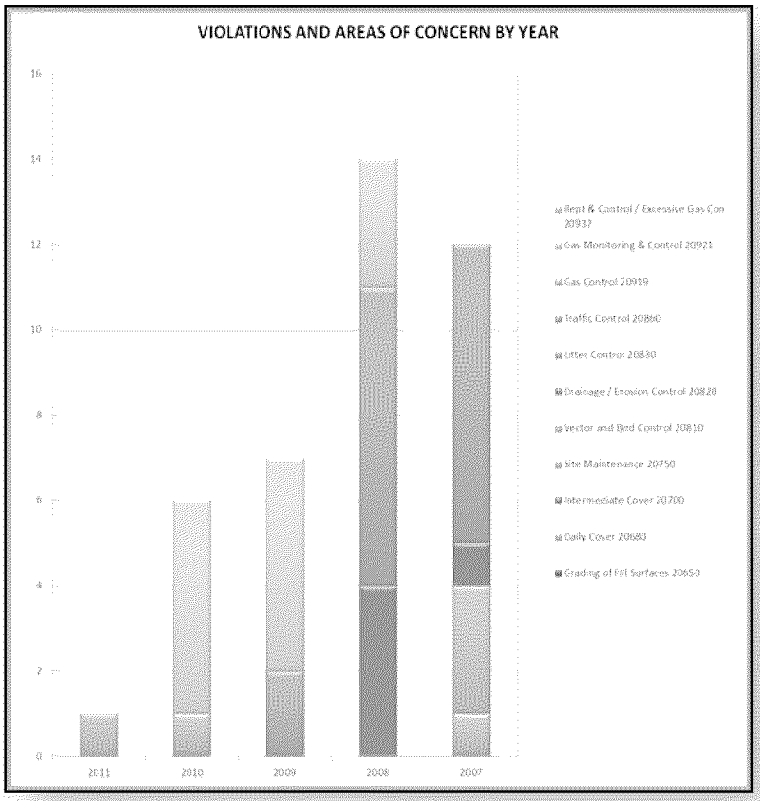
6.3 *LAMB CANYON INSPECTION HISTORY*

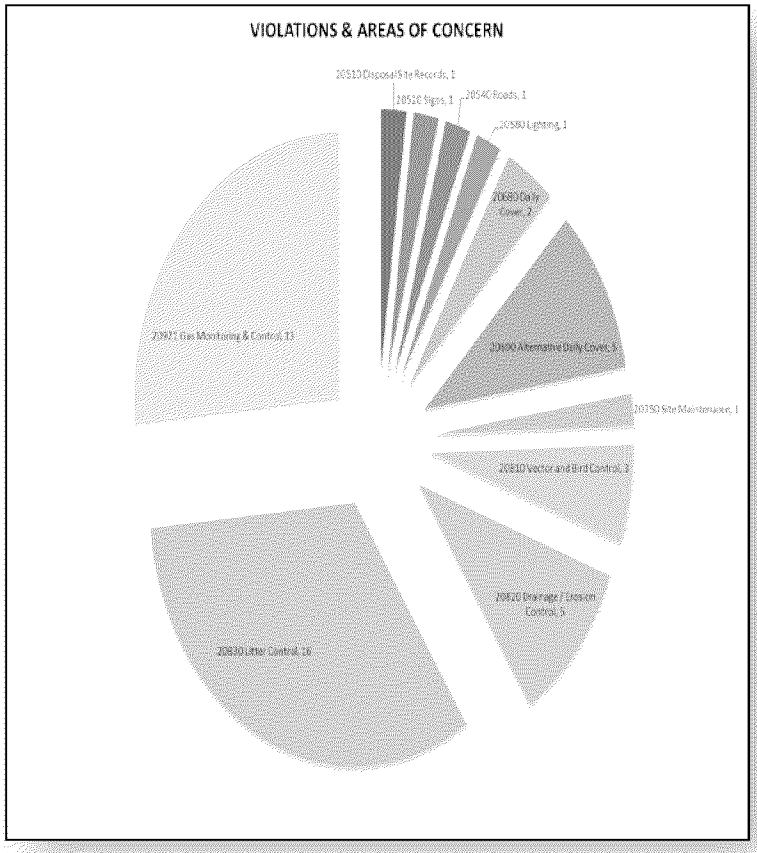
The inspection history at Lamb Canyon shows the most dramatic improvement, both in terms of operational issues and landfill gas control. From a high of 14 and 12 issues in 2007 and 2008, Lamb Canyon shows only 1 issue in 2011 – related to Site Maintenance (as of 11/9/2011).

Inspection issues have historically ranked in the following order of frequency:

1. Litter
2. Gas Monitoring and Control
3. ADC
4. Drainage
5. Vectors/Birds

Lamb Canyon should continue the good work.





The most common inspection issues at all three landfills (excluding landfill gas) are litter, ADC, drainage, and daily cover. Not surprisingly, these are also some of the most common inspections issues at California landfills – in general. And all of these issues are based on a subjective interpretation of the regulations – by the LEA inspector.

Further, we believe that these issues can best be addressed by implementing broad, effective change, rather than dealing with symptoms. For example, instead of focusing on a small area of exposed waste, work with the LEA inspector to develop more flexibility in the use of tarps – perhaps extending the duration of tarp placement at all landfills. Or, work to increase the use and effectiveness of portable litter screens …and put less emphasis on small quantities of windblown litter that is still within the active landfill area and contained by perimeter litter fences.

In our experience, many landfills in southern California – mostly those owned/operated by municipalities – have established an unrealistic performance standard. This was often done in the noble cause of making the landfills ever more compliant. But often this created an artificial standard that oftentimes far exceeded the original intent of the regulations.

From the standpoint of maintaining full compliance, and meeting the intent of the regulations to protect human health and the environment, we recommend the County continue to push back wherever necessary to maintain compliance and reasonableness.

As a case in point, consider the issue of ponded water. The regulations state:

20650. CIWMB - Grading of Fill Surfaces. (T14:Section 17710)

Covered surfaces of the disposal area shall be graded to promote lateral runoff of precipitation and to prevent ponding. Grades shall be established of sufficient slopes to account for future settlement of the fill surface. Other effective maintenance methods may be allowed by the enforcement agency.

These regulations appear to be relatively easy to read and understand …but are they? For example, what exactly is meant by the word, "ponding"? We have seen a landfill violation issued because the indentations left by the compactor's teeth filled with water during a rainstorm. We have also had discussions where an LEA inspector stated that his personal threshold for ponding was if the ponded area exceeded the size of a garbage truck. In cases where subjectivity is required, everyone has an opinion, but who is right …who is wrong …and where should the line be drawn?

In the past 10 years, we have taught more than 20 classes for CalRecycle (formerly the California Integrated Waste Management Board) on landfill regulations and inspection criteria. And the common theme has been: when there is room for interpretation, look for the underlying *intent* of the rules.

In summary, we suggest landfill management continue to work closely with the LEA to affirm that the focus is on the right issues – and that nobody loses sight of the intent of the rules.

7 INBOUND TONNAGE

The greatest factor impacting the workload at these landfills is inbound waste tonnage. As shown here, the annual tonnage at the three sites has declined significantly from a high of 1,427,980 tons in 2005 to 1,060,348 tons in 2011. This represents a decrease of approximately **26%.**

Annual Tonnage Blythe, Badlands & Lamb Canyon	
Year	**Landfilled Tons**
2001	687,815.90
2002	680,162.20
2003	682,764.76
2004	803,314.90
2005	1,427,979.88
2006	1,334,722.73
2007	1,275,198.40
2008	1,125,512.30
2009	999,960.21
2010	1,062,675.25
2011	1,060,348.01

It is important to note that in recent years, 2009-2011 there has been a slight **6%** increase in combined annual tonnage at the Landfills.

Because of the generally downward trend in waste tonnage, these landfills – like many others today – are faced with a declining waste stream ...and declining revenue.

On a more detailed level, the workload at EACH landfill is based almost entirely on inbound tonnage. Therefore, we began our detailed evaluation by characterizing that waste stream. For clarity, each landfill is presented separately

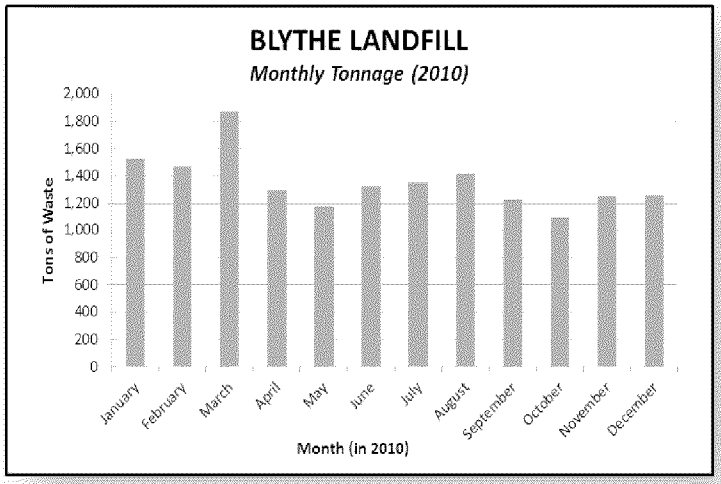
7.1 *BLYTHE LANDFILL -TONNAGE*

7.1.1 MONTHLY TONNAGE-BLYTHE

This chart describes the monthly tonnage received during 2010.

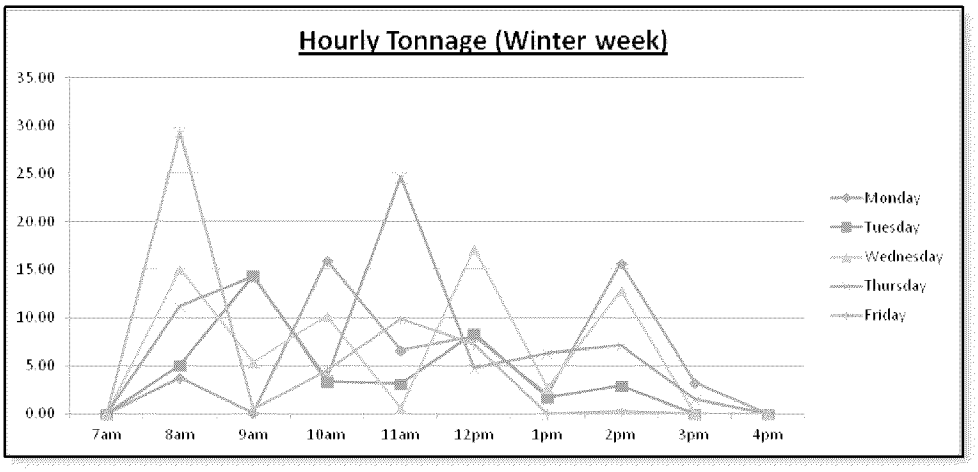
On a monthly basis, inbound tonnage varied from a low of 1,099 tons (October) to a high of 1,873 in March. The average inbound waste flow was 1,355 tons per month.

Seasonal variations in monthly tonnage are considered normal. With only a moderate change in tonnage we saw no obvious opportunity to make any significant staff or equipment changes.



7.1.2 WINTER TONNAGE-BLYTHE

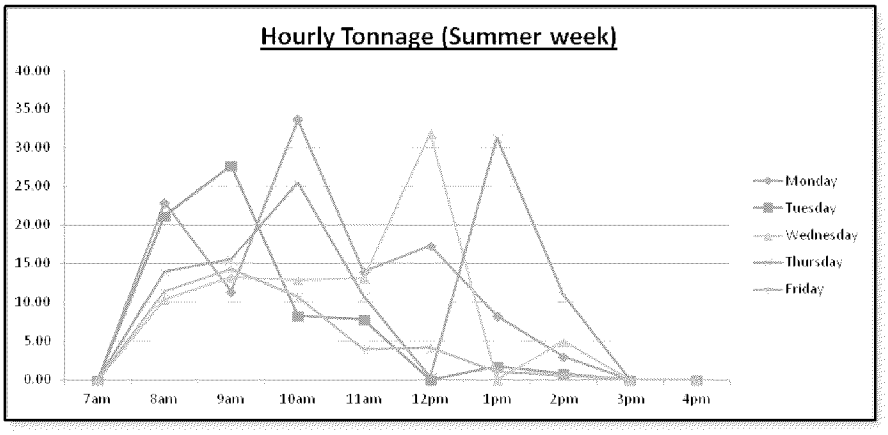
This chart for a week in January, 2011 - shows hourly tonnage for each day of the week (excluding Saturday) from this information we can see several obvious peaks in tonnage. The most consistent peaks are at 8:00 a.m. and 2:00 P.M. There are several inconsistent peaks between 9:00 a.m. and 12:00 p.m. The only consistent slow period appears to be at 1:00 p.m. There seems to be an inconsistent slow period around 9:30 a.m. Outside of these times, the flow becomes more random, generally decreasing toward the end of the day. Based on this information, there does not appear to be an obvious opportunity to reduce the hours of operation during the week.



7.1.3 SUMMER TONNAGE-BLYTHE

This chart – for a week in July, 2011 - shows hourly tonnage (excluding Saturday) similar to the week in January presented above.

This chart shows several inconsistent peaks. The most consistent peak is between 8:00 and 10:00a.m. There is a less consistent peak between 12:00 and 1:00 p.m. Overall this chart presents an inconsistent flow of waste throughout the days.



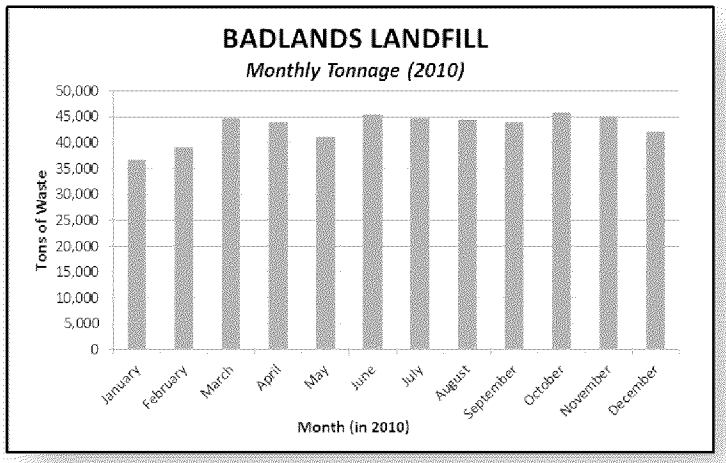
Aside from the peak at 1:00 p.m. on Thursday, there may still be an opportunity to shorten the Landfill's hours of operation towards the end of the day. Such a change should not be made without a more detailed evaluation and affirming that such a change would not further reduce the landfill's inbound tonnage.

Please note that these comments are based on only a 1-week period. Additional evaluation should be done before making any decision regarding hours of operation.

7.2 BADLANDS LANDFILL-TONNAGE

7.2.1 MONTHLY TONNAGE-BADLANDS

This chart describes the monthly tonnage received during 2010.

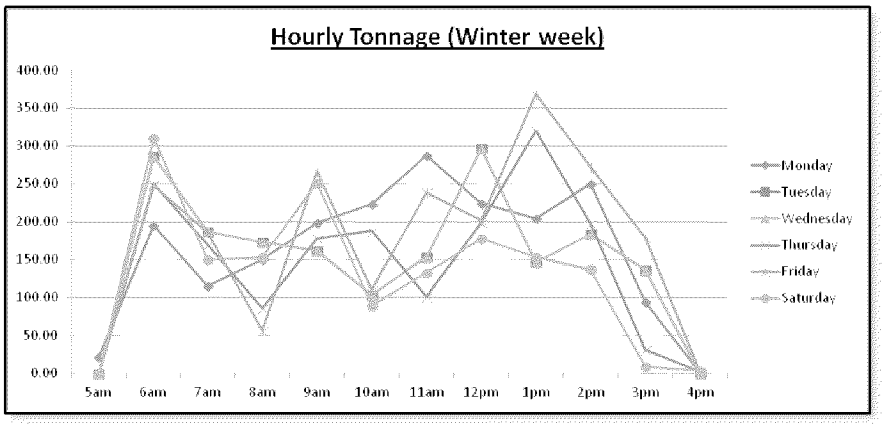


On a monthly basis, inbound tonnage varied from a low 36,680 tons (February) to a high of 45,743 in October. The average inbound waste flow was 43,056 tons per month.

Seasonal variations in monthly tonnage are considered normal. With only a moderate change in tonnage we saw no obvious opportunity to make any significant staff or equipment changes.

7.2.2 WINTER TONNAGE-BADLANDS

This chart for a week in January, 2011 - shows hourly tonnage for each day of the week. From this information we can clearly see a fairly consistent series of peaks, starting at 6:00 a.m. and repeated at 9:00a.m. There appears to be a less consistent peak between 11:00 a.m. and 2:00 p.m. The most consistent slow period appears to be at 8:00 a.m. The flow then becomes more random, generally decreasing toward the end of the day. Based on this information we do not see any obvious opportunities to reduce the hours of operation during the weekdays.

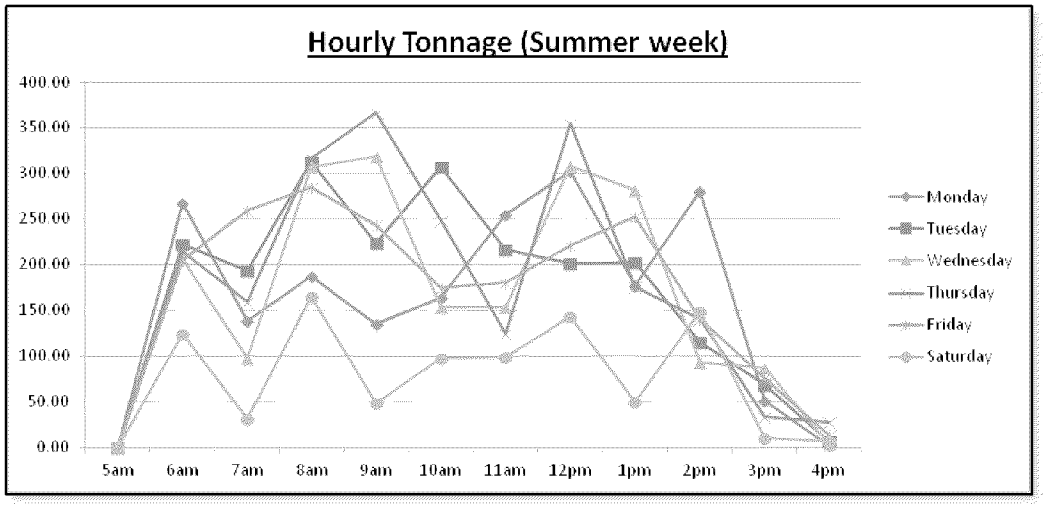


We do see an opportunity to shorten Saturday's hours. This chart shows tonnage dropping off slightly after noon and significantly after 2:00 p.m.

Please note that these comments are based on only a 1-week period. Additional evaluation should be done before making any decision regarding hours of operation.

7.2.3 SUMMER TONNAGE- BADLANDS

This chart – for a week in July, 2011 – shows hourly tonnage for each day of the week. This chart shows peaks at 6:00 a.m. and 12:00 p.m. There are also less consistent peaks between 8:00 a.m. and 10:00 a.m. The most consistent slow periods appear to be at 7:00 a.m. and 11:00 a.m. and then tapering off towards the end of the day. Based on this information we do not see any obvious opportunities to reduce the hours of operation during the weekdays.



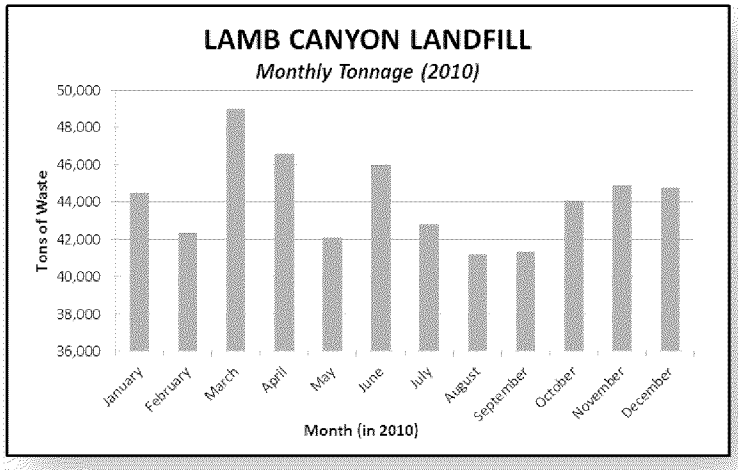
We do see an opportunity to shorten Saturday's hours. This chart shows tonnage dropping off significantly after 2:00 p.m.

Please note that these comments are based on only a 1-week period. Additional evaluation should be done before making any decision regarding hours of operation

7.3 *LAMB CANYON LANDFILL-TONNAGE*

7.3.1 MONTHLY TONNAGE-LAMB CANYON

This chart describes the monthly tonnage received during 2010.

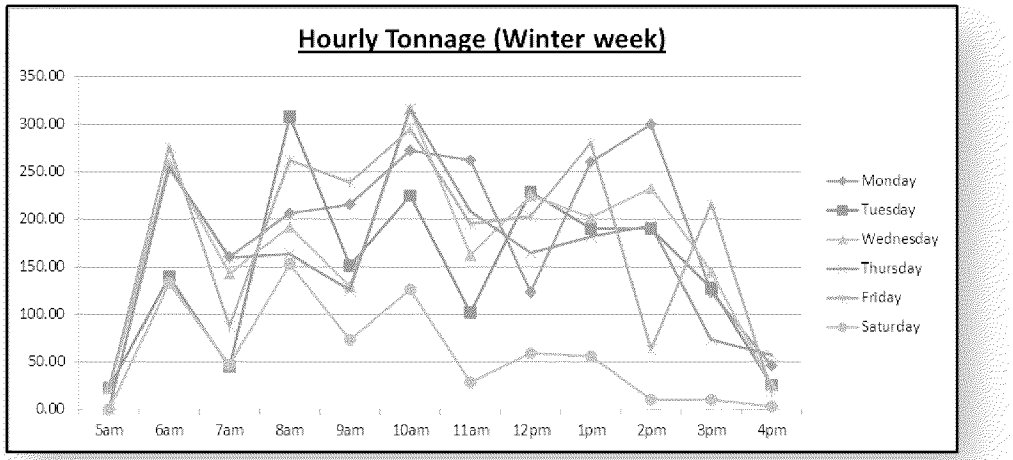


On a monthly basis, inbound tonnage varied from a low 41,212 tons (August) to a high of 48,992 in March. The average inbound waste flow was 44,145 tons per month.

Seasonal variations in monthly tonnage are considered normal. With only a moderate change in tonnage we saw no obvious opportunity to make any significant staff or equipment changes.

7.3.2 WINTER TONNAGE – LAMB CANYON

This chart for a week in January, 2011 - shows hourly tonnage for each day of the week. From this information we can clearly see a fairly consistent series of peaks, starting at 6:00 a.m. and repeated at 2-hour intervals. There then appears to be a slower period starting at 11 am until around 1:00 p.m. Beyond that time, the flow becomes more random, generally decreasing toward the end of the day. Based on this information, it appears there may be an opportunity to shorten the landfill's operating hours during the week, by perhaps closing the gate at 3:00 p.m. Such a change should not be made without a more detailed evaluation of which haulers are generally bringing waste after 3:00 p.m., and affirming that such a change would not further reduce the landfill's inbound tonnage.

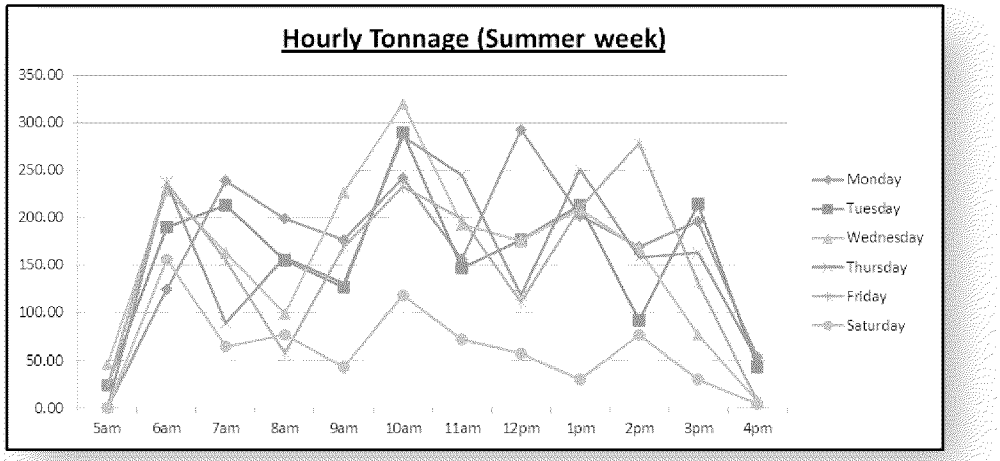


Similarly, we see an opportunity to shorten Saturday's hours. This chart shows tonnage dropping off slightly after noon and significantly after 2:00 p.m.

Please note that these comments are based on only a 1-week period. Additional evaluation should be done before making any decision regarding hours of operation.

7.3.3 SUMMER TONNAGE – LAMB CANYON

This chart – for a week in July, 2011 – actually shows less tonnage than the week in January presented above. And in fact, the monthly tonnage chart indicated similar trend.



This chart also shows some peaks, but overall presents

a more consistent flow of waste. We see less opportunity for reducing hours of operation during the week.

Aside from the peak at 2:00 p.m. on Saturday, there may still be an opportunity to shorten Saturday's hours. But again, such a change should not be made without a more detailed evaluation of which haulers are generally bringing waste on Saturday afternoon, and affirming that such a change would not further reduce the landfill's inbound tonnage.

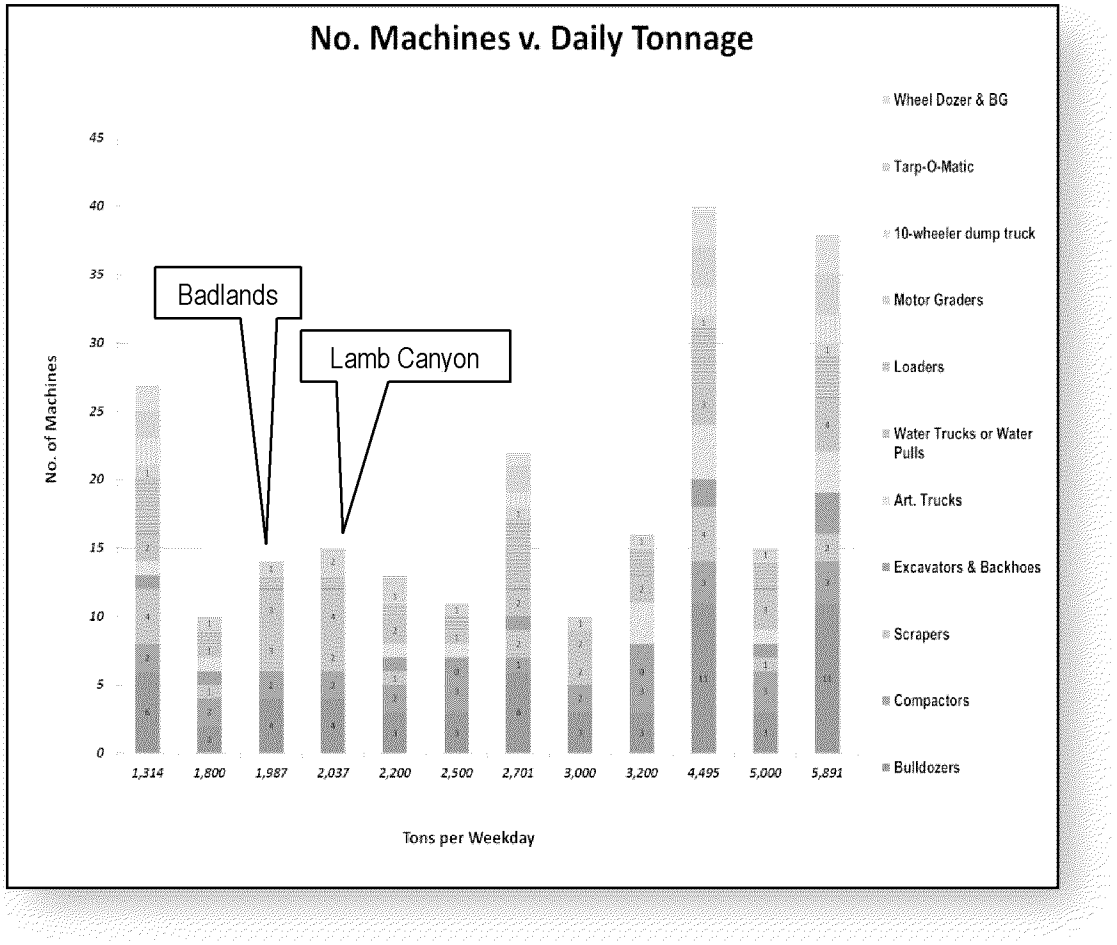
Please note that these comments are based on only a 1-week period. Additional evaluation should be done before making any decision regarding hours of operation.

8 EQUIPMENT – GENERAL

A vital step of this CORE assessment was to gain an understanding of the equipment fleet. After reviewing the number, type and size of machines at the Riverside County landfills, comparisons were made to other similar facilities.

As part of the review, several other similar landfills in California were surveyed. The Figure below shows the results of that survey. Please note that Blythe was not included in this review because of its lower tonnage related to the comparison facilities.

This chart shows landfill fleet size compared to daily tonnage. As would be expected, larger landfills (i.e., more tons per day) will generally have more machines. However, there is significant variation, mostly due to landfill operator choices, methods of operation, other ongoing projects (i.e., large excavations) and recent tonnage history. Regarding the last factor, landfills that had experienced a significant drop in waste tonnage (due to the recession) often have excess equipment that is not necessary. Riverside County's landfills fall into this category.



With experience working at over 200 landfills – and supported by the survey conducted for this project, we offer the following findings and recommendations regarding the number of machines at each facility.

8.1 *NUMBER OF MACHINES*

We recognize Riverside County's ongoing efforts regarding the continuous monitoring and adjustment to the size of the Landfill Fleet. The reduction of inbound tonnage over recent years has been a driving force behind the need for this adjustment. The following recommendations are based on our findings. We have considered factors such as equipment production rates, backup equipment, specialized equipment, inbound tonnage, owning and operating cost and a reduction in cover soil usage and handling.

It should be noted that the fleet downsizing process had already begun well before this analysis was performed. Over the past year, it appears that Badlands and Lamb Canyon have each eliminated 1 dozer and 2 scrapers. Additional machine reductions are recommended elsewhere in this report.

It is our opinion that the County can reduce the number of machines at these landfills, while still maintaining a sufficient fleet to efficiently handle the inbound waste and other necessary construction activities such as site maintenance.

While the following recommendations could lead to an optimum fleet size for the current landfill condition, a detailed analysis that incorporates equipment resale value, opportunity value, tonnage trending, system expansion, replacement costs, rental availability and costs, and mobilization costs should be carefully considered before releasing equipment with no remaining capital costs.

8.1.1 BLYTHE LANDFILL

Currently the Blythe Landfill is operating with 4 pieces of Landfill Equipment and 1 Water Truck. Based on the previously mentioned factors we feel that the current Blythe Fleet is properly equipped to perform the required tasks.

Because of the low tonnage at this site, a limited amount of equipment hours are required to complete the daily tasks. This causes the hourly Owning and Operating costs to be higher than if the equipment logged more hours. This is simply a function of the fixed costs (i.e., purchase cost) being amortized over fewer hours), resulting in a higher cost per hour.

However, as a more aggressive approach – one which could result in lower hourly Owning and Operating costs – we suggest exploring the feasibility of the following alternative fleet. This proposed fleet would require 1 piece of Landfill Equipment and 1 Water Truck. Obviously the absence of a Landfill Compactor would affect cell density and would ultimately shorten the landfill's life-span.

- Eliminate the Compactor and the Bulldozer; replace both of these pieces of equipment with a suitable Track loader.
- Eliminate the Scraper; utilize strategically placed cover soil stockpiles placed by either a contractor or a County Scraper brought to the site on a quarterly or as needed basis.

- Eliminate the Grader; utilize a contractor or a County Grader brought to the site on a quarterly or as needed basis.

While the previous recommendations could lead to an optimum fleet size for the current landfill condition, a detailed analysis that incorporates equipment resale value, opportunity value, tonnage trending, system expansion, replacement costs, rental availability and costs, and mobilization costs should be carefully considered before releasing equipment with no remaining capital costs.

8.1.2 Badlands Landfill

Currently the Badlands Landfill is operating with 11 pieces of equipment and 3 water trucks. Based on the previously mentioned factors we feel that the ideal Badlands Fleet size would be 8 pieces of equipment and 2 water trucks.

We recommend eliminating the following equipment:

- Either the D8R or the D9L Bulldozer.
  Based on utilization rates at this site and considering the need for a backup and a smaller Bulldozer we feel the site could efficiently operate with 1 less Bulldozer.
- 1 Water Truck.
  Based on the utilization rates of the Water Trucks we feel that this site could efficiently operate with 1 less Water Truck.
- 1 of the 637 Scrapers and the 623 Scraper.
  Based on the utilization rates, and our suggestion that cover soil be reduced we feel that this site could operate efficiently with 2 less Scrapers.
  We understand that the 623 Scraper is currently being utilized in a training capacity. We suggest the County explore other methods of training the Scraper operators. Options might include: training the operators on the existing 637 scraper, sending them to Blythe to work with that scraper, or simply renting a small scraper (i.e., 613 or 615) periodically when training a group of new operators. The decision regarding the 623 scraper may be one of logistics in regard to training. We did not evaluate it in that regard. However, we do suggest the 623 not be retained to serve as a production machine.

While the previous recommendations could lead to an optimum fleet size for the current landfill condition, a detailed analysis that incorporates equipment resale value, opportunity value, tonnage trending, system expansion, replacement costs, rental availability and costs, and mobilization costs should be carefully considered before releasing equipment with no remaining capital costs.

8.1.3 Lamb Canyon Landfill

Currently the Lamb Canyon Landfill is operating with 11 pieces of equipment and 4 water trucks. Based on the previously mentioned factors we feel that the ideal Lamb Canyon Fleet size would be 8 pieces of equipment and 2 water trucks.

We recommend eliminating the following equipment:

- 1 D8R Bulldozer.
  Based on utilization rates at this site and considering the need for a backup and a smaller Bulldozer we feel the site could efficiently operate with one less Bulldozer.
- 2 Water Trucks.
  Based on the utilization rates of the Water Trucks we feel that this site could efficiently operate with 2 less Water Trucks.
- 1 of the 637 Scrapers.
  Based on the utilization rates, and our suggestion that cover soil be reduced we feel that this site could operate efficiently with 1 less Scraper.
- 1 of the 140 Motor Graders.
  Based on the utilization rates, we feel that this site could operate efficiently with 1 Motor Grader.

While the previous recommendations could lead to an optimum fleet size for the current landfill condition, a detailed analysis that incorporates equipment resale value, opportunity value, tonnage trending, system expansion, replacement costs, rental availability and costs, and mobilization costs should be carefully considered before releasing equipment with no remaining capital costs.

8.2 *SIZE OF EQUIPMENT*

For the most part the Equipment used within the Riverside County Landfill Fleet is of proper size when compared to the required tasks. We do offer the following suggestions.

- We do not see the need for a D10 Bulldozer at the Badlands Landfill. When upgrading this Bulldozer we would recommend replacing with a more suitable sized Bulldozer such as a D9, assuming that the inbound tonnage continues at the current pace.
- We acknowledge that the 623 Scraper at the Badlands Landfill is currently being utilized in a training capacity. Due to its limited capacity and the length of the haul road, we do not recommend using this Scraper as a production machine.

8.3 *UTILIZATION OF LANDFILL EQUIPMENT*

Equipment utilization is an important measure of both the size and number of pieces of equipment. We evaluated the utilization of all landfill equipment at all three Riverside County Landfills. It was determined that some of the Landfill Equipment could be better utilized from the standpoint of achieving full utilization.

Of course, a utilization factor of 100% would be ideal but we understand that it is not realistic, and a job efficiency factor needs to be considered. A job efficiency factor of 85% accounts for time when a machine is not working due to unavoidable servicing, fueling, downtime, shift changes, etc. Thus, any machine with a utilization factor of 85% or higher, is considered fully utilized.

It should be noted that some machines, such as Motor Graders, Wheel Loaders, Finish Bulldozers, Backup Equipment and all of the equipment at Blythe will, by the nature of the work they perform, have low utilization rates. In these cases, it is entirely reasonable to accept a low utilization rate for a single

machine. However, when multiple machines – of the same type – have low utilization rates, we carefully scrutinized the need for multiple machines.

Overall, within the current Riverside County Landfill fleet, there are 26 pieces of landfill equipment that could be working. We have calculated the utilization rates based on available operating days and available operating hours per day. These two factors determine the total number of available operating hours. We have compared the actual annual operating hours to the available operating hours and determined the utilization rates. Excluding water trucks and support equipment the averaged Landfill Equipment utilization rate for all three Riverside County Landfills is **28%.** Please note that this utilization rate is based on the current operations, which may include some activities that simply are not necessary. Thus, if the current fleet was limited to performing only those tasks which are necessary, their utilization rate would be lower.

During our landfill site visits we did notice that numerous pieces of equipment were being prepared to go to auction. The equipment that was scheduled for auction has not been included in the following utilization charts. It is our opinion that the practice of monitoring and selling unused or underutilized equipment should be continued. In general landfill fleet size should be a direct result of inbound tonnage and maintaining the balance between these two items is a dynamic process. We believe that the County is aware of this and should continue to eliminate underutilized equipment as needed.

The bottom line is that each machine and group of machines must be evaluated in light of its contribution and the necessity of the tasks it performs.

8.3.1 UTILIZATION OF LANDFILL EQUIPMENT (BLYTHE LANDFILL)

Blythe Landfill Equipment Utilization				
Equipment	Average Hours per day (2010/11)	Available Annual Hours	Actual Annual Hours (2010/11)	Utilization Rate
Elevating Scraper 01-957	0.40	2176	109	*5%*
Bulldozer 99-954	1.01	2176	275	*13%*
Landfill Compactor 99-957	0.46	2176	125	*6%*
Motor Grader 95-932	0.55	2176	150	*7%*

When compared to the other two sites the Blythe Landfill has many unique circumstances that affect equipment utilization. Obviously, the inbound tonnage at Blythe limits the amount of equipment hours that are required to process the waste on a daily basis. The distance from other Riverside County Landfills limits the ability for Blythe to share equipment that is not required on a regular basis, such as the Motor Grader and Scraper.

We offer the following suggestions regarding Landfill Equipment utilization at Blythe.

- An Increase in inbound tonnage. Basically, any added tonnage would require an increase in equipment hours to process the waste. We understand that the City of Blythe tonnage has recently been redirected to the Blythe Landfill. This increased tonnage should increase the utilization rates by a nominal amount.
- As previously discussed a more aggressive approach would be to "re-tool" the Blythe equipment fleet. An example of this would be replacing the Dozer and Compactor with a Track Loader and eliminating the Grader and Scraper. This approach would increase the utilization rate of the proposed Track Loader and would eliminate the low utilization rates of the Scraper and Motor Grader.
- The third option would be to simply do nothing. The current fleet that is being used at Blythe is properly matched for the tasks at hand. The sites low inbound tonnage simply does not support higher Equipment utilization rates.

8.3.2 UTILIZATION OF LANDFILL EQUIPMENT (BADLANDS LANDFILL)

Badlands Landfill Equipment Utilization				
Equipment	Average Hours per day (2010/11)	Available Annual Hours	Actual Annual Hours (2010/11)	Utilization Rate
Bulldozer 00-941	7.68	3244	2,373	*73%*
Landfill Compactor 00-942	5.34	3244	1,649	*51%*
Open Bowl Scraper 00-943	2.73	3244	845	*26%*
Elevating Scraper 00-944	0.03	3244	10	*0%*
Bulldozer 02-940	3.68	3244	1,137	*35%*
Wheel Loader 03-946	1.36	3244	419	*13%*
Bulldozer 03-951	3.70	3244	1,144	*35%*
Motor Grader 04-958	3.08	3244	953	*29%*
Bulldozer 06-958	2.40	3244	742	*23%*
Open Bowl Scraper 06-959	3.59	3244	1,110	*34%*
Landfill Compactor 98-947	4.49	3244	1,387	*43%*

We offer the following suggestions or observations, regarding Landfill Equipment utilization at Badlands.

- In our opinion this site does not require 4 Bulldozers. By eliminating 1 of the Bulldozers it would increase the utilization rates of the remaining 3.
- The required need for a backup Compactor is causing the individual Compactors utilization rates to be approximately half of what would be considered fully utilized. With this in mind the current utilization rates of the Compactors are acceptable.
- From a utilization standpoint we feel that 2 of the 3 Scrapers should be eliminated. We recognize that the 623 Scraper is utilized as a training Scraper.
- The specialized equipment such as the Motor Grader, Wheel Loader, Finish Bulldozer and backup Equipment are obviously not being utilized on a full time basis. Due to the specialized nature of the work that they perform it is normal that they will have lower utilization rates.

8.3.3 UTILIZATION OF LANDFILL EQUIPMENT (LAMB CANYON LANDFILL)

Lamb Canyon Landfill Equipment Utilization				
Equipment	Average Hours per day (2010/11)	Available Annual Hours	Actual Annual Hours (2010/11)	Utilization Rate
Open Bowl Scraper 02-960	3.67	3223	1,127	*35%*
Bulldozer 03-952	4.97	3223	1,527	*47%*
Landfill Compactor 05-952	3.68	3223	1,131	*35%*
Open Bowl Scraper 05-953	4.29	3223	1,316	*41%*
Wheel Loader 06-948	1.75	3223	538	*17%*
Bulldozer 06-957	2.17	3223	667	*21%*
Landfill Compactor 09-948	5.04	3223	1,547	*48%*
Motor Grader 94-915	2.72	3223	836	*26%*
Motor Grader 97-918	0.72	3223	220	*7%*
Bulldozer 98-951	3.73	3223	1,145	*36%*
Bulldozer 99-953	1.50	3223	460	*14%*

We offer the following suggestions or observations, regarding Landfill Equipment utilization at Lamb Canyon.

- In our opinion this site does not require 4 Bulldozers. By eliminating 1 of the Bulldozers it would increase the utilization rates of the remaining 3.
- The required need for a backup Compactor is causing the individual Compactors utilization rates to be approximately half of what would be considered fully utilized. With this in mind the current utilization rates of the Compactors are acceptable.
- From utilization standpoint we feel that 1 of the 2 Scrapers should be eliminated.
- Based on the utilization rates we suggest eliminating 1 of the 2 Motor Graders.
- The specialized equipment such as the Motor Grader, Wheel Loader, Finish Bulldozer and backup Equipment are obviously not being utilized on a full time basis. Due to the specialized nature of the work that they perform it is normal that they have low utilization rates.

8.3.4 Utilization of Landfill Water Trucks (All Sites)

Water Truck Utilization Rates				
Machine	Average Hours per day (2010/11)	Available Annual Hours	Actual Annual Hours (2010/11)	Utilization Rate
Blythe				
Water Truck 96-425	1.49	2176	405	*19%*
Badlands				
Water Truck 01-419	3.73	3244	1,153	*36%*
Water Truck 97-433	2.94	3244	910	*28%*
Water Truck 98-448	0.86	3244	267	*8%*
Lamb Canyon				
Water Truck 00-410	2.64	3223	809	*25%*
Water Truck 02-436	4.06	3223	1,247	*39%*
Water Truck 07-402	4.63	3223	1,421	*44%*
Water Truck 07-403	5.82	3223	1,787	*55%*
			Average	32%

*Water truck units have been converted from miles to hours

We calculated the utilization rates for the Water Trucks separately from the Landfill Equipment. We had to make some assumptions while converting the provided annual miles to annual hours. Since landfill water trucks are used primarily at low speeds and accumulate relatively low mileage, it is our opinion that hourly usage is a much more accurate form of measurement.

The average utilization rate for all of Riverside County's Water Trucks is **32%.** We feel that this rate shows that the Water Trucks are being underutilized from a standpoint of comparing actual hours used to available hours. Based on this knowledge we feel that 1 Truck at Badlands and 2 Trucks at Lamb Canyon could be eliminated.

We suggest installing hour meters in the water trucks to allow for accurate hourly tracking. Once landfill staff can accurately track the water truck utilization on an hourly basis we suggest that water truck utilization be closely monitored and any necessary changes regarding the number of water trucks be made.

8.4 *BACKUP EQUIPMENT*

We acknowledge the need for backup equipment for machines such as trash dozers and compactors that may not be readily available on the open market. In addition, we understand that the County currently has excess equipment in its fleet due to the following reasons:

- The closure of the Edom Hill landfill resulted in the deployment of the newer existing equipment at the remaining open sites.
- The 26% reduction in inbound tonnage.

8.4.1 BLYTHE LANDFILL

We do not t feel that it is necessary to have any backup equipment for the current equipment fleet at the Blythe Landfill. In the event that the Bulldozer or Compactor break down the landfill can still temporarily operate with just one of these machines.

8.4.2 BADLANDS LANDFILL

We feel that backup equipment should only be present for the frontline trash handling equipment.

In addition to the frontline Bulldozer there should be a backup Bulldozer that is capable of working in both dirt and trash. For this particular site either the current D8R or the D9L could be used depending on how they are configured.

We agree with continuing the practice of having two 836 Compactors on site, one as a primary and one as a backup.

We do not feel that it is necessary to have any backup Water Trucks onsite. In the event that a backup Water Truck is needed, one can be sourced at a local rental company.

We do not feel that any backup Scrapers are needed for this site. With a detailed fill sequence plan and periodic stockpiling of cover soil a backup Scraper is unnecessary.

The support equipment such as the Motor Grader and the Loader do not require backup equipment. In the event that backup equipment is needed, it can be sourced through a local rental company.

8.4.3 LAMB CANYON LANDFILL

We feel that backup equipment should only be present for the frontline trash handling equipment.

In addition to the frontline Bulldozer there should be a backup Bulldozer that is capable of working in both dirt and trash. For this particular site one of the D8R Bulldozers could be used, assuming that it is properly configured.

We agree with continuing the practice of having two Compactors on site, one as a primary and one as a backup.

We do not feel that it is necessary to have any backup Water Trucks onsite. In the event that a backup Water Truck is needed, one can be sourced at a local rental company.

We do not feel that any backup Scrapers are needed for this site. With a detailed fill sequence plan and periodic stockpiling of cover soil a backup Scraper is unnecessary.

The support equipment such as the Motor Grader and the Loader do not require backup equipment. In the event that backup equipment is needed, it can be sourced through a local rental company.

8.5 *FLEET AGE/SERVICE LIFE (ALL SITES)*

During our site visits and after reviewing the provided equipment data we took notice of the age of the County's Landfill Fleet, Water Trucks included. We were most concerned with anticipating capital expenditures regarding the Landfill Fleet. Our calculations show that currently the average age within Riverside County's Landfill fleet is **10.28** years old. Surprisingly, this is a moderately high number when compared to other Municipal Landfill Fleets in the region. This number is more in line with that of a competitive Private Landfill Contractor. Keep in mind, that Equipment age cannot be the sole factor when analyzing Equipment life. It is also extremely important to consider Equipment hours in relation to Equipment age. It is our opinion that in a Landfill environment, fully utilized Equipment should expend its usable service life within 10-15 years.

According to the most recent hour meter readings and the County's own service life estimates the average service life for Riverside County's Landfill Fleet is **37%** expended.

Using the previous calculations and assuming the County is expecting to obtain 100% service life the Fleet would be on average **27.8** years old. Obviously a fleet of this age is unrealistic, and would have numerous limiting factors mainly pertaining to declining reliability and serviceability.

We feel that a large factor contributing to this unbalance is the previously discussed, underutilized Equipment. The intended goal being that equipment reaches 100% service life within a reasonable time frame, while still being used in the most efficient manner. To accomplish this, it is generally better to have fewer machines that receive normal utilization rather than many machines that receive low utilization. We acknowledge that in cases such as specialized Equipment, backup Equipment and Equipment acquired from closed sites the intended goal will be difficult to achieve. We suggest that the County look further into this matter.

Fleet Age and Service Life							
Unit	Make / Model	Purchase Date	Hour Meter 10/17/2011	Estimated Service Life (Hours)	Today's Date	Years Old	Expended Service Life
Blythe							
01-957	Caterpillar 623-F Elevator Scraper	12/14/01	3,510	25,000	1/23/2012	10.12	14%
99-954	Caterpillar D7-R Dozer	1/27/99	6,837	25,000	1/23/2012	13.00	27%
99-957	Al-Jon 81 K/R Compactor	12/13/99	1,677	25,000	1/23/2012	12.12	7%
95-932	Caterpillar 140-G Motor Grader	4/25/95	15,250	25,000	1/23/2012	16.76	61%
96-425	Autocar / Volvo 6X6 Water Truck	6/5/96	10,612	25,000	1/23/2012	15.64	42%
					Blythe Average	13.53	30%
Badlands							
00-941	Caterpillar D10-R Dozer	03/14/00	25,901	25,000	1/23/2012	11.87	104%
00-942	Caterpillar 836 Compactor	03/16/00	20,410	25,000	1/23/2012	11.86	82%
00-943	Caterpillar 637-E Scraper	04/07/00	12,695	25,000	1/23/2012	11.80	51%
00-944	Caterpillar 623-F Scraper	04/04/00	5,455	25,000	1/23/2012	11.81	22%
01-419	Peterbuilt 6X6 Water Tanker	01/12/01	15,217	41,667	1/23/2012	11.04	37%
02-940	Caterpillar D6-R Dozer	01/22/02	6,405	25,000	1/23/2012	10.01	26%
03-946	Caterpillar 950-G Loader	03/14/03	4,483	25,000	1/23/2012	8.87	18%
03-951	Caterpillar D8-R Dozer	05/17/03	7,181	25,000	1/23/2012	8.69	29%
04-958	Caterpillar 143H Grader	04/26/04	6,762	25,000	1/23/2012	7.75	27%
06-958	Caterpillar D9-L Dozer	05/01/06	9,796	25,000	1/23/2012	5.73	39%
06-959	Caterpillar 637-E Scraper	04/19/06	6,648	25,000	1/23/2012	5.77	27%
97-433	VOLVO 6X6 Water Tanker	11/12/97	13,163	41,667	1/23/2012	14.21	32%
98-448	VOLVO 6X6 Water Tanker	03/30/98	15,848	41,667	1/23/2012	13.83	38%
98-947	Caterpillar 836 Compactor	03/30/98	21,986	25,000	1/23/2012	13.83	88%
					Badlands Average	10.50	44%
Lamb Canyon							
00-410	Kenworth 6X6 Water Tanker	08/04/00	22,226	83,333	1/23/2012	11.48	27%
02-436	International 6X6 Water Tanker	05/28/02	16,998	83,333	1/23/2012	9.66	20%
02-960	Caterpillar 637G Scraper	01/16/02	10,908	25,000	1/23/2012	10.02	44%
03-952	Caterpillar D9-R Dozer	05/17/03	14,939	25,000	1/23/2012	8.69	60%
05-952	AL-JON 600CS Compactor	06/14/05	12,320	25,000	1/23/2012	6.61	49%
05-953	Caterpillar 637G Scraper	07/28/05	7,232	25,000	1/23/2012	6.49	29%
06-948	Terex Wheel Loader TXL300-2	08/30/06	3,229	30,000	1/23/2012	5.40	11%
06-957	John Deere Dozer 850-J	02/03/06	4,785	25,000	1/23/2012	5.97	19%
07-402	International 6X6 Water Tanker	09/12/07	10,390	83,333	1/23/2012	4.37	12%
07-403	International 6X6 Water Tanker	09/12/07	9,693	83,333	1/23/2012	4.37	12%
09-948	Caterpillar 836H Compactor	07/01/09	3,594	28,000	1/23/2012	2.56	13%
94-915	Caterpillar 140-G Grader	08/06/94	14,103	25,000	1/23/2012	17.48	56%
97-918	Caterpillar 140-G Grader	01/02/97	9,582	25,000	1/23/2012	15.07	38%
98-951	Caterpillar D8-R Dozer	07/27/98	15,990	25,000	1/23/2012	13.50	64%
99-953	Caterpillar D8-R Dozer	01/21/99	10,401	25,000	1/23/2012	13.01	42%
					Lamb Canyon Average	8.98	33%
					All Sites Average	10.28	37%

*Water truck units have been converted from miles to hours

8.6 *EQUIPMENT SERVICES*

It is our understanding that the Fleet Services section functions as part of the County's Waste Management Department (WMD). We see this as a positive arrangement. Some of the benefits of this arrangement should be increased communication, responsiveness and oversight. As a comparison, other Municipal Landfills commonly rely on Fleet Services that are not under their supervision. This practice commonly has issues such as excessive downtime, extended response time and a lack of departmental cohesiveness.

It is our opinion that the Fleet Services staff appears to be skilled, competent and well equipped. The most frequent comments that were heard were regarding issues in procedure or policy. More specifically it was noted that the current processes of ordering parts and contracting major rebuilds caused excessive Equipment downtime. We suggest that the current processes and procedures are further examined with the intended goal being limiting Equipment downtime.

8.6.1 FUELING

It is our understanding that the Badlands and Lamb Canyon sites have Fleet Services staff dedicated to equipment fueling. This is a standard practice throughout the industry and we do not recommend any changes.

Due to the minimal amount of Equipment at the Blythe Landfill the Equipment Operator performs equipment fueling. This is an acceptable practice since dedicated fueling staff cannot be justified.

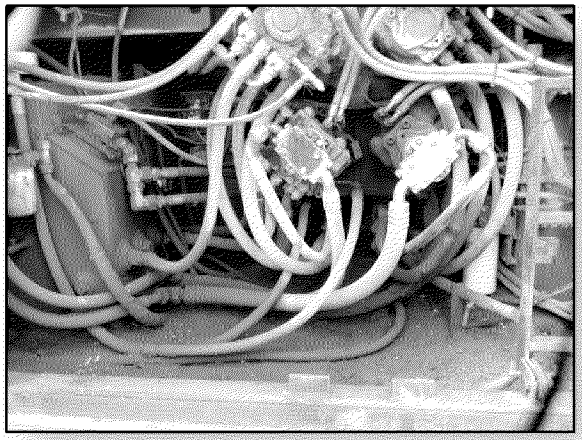
We recommend continuing the current practice of accurate fuel usage tracking and logging at all sites. This data is vital in calculating Equipment Owning and Operating costs and can also aid in budgeting etc.

8.6.2 SERVICING

Based on our follow up interviews with Landfill staff, it was noted that Equipment servicing has dramatically improved in recent years. Overall we did not notice any major issues regarding Equipment Servicing. Due to the age of the Equipment Fleet we strongly suggest that equipment servicing and preventative maintenance remain a top priority.

8.6.3 Minor Repairs

While performing individual Equipment inspections during our sites visits we did notice numerous minor repairs in need of correction. During follow up interviews it was mentioned that the process of ordering parts was often the reason for minor repairs not being fixed in a timely manner. Some of the issues that we noticed were oil leaks, cracked hydraulic sight glasses, leaking hydraulic cylinders and excessively damaged tires. We do not know if in fact the parts ordering process was to blame for these outstanding repairs. It is our opinion that there seemed to be an above average amount of minor repairs in need of attention.



8.6.4 Major Repairs

The practice of sending large repairs such as engine/transmission rebuilds etc. out for repairs is understandable and is a common occurrence throughout the industry. We do question how long this process takes. During our site visits and follow up staff interviews it was noted that equipment is often down for an extended period of time awaiting repair. We recognize the need for competitive bidding for large repair orders performed by a vendor. Landfill operations can be negatively affected by a piece of Equipment that is out of service for an extended period of time. We suggest considering a more efficient system that would allow for a quicker repair turnaround and would result in less equipment down time. It is our understanding that management has recently entered into a parts contract with a major equipment manufacturer that may accomplish this goal.

8.7 *Cost*

8.7.1 Owning and Operating Cost

As part of our assessment we calculated the Owning and Operating costs for the Landfill Equipment and Water Trucks at all three Riverside County sites. All of the required background data was provided by County staff. Caterpillar's format for determining Owning and Operating was used for these calculations and is considered the industry standard. Equipment purchase price, ownership term, average annual

hours, fuel consumption, maintenance, repair reserve and labor costs are a few examples of the many factors that were included in these calculations. The following charts show the hourly Owning and Operating cost for all Equipment and Water Trucks within the Riverside County Landfill Fleet.

Blythe Landfill Hourly Owning and Operating Cost		
Make/Model	Unit	Hourly Cost
Caterpillar 623-F Elevator Scraper	01-957	$115.29
Caterpillar D7-R Dozer	99-954	$168.59
Al-Jon 81 K/R Compactor	99-957	$118.43
Caterpillar 140-G Motor Grader	95-932	$75.46
Autocar / Volvo 6X6 Water Truck	96-425	$65.54
Site Average		$108.66

When compared to other Municipal Landfills in California Riverside County's hourly Owning and Operating costs are relatively low. We credit the following reasons for the low hourly costs:

- The County's labor costs are relatively low when compared to other Municipal Landfills in the region. Labor costs are often a large component of hourly Owning and Operating costs.
- The County's practice of retaining Equipment for a longer period of time allows for the owning costs to be amortized over a longer period of hours.

Badlands Landfill Hourly Owning and Operating Cost		
Make/Model	Unit	Hourly Cost
Caterpillar D10-R Dozer	00-941	$136.80
Caterpillar 836 Compactor	00-942	$122.18
Caterpillar 637-E Scraper	00-943	$161.96
Caterpillar 623-F Scraper	00-944	$126.77
Peterbuilt 6X6 Water Tanker	01-419	$42.91
Caterpillar D6-R Dozer	02-940	$105.55
Caterpillar 950-G Loader	03-946	$62.89
Caterpillar D8-R Dozer	03-951	$122.87
Caterpillar 143H Grader	04-958	$69.15
Caterpillar D9-L Dozer	06-958	$125.57
Caterpillar 637-E Scraper	06-959	$159.96
VOLVO 6X6 Water Tanker	97-433	$46.60
VOLVO 6X6 Water Tanker	98-448	$49.11
Caterpillar 836 Compactor	98-947	$124.17
Site Average		$104.04

We feel that if any equipment was eliminated from the current fleet, the hourly costs (based on Caterpillar's model) for the remaining equipment should decrease due to increased usage.

We recommend the County conduct a more detailed assessment of Equipment Owning and Operating cost – taking into consideration Opportunity Costs (i.e., the opportunity being to sell the excess machines at their current market value as opposed to utilizing these machines because they are currently available.)

Lamb Canyon Landfill Hourly Owning and Operating Cost		
Make/Model	**Unit**	**Hourly Cost**
Kenworth 6X6 Water Tanker	00-410	$42.06
International 6X6 Water Tanker	02-436	$41.72
Caterpillar 637G Scraper	02-960	$179.40
Caterpillar D9-R Dozer	03-952	$121.17
AL-JON 600CS Compactor	05-952	$124.22
Caterpillar 637G Scraper	05-953	$168.49
Terex Wheel Loader TXL300-2	06-948	$68.79
John Deere Dozer 850-J	06-957	$104.00
International 6X6 Water Tanker	07-402	$45.06
International 6X6 Water Tanker	07-403	$43.89
Caterpillar 836H Compactor	09-948	$128.00
Caterpillar 140-G Grader	94-915	$102.62
Caterpillar 140-G Grader	97-918	$66.85
Caterpillar D8-R Dozer	98-951	$115.20
Caterpillar D8-R Dozer	99-953	$149.02
Site Average		$100.03

9 LANDFILL

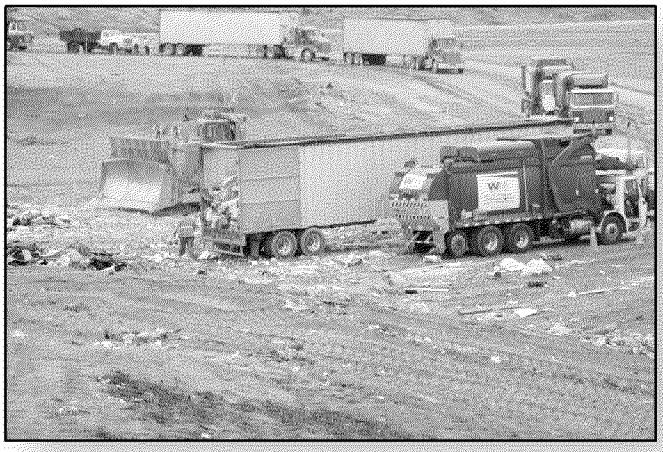
The CORE assessments covered the main activities performed by the heavy equipment, including pushing, spreading, compacting and covering of waste, transport of soil, access road maintenance, litter control, drainage systems, and dust control.

Most of the time on-site however, was spent watching, filming and photographing the operation. This allowed for a rigorous set of evaluations. We were able to gain some understanding of the operation by simply watching. But in order to look deeper into the waste handling process – beyond what we could visually see while on-site – we conducted various time-motion studies. The results of this work are presented on the following pages.

9.1 *TIPPING PAD*

The tipping pads at all three landfills appeared to be of adequate size and configuration to match the inbound waste flow rate. At the time of our site visit, waste was being pushed downhill at Blythe …and uphill at Badlands and Lamb Canyon.

We found that the focus of the crew was directed on the waste-handling operation – which is appropriate. Occasional delays for inbound trucks were typical of other well-run landfills, and the spotters were doing a good job of keying off the heavy equipment operators regarding placement of the next truck. This is preferred over what we sometimes see where the garbage trucks tend to run the operation by demanding to unload immediately.



We also noted that the trucks were required to clean-out at the edge of the tipping pad, rather than moving to a separate clean-out area. This also added a few minutes to vehicle unloading time, but served to keep the deck cleaner.

There was some spilled trash in the unloading area, but we believe this is acceptable and preferred – when compared to the alternative of constant grading of the deck.

Overall, the operation at the tipping pad appeared to be organized and safe.

9.1.1 BLYTHE

The tipping pad layout and waste-handling process at Blythe appeared to be clean, simple and efficient. This is due to two factors. First, the site manager/operator is very competent and coordinates his actions well. Second, because of his heavy workload at the time of our visit (i.e., manager & operator), there simply isn't any time to waste.

9.1.2 BADLANDS & LAMB CANYON

Badlands and Lamb Canyon were using a similar layout at their respective tipping pads. Vehicles unloaded at the toe of the slope and waste was pushed uphill to the face.

9.2 *PUSHING TO FACE*

The pushing operation at all three landfills is typical of other well-run facilities. The most positive thing noted in regard to pushing, was that each site used only one dozer. This is obviously appropriate for Blythe, with its low tonnage, but for the larger landfills, using one dozer shows a lean, efficiency-minded approach. Alternatively, we see many other similarly-sized landfills – especially municipal landfills – that would be using 2 or more dozers for this task.

So, even though we are recommending further reductions in machine numbers, the use of a single dozer at the face was very positive.

In addition to our visual observation, we'll present the findings of our time-motion studies here.

10 DETAILED PRODUCTION ANALYSES

Various detailed production (time-motion) studies were also performed during this study. They include: Activity Sampling; Video Analysis and; Value-Stream Mapping. These techniques – all of which are used to streamline operations by improving efficiency and eliminating waste – are explained on the following pages.

10.1 *VIDEO ANALYSIS*

The second step of productivity measurement was to conduct Video Analyses. Unlike Activity Sampling – which identifies what percentage of time is spent on specific tasks – Video Analyses identifies how much time is spent on those individual tasks.

To conduct the Video Analyses, we evaluated several days of video, condensing it into a few major categories of work. These include:

10.1.1 TIME TO UNLOAD

This refers to the time it takes for a truck to unload once is has backed into place on the edge of the tipping pad.

10.1.2 Time on the Ground

The length of time that individual loads sit on the edge of the tipping pad before to being pushed to the face was also measured. This data – when combined with the unload time – shows how long an individual slot (i.e., parking space) is occupied by a vehicle.

10.1.3 Time to Push

The next step in the process of moving waste from the trucks to the active face is pushing. In this step, the dozers push waste from the edge of the tipping pad to the face – placing the load in the appropriate location for the dozer.

10.1.4 Time to Return

Finally, we also evaluated the second part of the dozer's cycle – the return trip.

In regard to these tasks, we typically hope to see the data fall into a pattern of Normal Distribution (i.e., the classic Bell Curve). When there is no Bell Curve, it often indicates some type of variability. In the case of unloading time, it often reflects several different types of unloading vehicles, such as: roll-off, route and transfer trucks. This variation may also be due to other factors, including: condition of truck; type of material in the load and; slope of truck when dumping.

10.2 *Activity Sampling – Dozer and Compactor*

We also conducted Activity Sampling of the primary (trash) dozer and the compactor at each landfill.

The above-listed tasks are discussed for each of the three landfills on the following pages. The results of our Detailed Production Analyses indicate that these three landfills are operating at a normal rate of efficiency. In our experience, their performance is above average compared to other municipal landfills, and typical of similarly-sized private landfills.

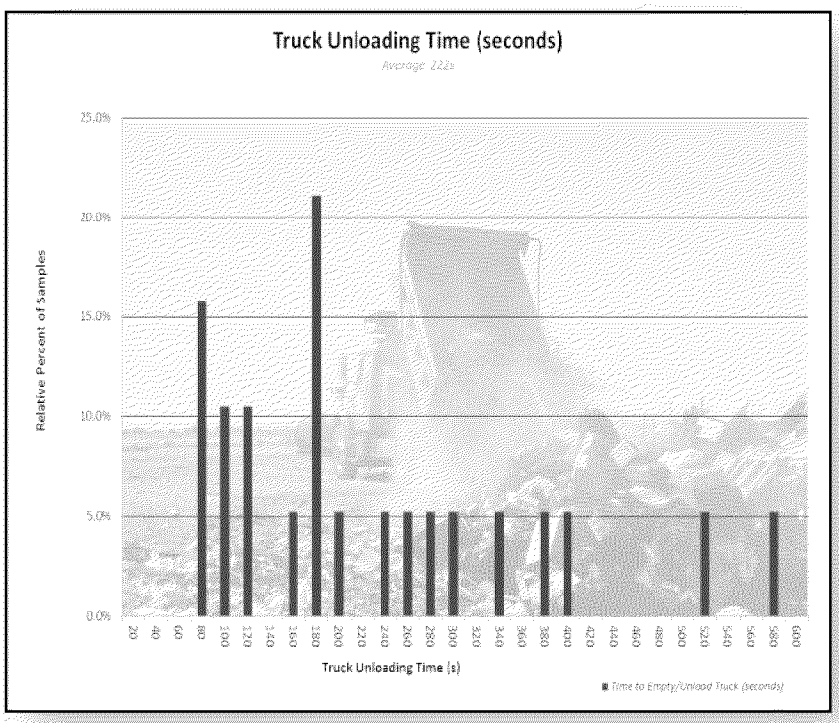
The results of these studies should be taken in the context that every operation – at every landfill – has inherent inefficiencies. This information should provide Riverside County with useful data to enable them to continue improving their operation.

It should be noted that we have performed these types of analyses at other municipal and private landfills, and the results from this study indicate a competitive level of performance.

10.3 *Video Analysis and Activity Sampling- Blythe*

10.3.1 Time to unload - Blythe

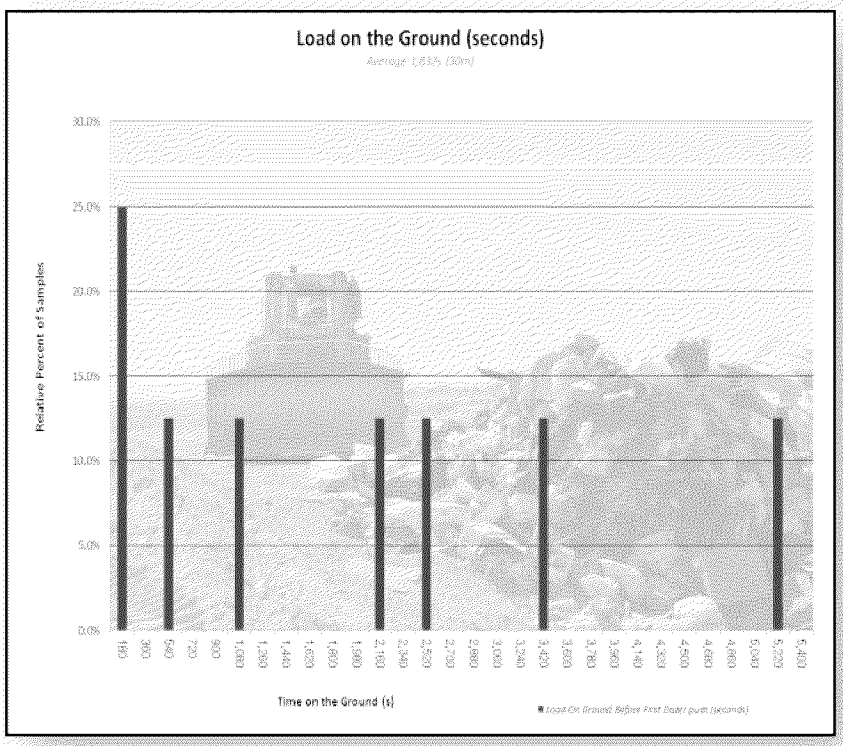
At Blythe, it took vehicles an average of 3m: 42s (3 minutes and 42 seconds) to unload. The actual times ranged from just over 1 minute ...to nearly 10.



10.3.2 Time on Ground - Blythe

Once dumped, loads sat on the ground an average of 30m: 32s before being pushed. Initially this may sound like a long time. But keep in mind that Blythe receives few loads, and it is actually more efficient to let them stack up, before starting the dozer and pushing them.

In fact, at most landfills we generally do not recommend that every load be pushed immediately, particularly during slow periods, when truck arrival is sporadic. At these times, it does not make sense to have a dozer poised at the tipping pad when it is likely to have more wait time than push time.



10.3.3 Total Slot Time - Blythe

Based on an average "Unloading Time" of 3m 42s, and an average "On the Ground" time of 30m 32s, the average "Occupied" time for each slot is 34m: 14s. Thus, each slot can handle – on average – 1.75 loads per hour. At 3.2 tons per load (per JTD tonnage ÷ load count), that's 5.6 tons per hour ...per slot.

So, with 6 slots, Blythe can receive approximately 34 tons of waste before it must be pushed ...even more if the loads are double-stacked. With the relatively low tonnage at Blythe, waiting in line is not an issue.

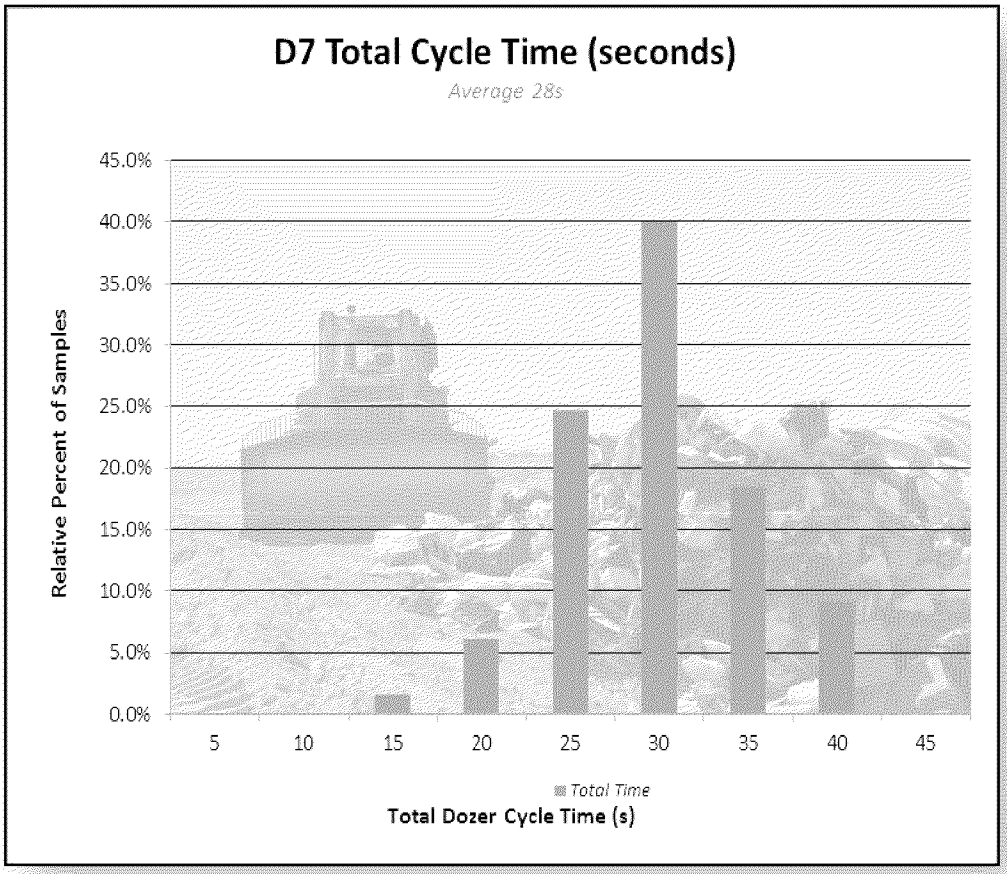
10.3.4 TIME TO PUSH - BLYTHE

It was found that the average push time – from the edge of the tipping pad to the face was 15s.

10.3.5 TIME TO RETURN - BLYTHE

The results of our evaluation indicate an average return time of 13s.

Thus, the average cycle time for the dozer, was 28s. This means that under ideal conditions, the dozer at Blythe could make approximately 128 pushes per hour. At 3.2 tons per push, that works out to raw production rate of 410 tons per hour (tph).



If we back this down to 85% efficiency, the production rate decreases to 348 tph.

And finally, if we assume that every 3rd push is a cleanup push, the dozer's production rate is down to 232 tph.

Blythe receives approximately 60 tons per day – which the dozer could handle in approximately 16 minutes.

Are there other issues and other tasks? Yes, of course. We estimate that another 1 hour per day is required for:

- Pre-fill Striping
- Placing Tarps
- Placing Cover Soil
- Other Activities

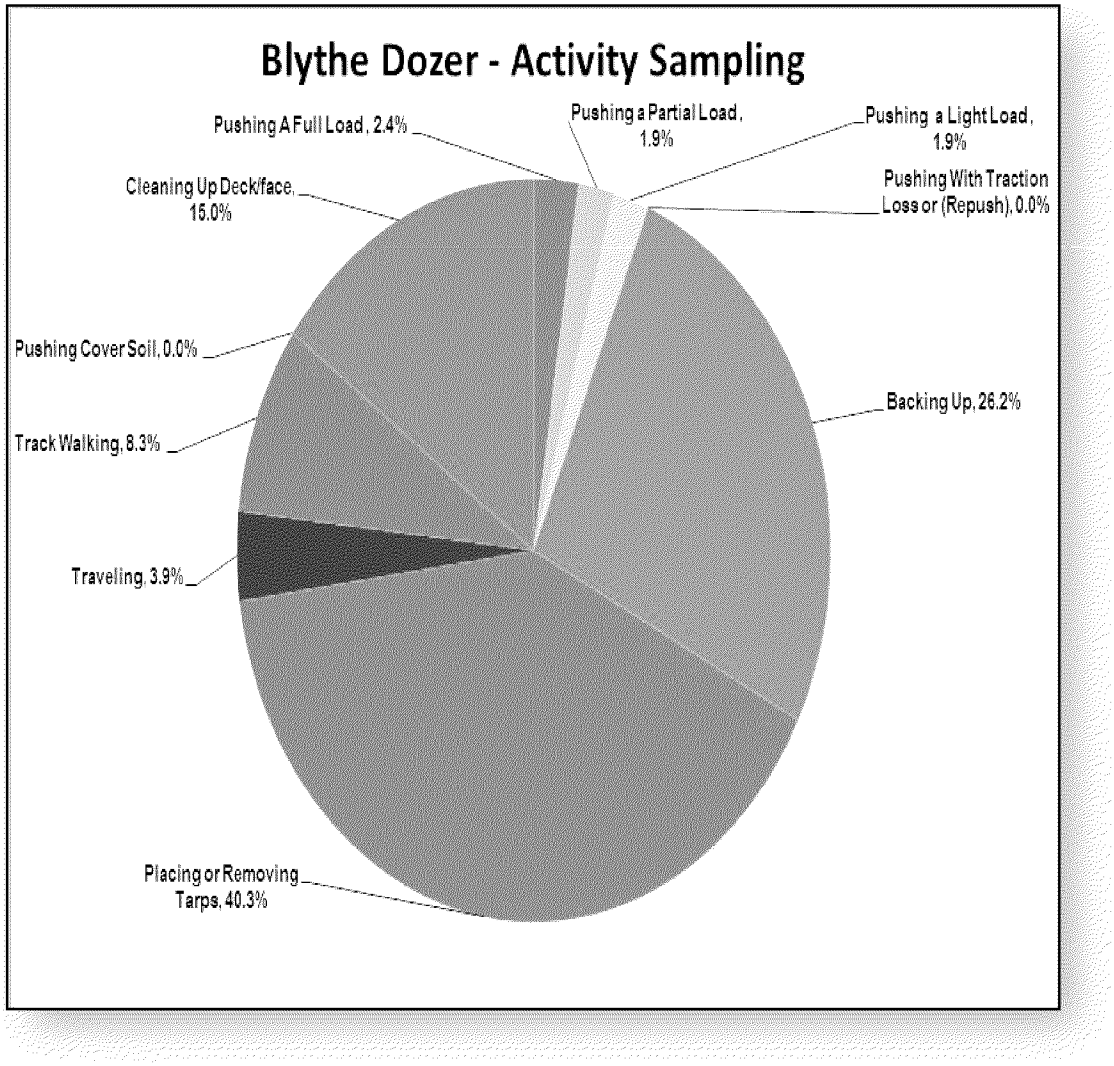
In fact, based on County records, the dozer at Blythe works approximately 1 hour per day.

10.3.6 DOZER ACTIVITY SAMPLING – BLYTHE

As part of our evaluation at Blythe, we performed an Activity Sampling study on the dozer. We found that it did a variety of things during the day, some which would be classified as Value Added (VA) – these are essential activities …and some which are classified as Non-Value Added (NVA) – these are non-essential activities.

VA activities may include pushing a full load, backing up, placing a tarp, etc. NVA activities may include pushing a light/partial load, traveling, waiting, making unnecessary moves, etc.

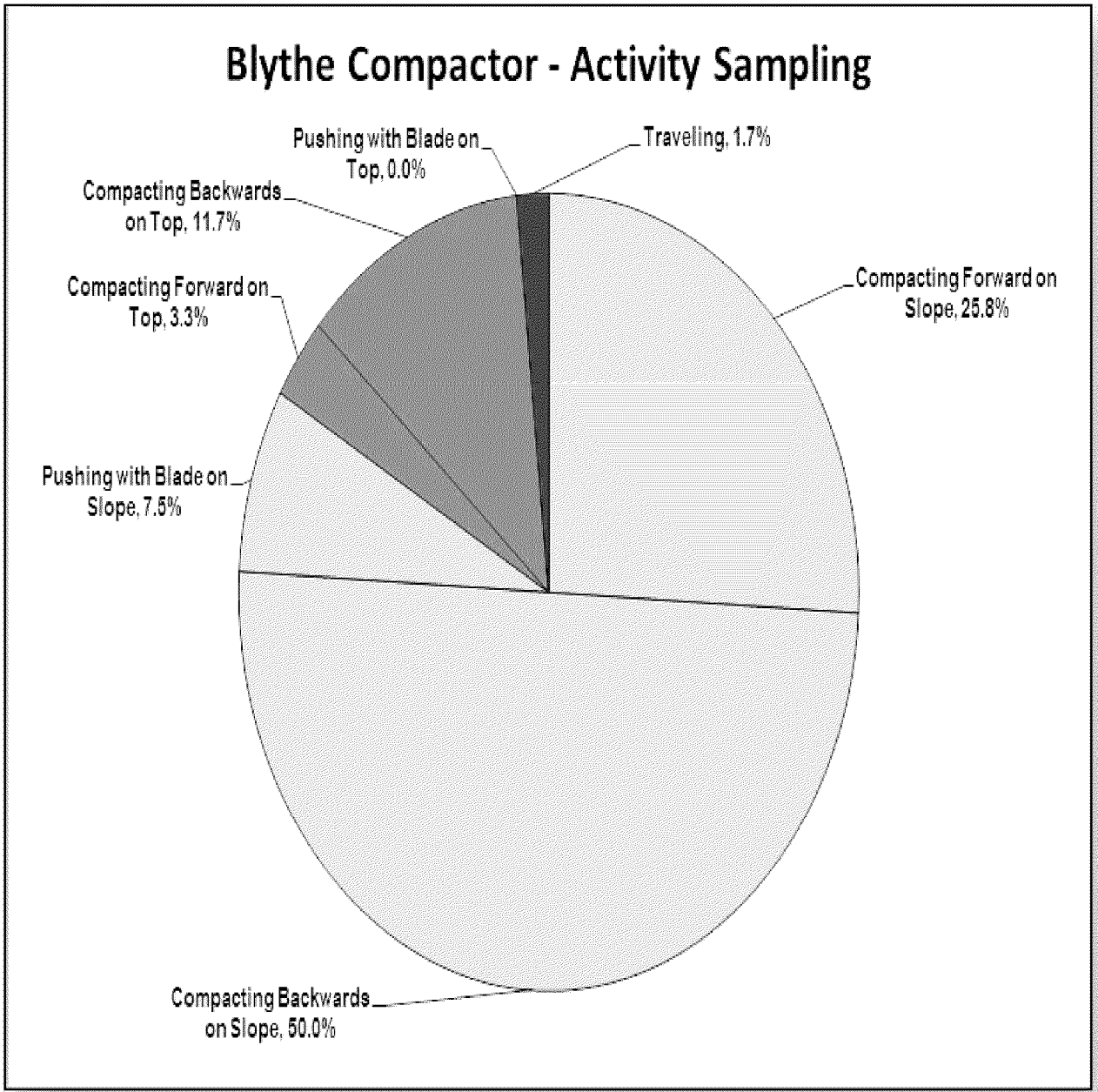
It should be noted that backing up, is a vital part of an efficient, full-payload (VA) push. But backing is also required when the dozer is performing NVA activities. Based on our review, the dozer at Blythe may be able to increase efficiency by focusing on making full-payload pushes and spending less time cleaning the deck between customers.



10.3.7 Compactor Activity Sampling – Blythe

We also performed activity sampling for the compactor. This portion of our study revealed that the compactor spends 83% of its time on the cell's slope (where it is least effective), and 15% of its time on the top (where it would be most effective). The other ~2% is spent traveling.

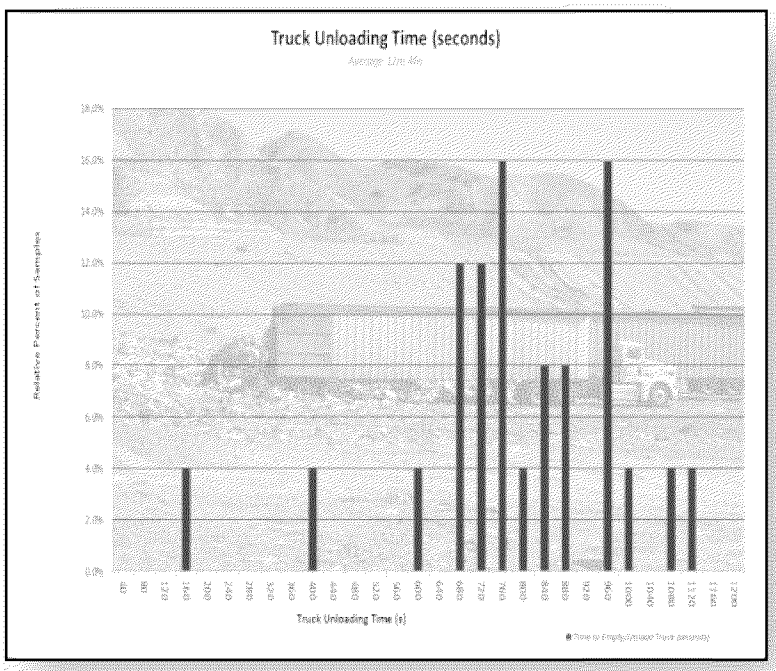
While compacting on a slope is by far the most common practice at landfills across the U.S. – for both municipal and private landfills, it is not the most efficient method. Later in this report, we discuss the benefits of changing to a pancake or "flat-pack" process. This is something we recommend for all three landfills.



10.4 *VIDEO ANALYSIS AND ACTIVITY SAMPLING- BADLANDS*

10.4.1 TIME TO UNLOAD - BADLANDS

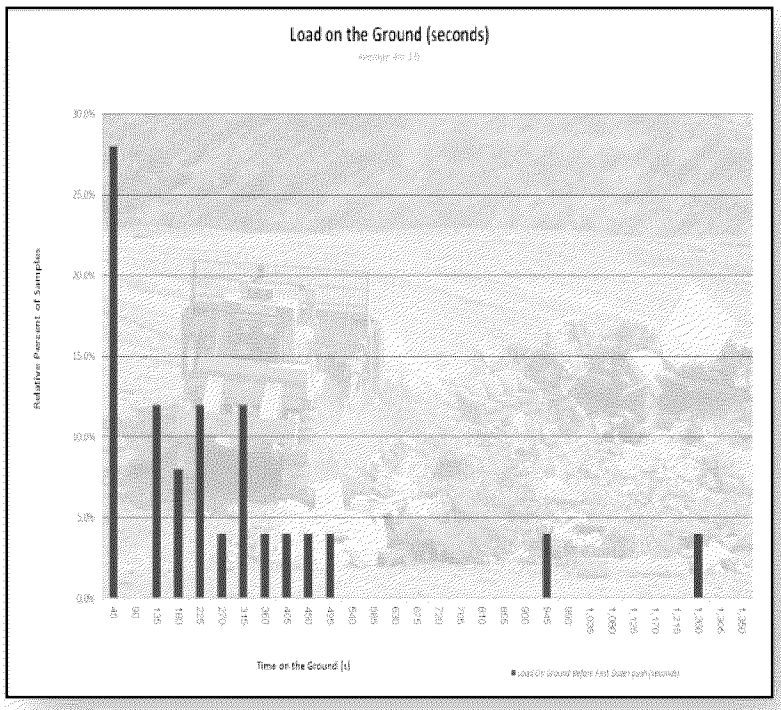
At Badlands, it took vehicles an average of 12m: 46s to unload. The actual times ranged from just under 3 minutes ...to nearly 19. These longer times reflect some of the live floor trucks which take longer to unload and clean out.



However, it should also be noted that this is 81% longer than the average unloading time we measured at Lamb Canyon.

Much of the difference is due to the predominate type of truck (transfer trucks take longer than route trucks), but there may also be an issue related to driver culture or environment. For example, it is our understanding that the drivers who come to Badlands are paid by the hour and may not have an incentive to quickly clean out their trucks. In contrast, the drivers that come to Lamb Canyon are paid by the load and clearly have an incentive to be as efficient as possible which results in less time at the tipping pad.

We also noted that at Lamb Canyon, trucks had a longer waiting line more often than at Badlands. We did not perceive this as problematic, but rather a result of loads sitting on the ground (prior to pushing) a bit longer- 6m: 0s (Lamb Canyon) vs. 4m: 13s (Badlands). The longer waiting line may induce a bit of pressure on those who are dumping (at Lamb Canyon), to finish unloading and make room for the next vehicle.



10.4.2 TIME ON GROUND - BADLANDS

Once dumped, loads sat on the ground an average of 4m: 13s before being pushed. This is much shorter than what we measured at Blythe – and reflects the fact that with higher rates of inbound tonnage,

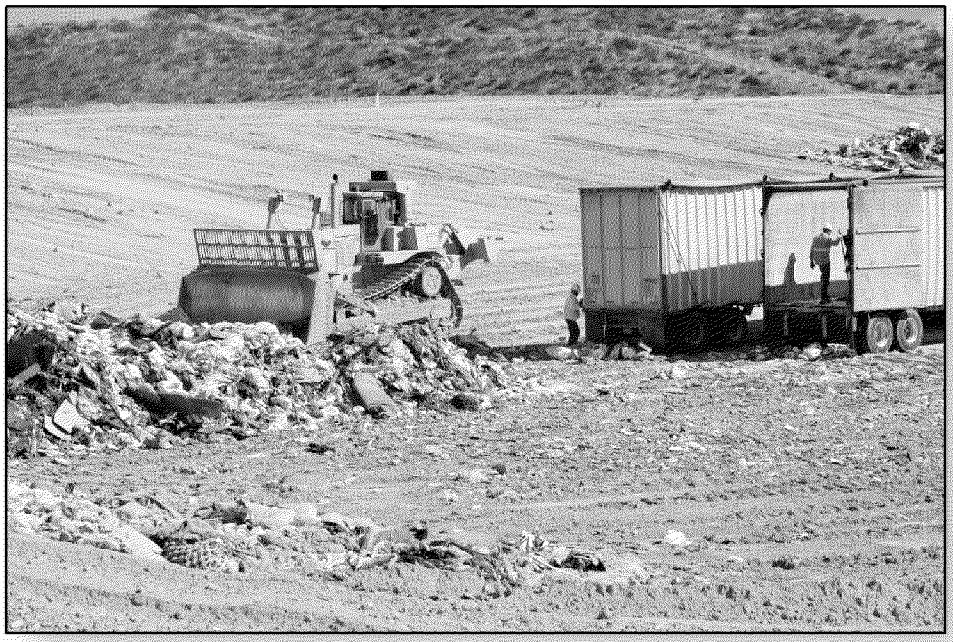
the dozer at Badlands must be available and pushing on more of a continual basis.

It should be noted though, that during the few slow periods, the dozer did occasionally park. This is shown by the few loads that sat for a longer time …up to 21 minutes.

10.4.3 Total Slot Time - Badlands

Based on an average "Unloading Time" of 12m 46s, and an average "On the Ground" time of 4m: 13s, the average "Occupied" time for each slot is 16m 59s. Thus, at Badlands each slot can handle – on average – 3.53 loads per hour. At ~18 tons per load, that's 64 tons per hour …per slot.

So, with 6 slots, Badlands can receive approximately 384 tons of waste before it must be pushed.



Because of the slower unloading times at Badlands, the unloading slots are not as productive as those at Lamb Canyon. This results in reduced efficiency for the dozer, and even though Badlands uses a D10 (as opposed to Lamb Canyon's D9), the dozer at Badlands works 2.7 hours more per day.

Generally, during peak times, the dozer cannot wait for all of the slots to fill up, but must be diligent to push as waste arrives. And, during those busy times, prompt pushing helps to minimize the time trucks may have to wait in line.

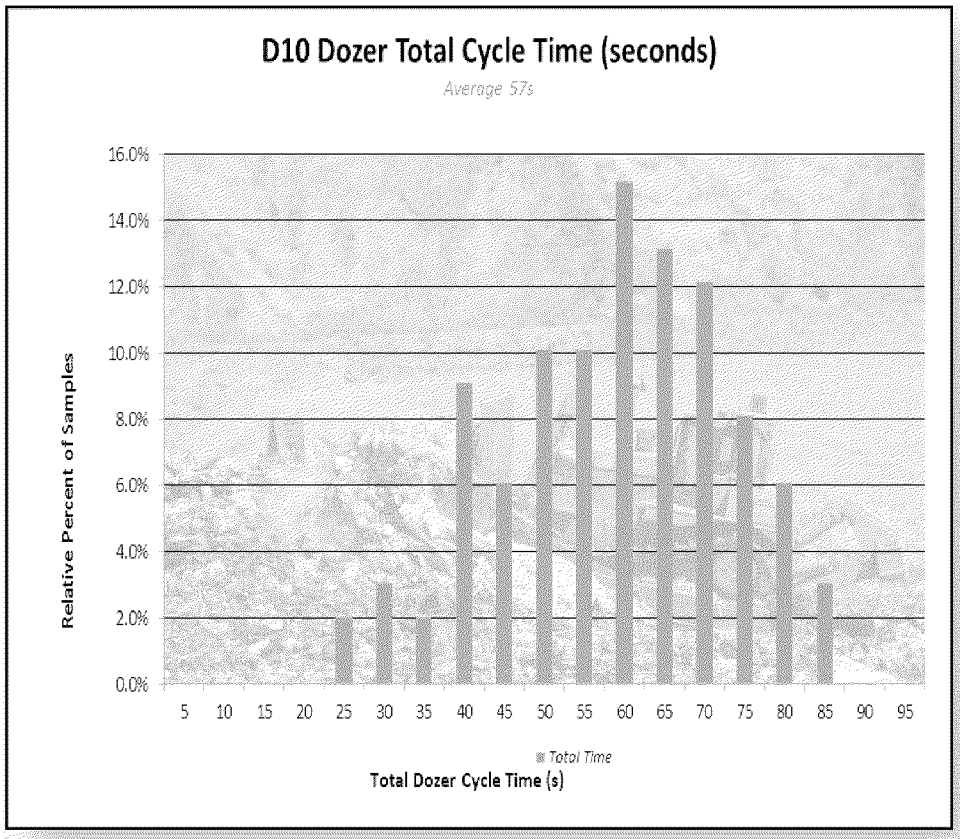
However, when truck arrival is sporadic, it is more efficient for the dozer to stop – and wait until the unloading area fills before pushing. This simply ensures that when the dozer is working, it spends a higher percentage of its time making production pushes …not waiting.

10.4.4 TIME TO PUSH - BADLANDS

It was found that the average push time – from the edge of the tipping pad to the face was 35s.

10.4.5 TIME TO RETURN - BADLANDS

The results of our evaluation indicate an average return time of 22s.



Thus, the average cycle time for the dozer, was 57s. This means that under ideal conditions, the dozer at Badlands could make approximately 63 pushes per hour. At 18 tons per push, that works out to a raw production rate of 1,134 tons per hour (tph).

If we back this down by 85%, and then assume that every 5th push is a cleanup push, the dozer's maximum production rate is approximately 771 tph.

Badlands receives approximately 1,672 tons per day – which the dozer could handle in approximately 2.2 hours – under ideal conditions. But of course the landfill doesn't receive all of this tonnage in a large block …but across the entire day.

So, this number should be taken in the context that the waste arrives at a varying, though somewhat predictable rate. The actual conditions at this landfill – or any landfill – are never ideal. Thus, while a tentative schedule can be made for the dozer, it must in fact, respond to waste as trucks arrive. And as a result, there will be some inherent inefficiency due to waiting, re-positioning, etc. So the 2.2 hours becomes a target toward which we strive, even knowing that the actual machines hours will be higher.

Also, there are other tasks that the dozer performs (i.e., removing/placing tarps), but they could likely be handled in approximately 1 hour per day.

Overall, our target for the dozer at Badlands is 3.2 hours per day.

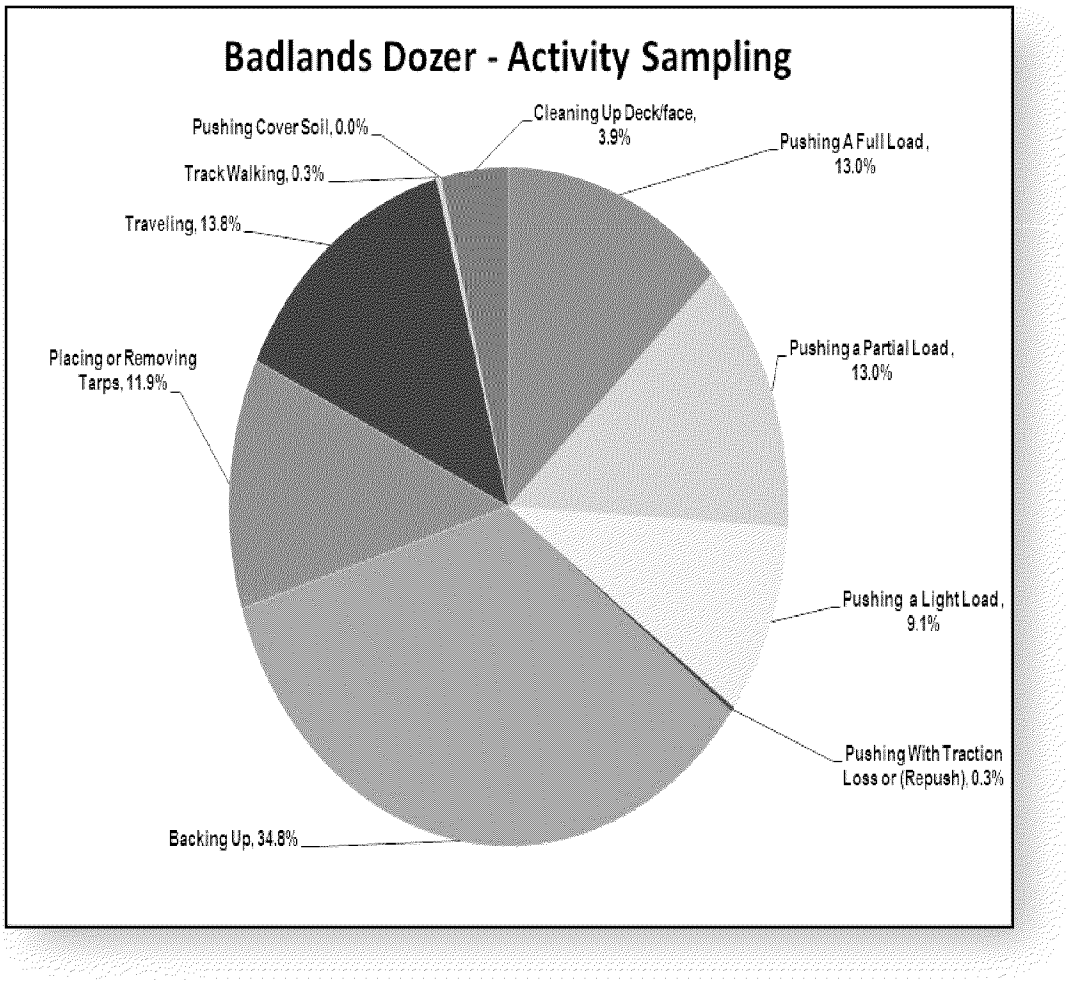
As a point of reference, the D10 dozer at Badlands currently logs an average of 7.7 hours per day. This simply means that there is some opportunity to reduce dozer hours by eliminating some of the Non-Value Added activities shown in the following section.

10.4.6 Dozer Activity Sampling – Badlands

As part of our evaluation at Badlands, we performed an Activity Sampling study on the dozer. We found that it did a variety of things during the day, some which would be classified as Value Added (VA) – these are essential activities …and some which are classified as Non-Value Added (NVA) – these are non-essential activities.

VA activities may include pushing a full load, backing up, placing a tarp, etc. NVA activities may include pushing a light/partial load, traveling, waiting, or making other unnecessary moves.

It should be noted that by eliminating some of the NVA activities, the dozer's daily hours are actually expected to decrease. This would decrease the machine's utilization rate. But remember, the goal is to maximize efficiency – not necessarily to achieve the highest possible utilization rate.



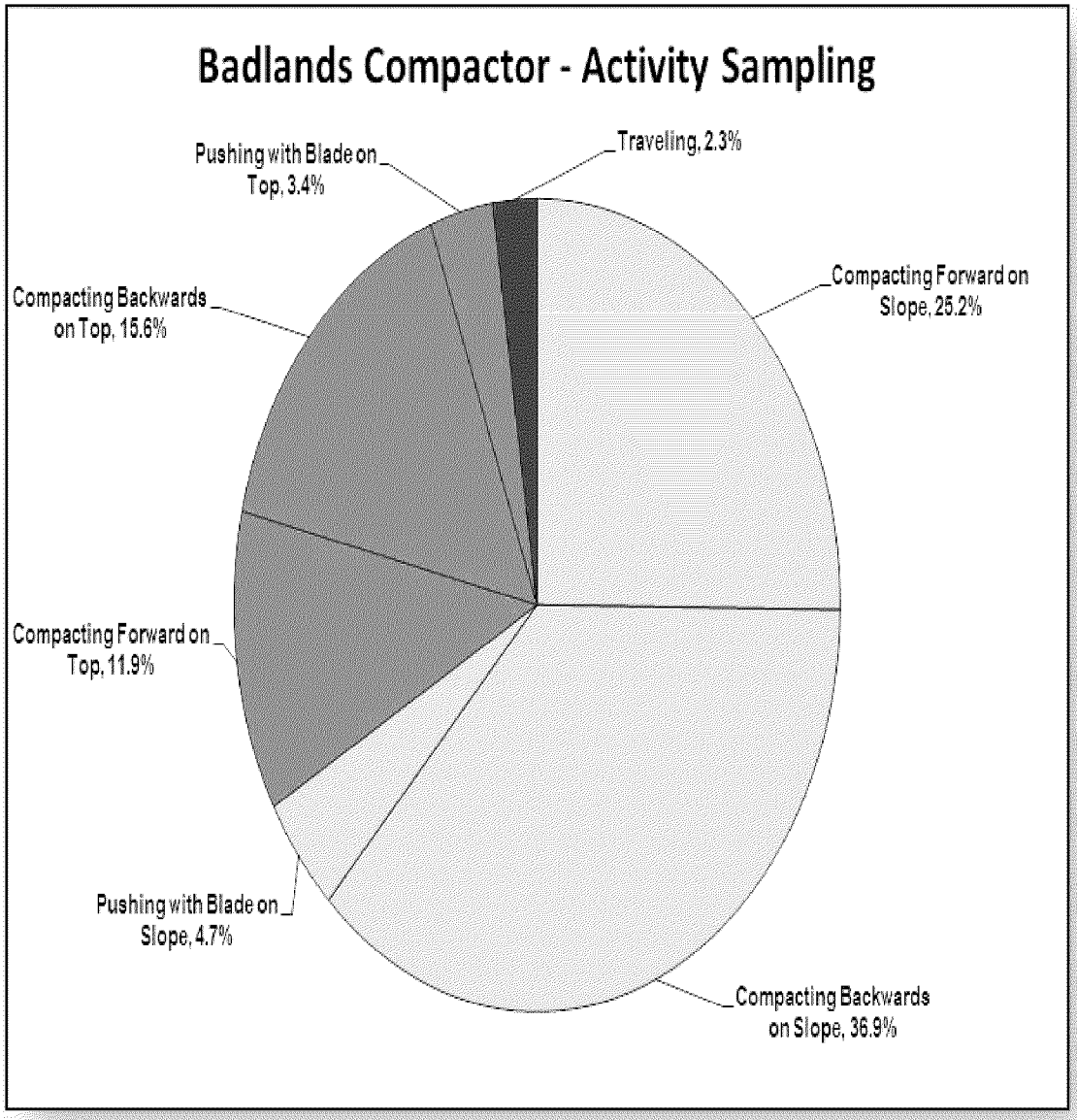
To increase the efficiency of the Badlands dozer, we suggest it focus on making full-payload pushes, spend less time traveling, and minimize deck cleaning, doing only what's required to provide safe vehicle access.

In addition to the activities shown here, the D10 dozer spent 10.6% of its time parked, and was outside the frame of the video 30.4% of the time.

10.4.7 Compactor Activity Sampling – Badlands

We also performed activity sampling for the compactor. This portion of our study revealed that the compactor spends 67% of its time on the cell's slope (where it is less effective), and 31% of its time on the top (where it would be more effective). The other ~2% is spent traveling.

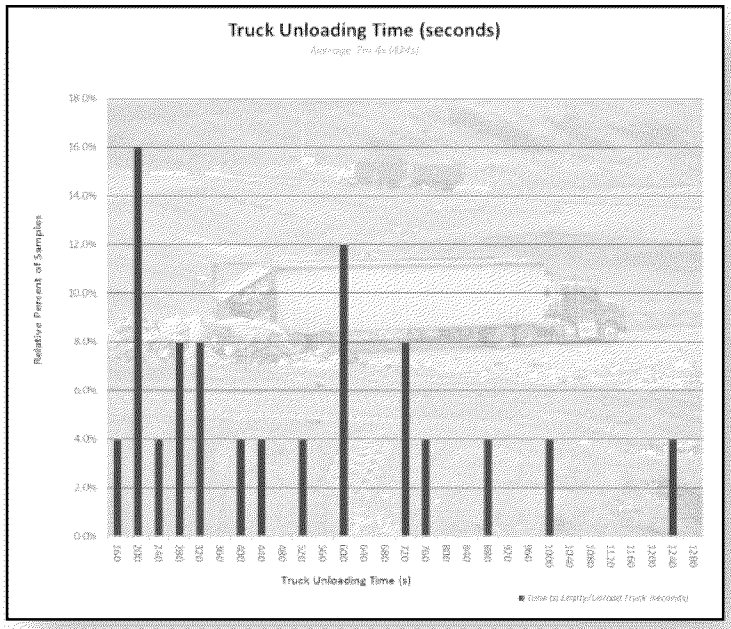
While compacting on a slope is by far the most common practice at landfills across the U.S. – for both municipal and private landfills, it is not the most efficient method. Later in this report, we discuss the benefits of changing to a pancake or "flat-pack" process. This is something we recommend for all three landfills.



10.5 *Video Analysis and Activity Sampling-Lamb Canyon*

10.5.1 Time to unload – Lamb Canyon

At Lamb Canyon, it took vehicles an average of 7m: 4s (7 minutes and 4 seconds) to unload. The actual times ranged from 6 minutes …to more than 20. But on average, the unloading time is much faster than the Badlands average of 12m: 46s. This difference was discussed in greater detail in the previous section (Time to Unload – Badlands).

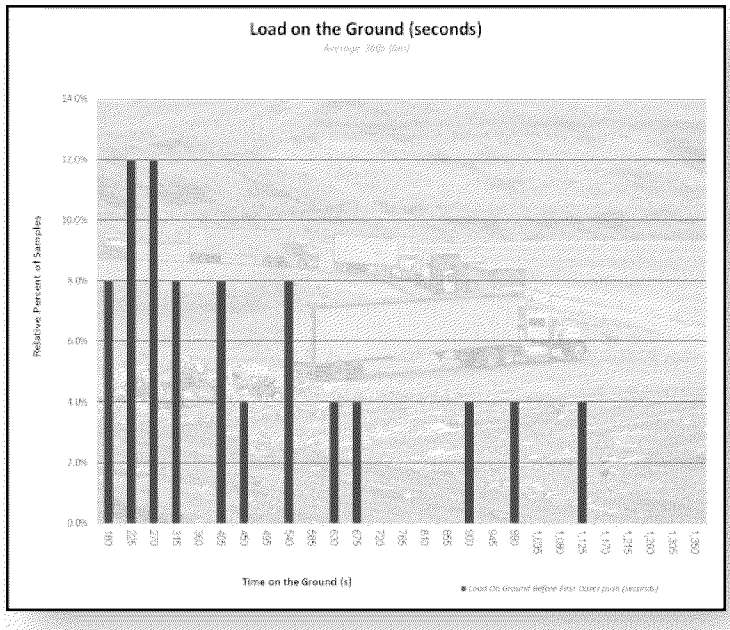


In any case, we suggest that the unloading system at Lamb Canyon is efficient and well-run.

10.5.2 Time on Ground - Lamb Canyon

Once dumped, loads sat on the ground an average of 6m: 0s before being pushed. This is a bit longer than what we found at Badlands – where the average was 4m: 13s. However, we did not perceive this to be significant – and may simply be based on the difference is dozer size (e.g., D9 at Lamb Canyon v. D10 at Badlands).

We also believe that the time a load sits on the ground before being pushed is not directly related to production. Generally, it is best for the dozer to push the trash in blocks – when the tipping area is nearly filled – rather than pushing each load as quickly as possible.



Accordingly, we do not recommend that every load be pushed immediately, particularly during slow periods, when truck arrival is sporadic. At these times, it does not make sense to have a dozer poised at the tipping pad when it is likely to have more wait time than push time. The dozer's activity should be adjusted, based on the flow of inbound waste.

10.5.3 TOTAL SLOT TIME - LAMB CANYON

Based on an average "Unloading Time" of 7m: 4s, and an average "On the Ground" time of 6m 0s, the average "Occupied" time for each slot at Lamb Canyon is 13m: 4s. Thus, each slot can handle – on average – 4.6 loads per hour. At 15 tons per load, that's 69 tons per hour …per slot.

So, with 6 slots, Lamb Canyon can receive approximately 414 tons of waste before it must be pushed …even more if the loads are double-stacked. We do not recommend double-stacking transfer loads, but considering the pushing capability of the D9 dozer, double-stacking the packer and route trucks makes sense.

The productivity of the unloading slots at Lamb Canyon is 8% higher than what we measured at Badlands. Because Badlands receives a higher percentage of transfer trucks, we'd expect it would be higher than Lamb Canyon.

10.5.4 Time to Push - Lamb Canyon

It was found that the average push time – from the edge of the tipping pad to the face was 34s.

10.5.5 Time to Return - Lamb Canyon

The results of our evaluation indicate an average return time of 27s.

Thus, the average cycle time for the dozer, was 61s. This means that under ideal conditions, the dozer at Lamb Canyon could make approximately 59 pushes per hour. At 15 tons per push, that works out to 885 tons per hour (tph).

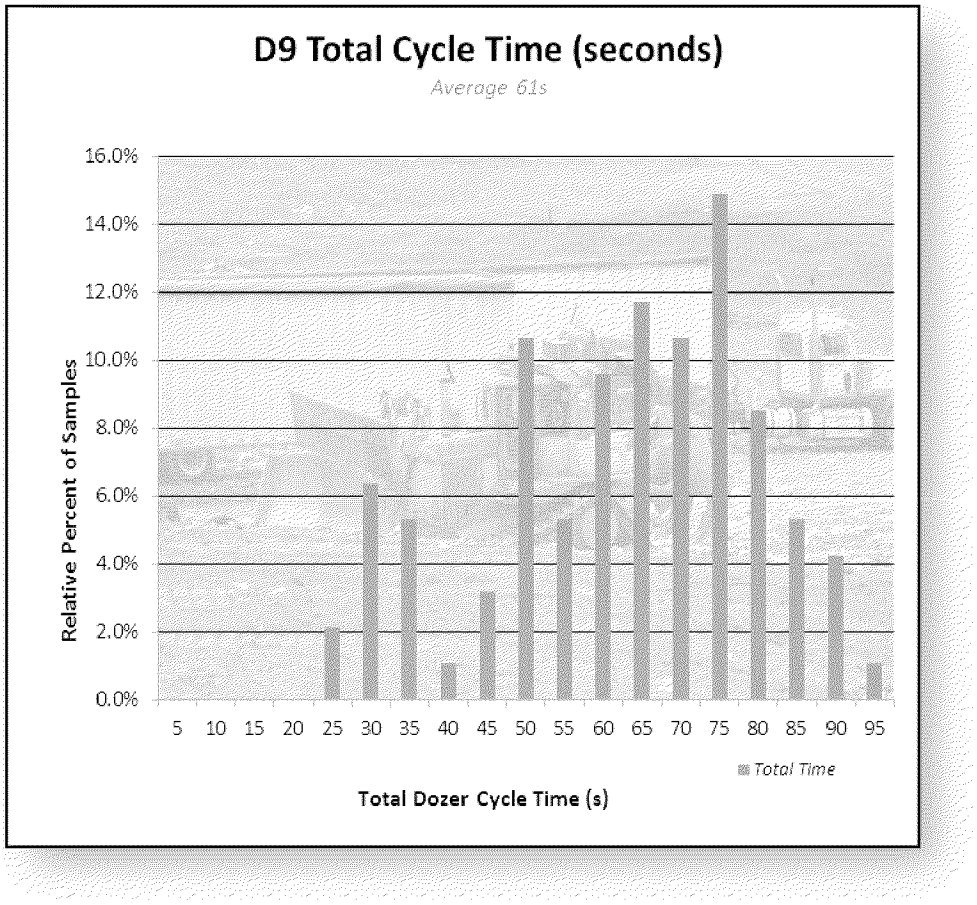
If we back this down to 85% efficiency, the production rate decreases to 753 tph.

And finally, if we assume that every 5th push is a cleanup push, the dozer's production rate is down to 602 tph.

Lamb Canyon receives approximately 1,726 tons per day – which the dozer could handle in approximately 2.9 hours.

Are there other issues and other tasks? Yes, of course. We estimate that another 1 hour per day is required for:

- Pre-fill Striping
- Placing Tarps
- Placing Cover Soil
- Other Activities



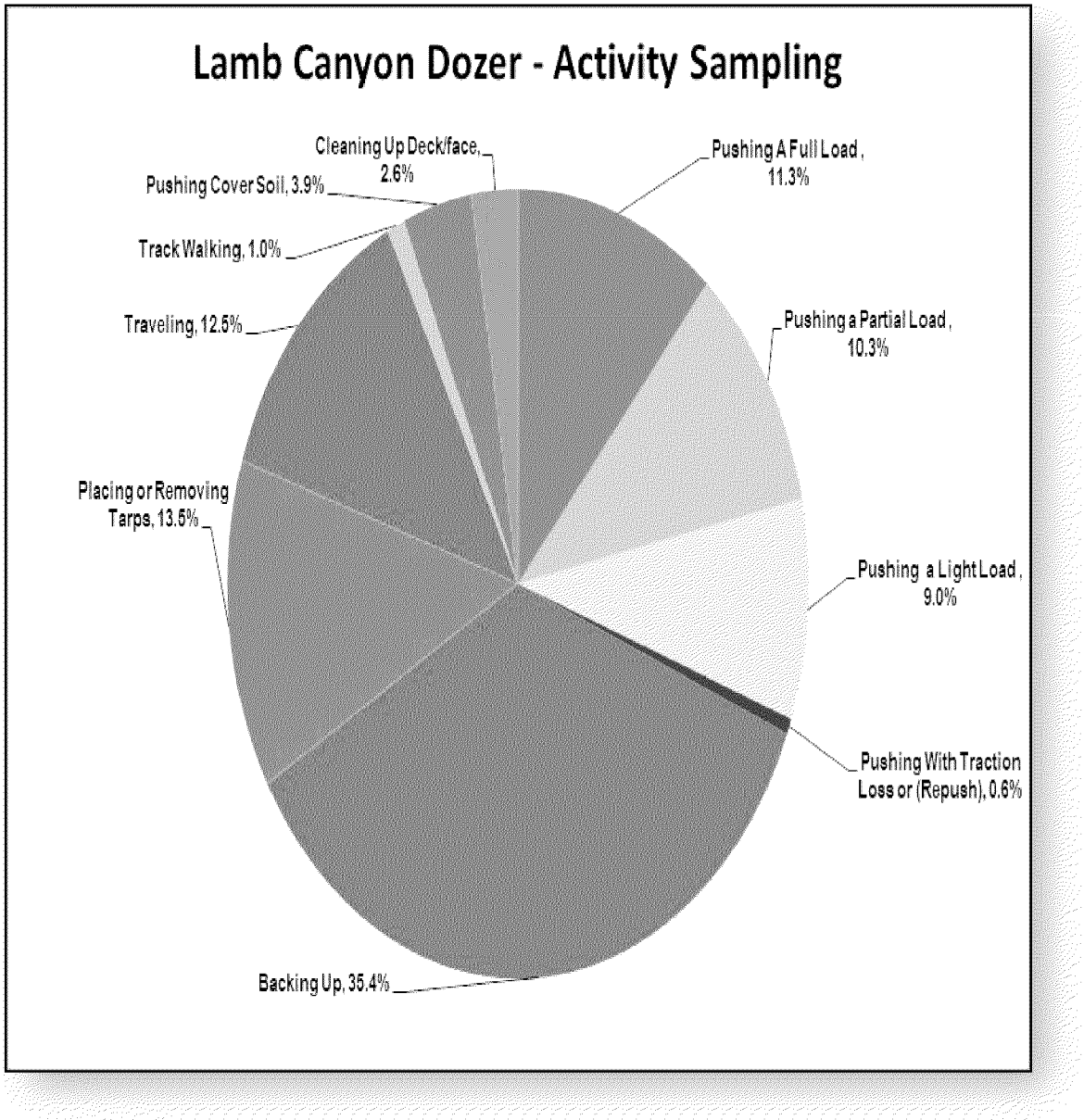
Thus, at Lamb Canyon we estimate the dozer could ideally handle the inbound waste – and other duties – in approximately 3.9 hours per day. As a point of reference, the D9 dozer at Lamb Canyon currently logs an average of 5.0 hours per day. This indicates an efficient and predictable level of performance. Additional improvement will be gained primarily by reducing Non-Value Added activities.

10.5.6 Dozer Activity Sampling – Lamb Canyon

As part of our evaluation at Lamb Canyon, we performed an Activity Sampling study on the dozer. We found that it did a variety of things during the day, some which would be classified as Value Added (VA) – these are essential activities …and some which are classified as Non-Value Added (NVA) – these are non-essential activities.

VA activities may include pushing a full load, backing up, placing a tarp, etc. NVA activities may include pushing a small load, traveling, waiting, making unnecessary moves, etc.

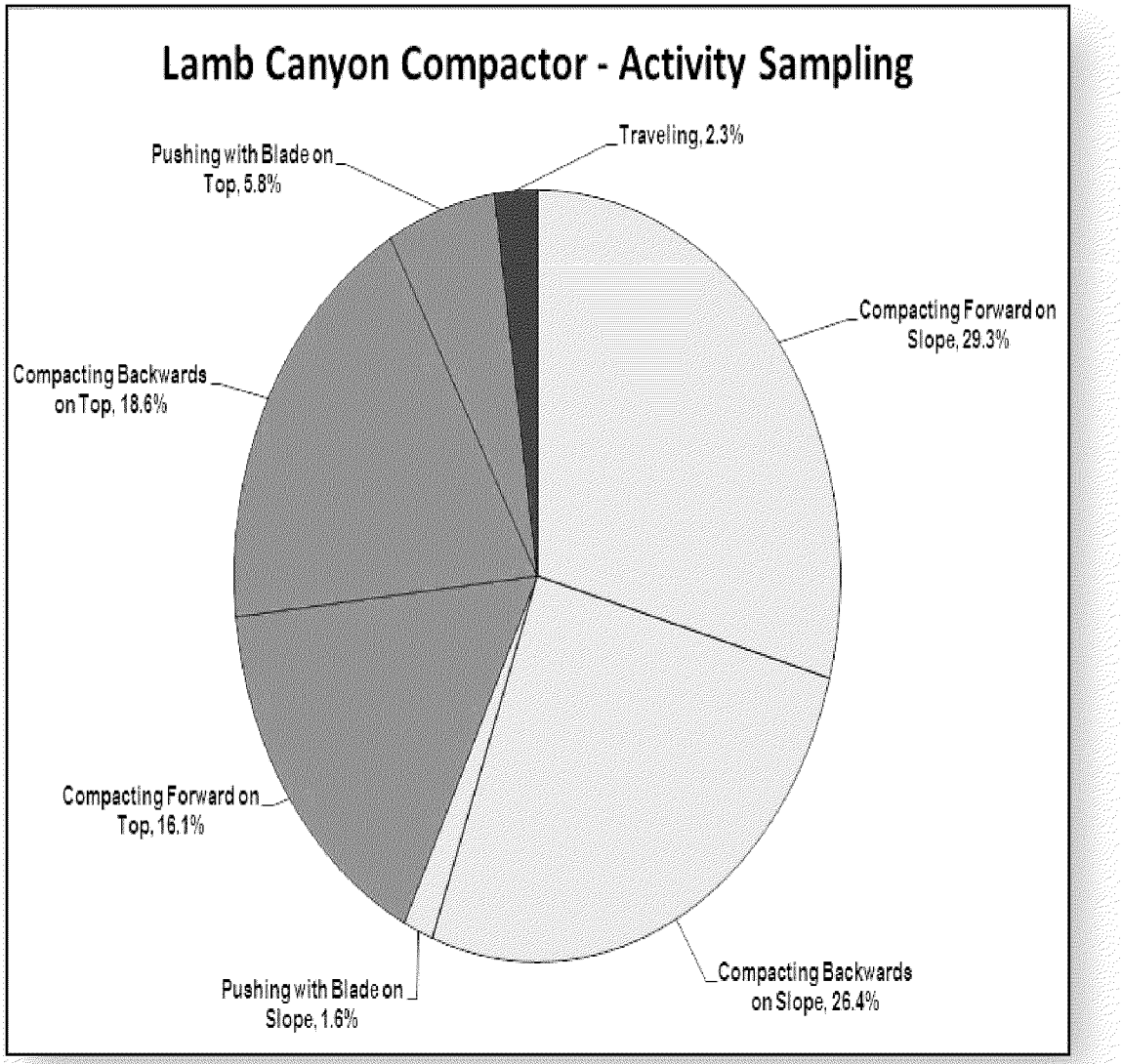
In addition to the activities shown here, the D9 dozer spent 18.6% of its time parked, and was outside the frame of the video 14.1% of the time.



10.5.7 Compactor Activity Sampling – Lamb Canyon

We also performed activity sampling for the compactor. This portion of our study revealed that the compactor spends 83% of its time on the cell's slope (where it is less effective), and 15% of its time on the top (where it would be more effective). The other ~2% is spent traveling.

While compacting on a slope is by far the most common practice at landfills across the U.S. – for both municipal and private landfills, it is not the most efficient method. Later in this report, we discuss the benefits of changing to a pancake or "flat-pack" process. This is something we recommend for all three landfills.

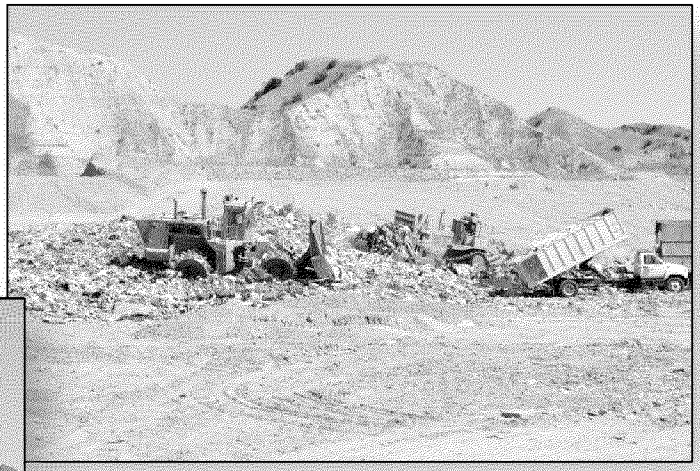


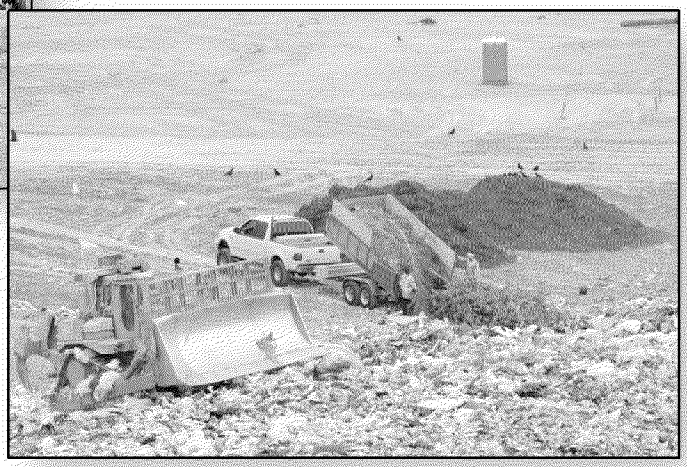
11 TIPPING PAD OPERATIONS

The tipping pads at all three landfills were properly oriented and well-run. Generally, the spotters were controlling traffic and there was good evidence of coordination between the spotter(s) and operator(s) in regard to where and when to place specific loads.

The pushing operation is typical of other landfills we have evaluated, and the fact that a single dozer is used, even at the larger 2 landfills is a good indicator of efficiency. However we did find – at all three landfills – that only 1 out of three pushes with the dozer was a full load. The other two were partial or light loads. This indicates some pressure to get the waste pushed from the pad quickly, rather than waiting to gather full loads.

We understand the need for cleanup pushes at the tipping area. And typically we'd expect that every 3rd push (at Blythe) or every 5th push (at Badlands or Lamb Canyon) to be a cleanup push. It should be noted that this is quite typical at both municipal and privately operated landfills. It should not be considered a serious inefficiency, but rather something to work on during training sessions with the operators and spotters.





In general, the dozers were able to keep up with the inbound waste. We did however, note some in-efficiencies. For example, in the waste-handling operation, the dozers and compactor should be working as an integrated team. The focus should work backward, starting with the production rate of the compactor; the dozers should be feeding a steady rate of trash to the face for the compactor to handle. This waste should be spread in a

repetitive pattern, allowing the compactor to process each layer of trash before the next is placed. This frequently did not occur. Instead of keying off the compactor, we sometimes saw the bulldozers responding to the trash trucks. It appeared that in some cases, the dozers were more concerned with pushing the trash, than coordinating with the compactor.

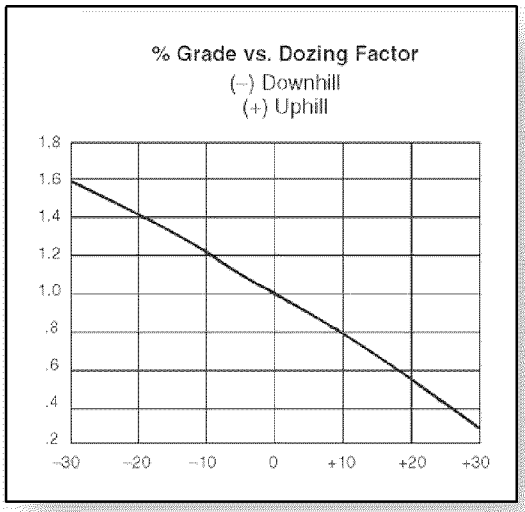
We also saw the compactors regularly waiting for the dozer to push a load into place. This is inefficient and a direct result of not having enough room for spreading the inbound waste in a standardized pattern.

We believe this is not just an operator issue; it is also a management issue. The solution is to develop a standardized process for waste handling, clearly communicate it to the operators, and then affirm that it is happening through direct observation and review of regular benchmarking. Our recommendation is that the waste operation should first key off the compactor's production rate and working to a predetermined pattern of waste placement and compaction.

Increased pushing productivity could also be obtained by pushing downhill whenever possible.

11.1 *PUSH DOWNHILL*

Changing from uphill pushing to downhill pushing will provide the greatest possible increase in dozer productivity. According to Caterpillar, pushing up a 3:1 slope will decrease dozer productivity by as much as 70% while pushing downhill on a similar slope will increase productivity by nearly 60%. This dramatic increase in production will allow the landfill crew to handle the days' trash with fewer pushes, easier pushes, fewer dozers, reduced machine wear, less fuel consumption and considerably less cost.



We understand the drawbacks of pushing downhill: increased potential for litter; tendency to build "cliffhangers;" increased tipping pad maintenance; slower cycle times; reduced visibility when backing across the hinge point; etc. However, we also recognize many of the benefits: easier on machine – especially during hot weather; increased productivity – resulting in fewer pushes; faster cycle times; faster pad clean-off; etc.

One option that allows pushing downhill, and also minimizes some of the drawbacks, is to establish two similar unloading areas. This is explained in the following section.

11.2 *CONSIDER PUSHING FROM TWO PADS*

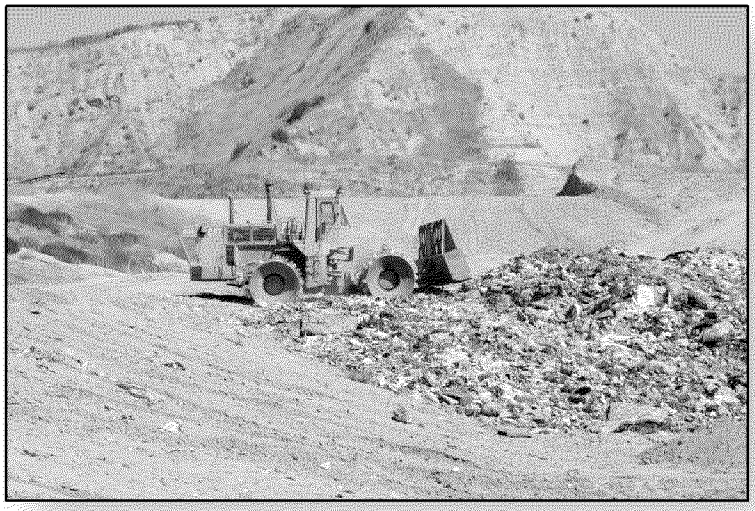
Having two locations from which to push (downhill) – and then alternating between them – will create less crowding and reduce the risk of accident/injury. Here's how it would work: Trucks would be directed to dump from one location until every slot has been filled with waste – without double stacking loads (except for packer trucks which you may want to double-stack). Then, the traffic would be re-directed to the second area. And while the second area is in use, the dozer(s) would push loads from the first area. Once the dozer(s) finish and the first area is clean, trucks would be re-directed back to that area.

This process would continue, with the active unloading area alternating back and forth. The trucks and dozers are never working in close proximity and there would be no need for a spotter to be working in/around the trucks. Instead, the spotter could be directing traffic from a central location– perhaps a fork in the road – always from the protection of the spotter's station. Once the regular drivers get used to this system, the entire process should work quite easily and efficiently.

This change will provide many benefits, including:

1. Less Crowding – More Room to Unload
2. Safer for Spotters
3. Downhill Pushing – Easier on Dozers & Less Costly
4. Flat area for Compactor to Work – Increased Waste Density
5. Allows Broader Use of Tarps
6. Less concern regarding reduced visibility when backing up/over the hinge point
7. Reduces Use of Cover Material

11.3 *CELL CONSTRUCTION*



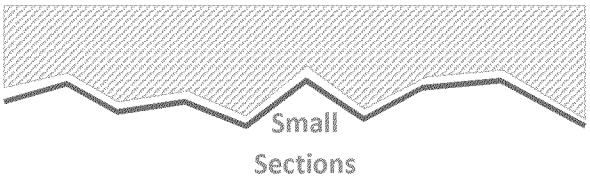
In regard to cell construction and in an effort to increase the efficient use of airspace, it is recommended that the three landfills consider halting the practice of constructing individual daily cells. The current system results in cells having a top that is long and very narrow. Based on our site visit, it appears the average top width of the daily cells may be as narrow as 30 feet at the larger landfills, and less than 10 feet at Blythe. This narrow top creates three problems for the landfill operation.

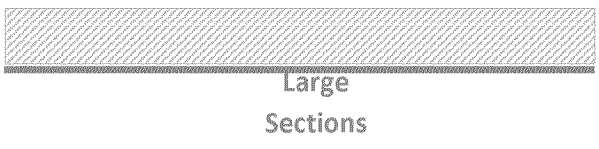
FIRST, the process of compacting along such a narrow top is difficult for the size of the compactor – a machine whose length exceeds the width of the top deck. Clearly, within such a narrow space, the compactor cannot manuever well, nor achieve effective compaction.

This is compounded by the results of our video analyses that indicate the compactor spends an average of 29% of its day working on the top ...and 69% on the lower portion of the face. Yet, it appears that the top represents less than 20% of the cell's total surface area.

SECOND, because of the limited area on the top of the cell, it is very difficult for the compactor to properly grade and finish this area. A larger area provides room for the compactor operator to feel and see the surrounding grade – and then connect to it with the current cell. Remember, the average width of the top area is 30 feet or less. But some portions of the top deck may actually be narrower than the compactors wide blade.

As a result, the grade of the top deck has lots of variation. Conversely, if the top deck was much larger, it would be easier for the compactor operator to construct it to a smooth, uniform grade. The process is similar to spreading plaster with 1"-wide putty knife vs. one that is 10"wide. Then of course, the small dozer operator must make up the difference with cover soil. And, while the finished (covered) product looks the same, the small sections of each daily cell require signficantly more soil.





THIRD, having to complete the top of the cell at the end of every day creates a "crunch time." Here's what happens at this time:

1. Last Load is dumped
2. Load is pushed to the face
3. Load is spread for the compactor
4. Compactor further spreads the trash
5. Compactor compacts the trash
6. Compactor trims/fills
7. Compactor then re-compacts
8. Small dozer spreads soil across the top of the cell

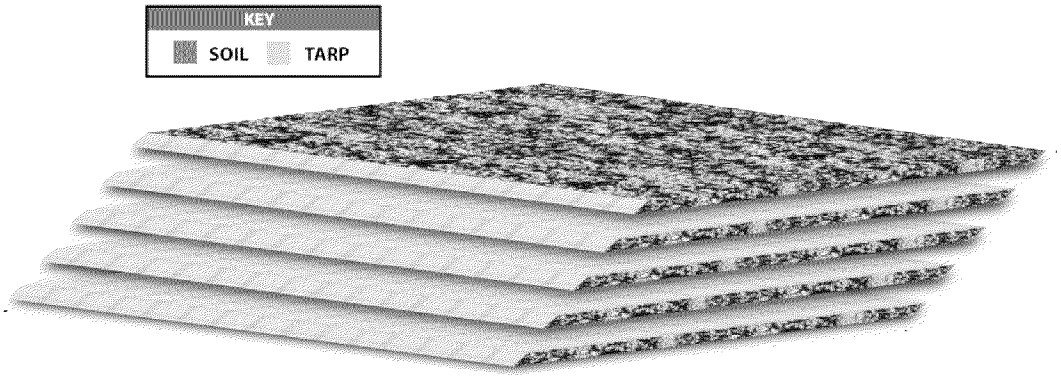
All of these tasks must happen during the final 30-60 minutes of the day. The push is on to finish and clock-out …and as a result, the quality of the finished product is not as good as it could be if there was additional time.

So, these three factors combined, create situation where the waste is not optimally compacted and too much soil is used. As a solution, we recommend the landfill begin to construct weekly cells that consist of daily horizontal layers – or pancakes.

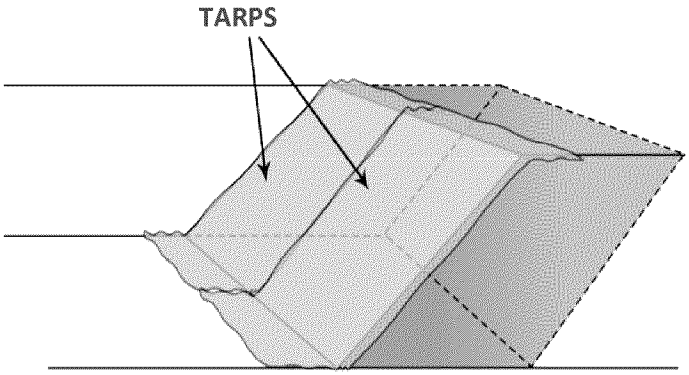
While it is fairly common within the landfill industry to use the current method of constructing cells on a steep slope, it is inefficient. Changing to a pancake (horizontal) system will eliminate many of the operational problems described in this report and will result in a decrease in operating cost, increased waste compaction, reduced soil use …and better use of airspace.

The first benefit is related to geometry and the fact that smaller daily cells require a higher degree of skilled placement of soil by equipment operators than a larger cell. As cell size increases, the surface area within which a more accurate grade can be obtained increases.

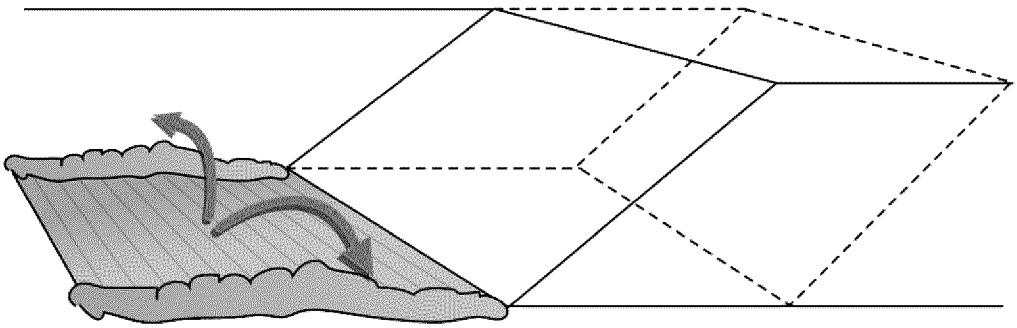
So, in order to take maximum advantage of this economy of scale, the landfills would construct what are, in essence, multi-day cells (i.e., weekly cells). Thus, instead of building and covering daily cells, each containing one days' tonnage, the crew would construct weekly cells that contain ~5-6 days of waste. To do this, the landfills would construct a stack of "pancake" cells each week. The crew would cover the



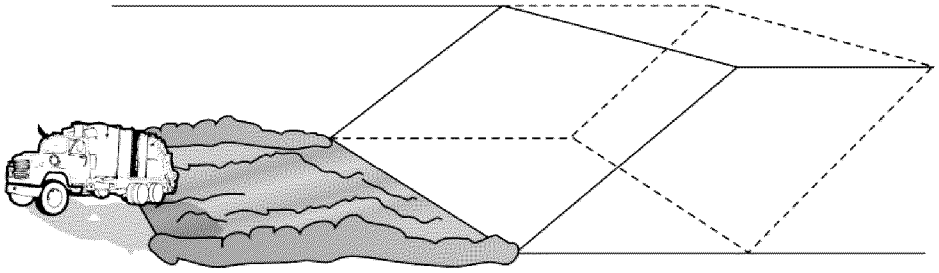
top and the front face of the daily cells with tarps, and the side of the cells with soil and/or mulch.



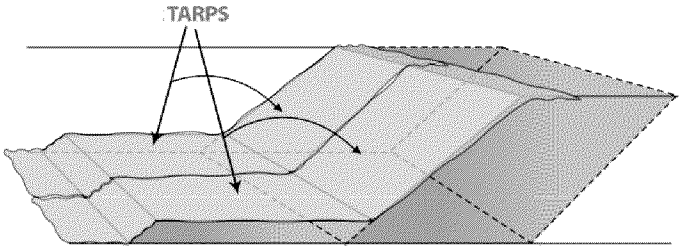
At the beginning of the next week (or when the current stack is completed), previously-placed soil (i.e., what was placed on top of the previous lift) would be stripped for the next footprint. The stripped soil would be stockpiled at the side of the cell for re-use throughout the week.



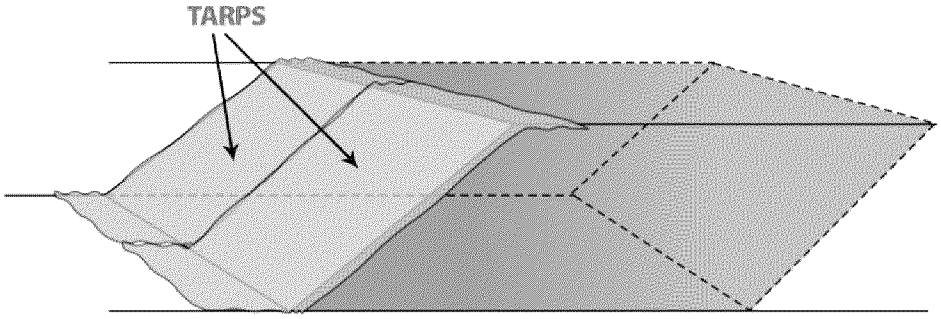
Waste would be spread horizontally across the stripped area and compacted. It is estimated that each day's pancake will be approximately 2-5 feet deep. The horizontal dimensions would vary from one landfill to another.



At the end of the day, the waste would be covered with a tarp. Only the side edge receives cover soil or other type of ADC.

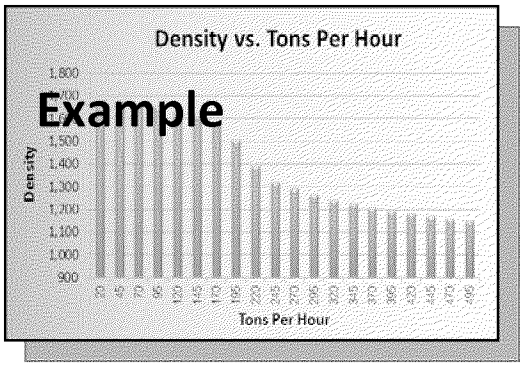


At the end of the week, the stacked pancakes will be approximately the same depth as the current daily cells. The key here is not timing – but matching the tie-in depth of the surrounding waste. Reaching grade may occur in 5 days …or 8. But regardless, when complete – the top would be covered with soil, the side could be covered with mulch or other form of ADC, and the face would be covered with a tarp. Then the next stack would begin.



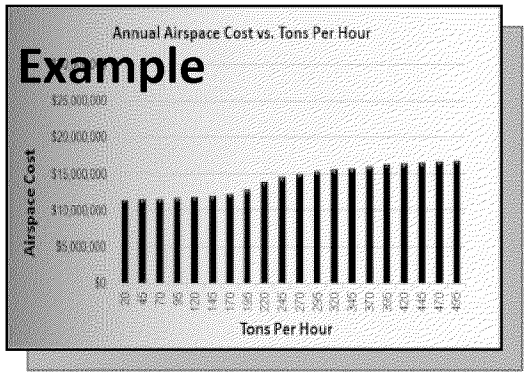
By changing the way daily waste cells are constructed, and by minimizing the quantity of soil used for daily cover, the landfills will improve waste density and further reduce soil use.

11.3.1 COMPACTION



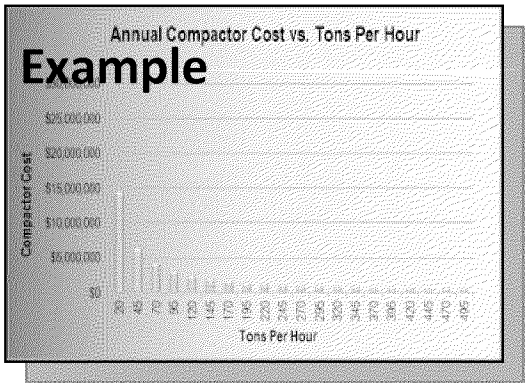
Waste Compaction is perhaps the most important single component of landfill operations – and waste density, one of the most important benchmarks. From that perspective, we have focused considerable effort at evaluating the current compaction-related processes.

One of the first things we looked at – a simple compaction benchmark – was this: How does the compactor's effort compare to the inbound waste tonnage?



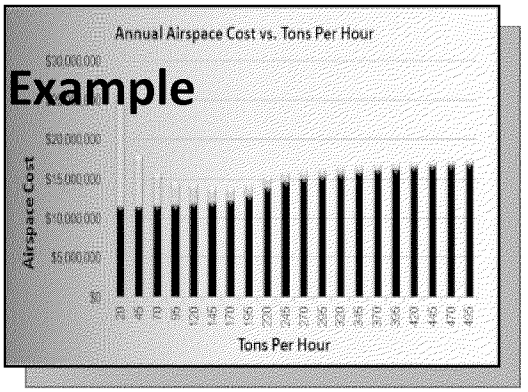
In terms of compacting, there is an optimum point – a place where the combined cost of operating the compactor and the consumption of airspace are minimized. This *least-cost* point, most often expressed in tons per compactor hour, is the compactor's optimum production rate. This is explained below:

The process begins with a production curve. This is critical information and always best when it is site-specific. As expected, the waste density will vary depending on how many tons per hour the compactor is processing. Logically, as the flow rate of tonnage increases, density decreases.



The next step is to calculate how the compactor's effort – at various production rates – impacts airspace consumption and airspace cost. As would be expected, the compactor's production rate and airspace cost are inversely related: as waste density decreases, airspace costs increase.

The next step is to calculate how the compactor's production rate impacts compactor cost. Again, the results are logical: at very low production rates (i.e., few tons per hour), more compactor time is required to process the inbound waste …and the cost attributed to the compactor increases.



Finally, these two costs – airspace and compactor – are combined into a total cost, shown at varying production rates (i.e., tons per hour). This combined cost typically shows a minimum (i.e., least cost). This identifies the production rate that results in the lowest overall cost. It is expressed in (compactor) tons per hour.

Please Note: These production rates – and associated costs – are based solely on our experience at other landfills. They are not based on any work done at Riverside County's Landfills.

So, without site-specific data, and based on BRS' experience, we estimate that the optimum waste density would be achieved when the compactor processes waste at a rate of approximately 150-200 tons per hour (at Badlands and Lamb Canyon) and 70-90 tons per hour (at Blythe).

The compactors are currently operating within those ranges:

Blythe	*71 tph*
Badlands	*170 tph*
Lamb Canyon	*198 tph*

12 STAFFING

As part of our assessment we reviewed the provided organizational charts for all three Riverside County Landfills. Our Landfill site visits, staff interviews and initial presentation of findings allowed us to further evaluate the Landfill staff. We offer the following findings and recommendations regarding landfill operational staffing.

12.1 *MANAGEMENT*

We found that the Management staff was extremely competent and motivated. We were most impressed with the proactive nature of the staff. During the course of the assessment and during our initial presentation we presented some potential issues and findings. The management staff commonly had solutions in process to many of the issues that were presented. We feel that this type of attitude and atmosphere is a vital ingredient of a well-run Landfill.

12.2 *EQUIPMENT OPERATORS*

During our evaluation, we found the operators to be skilled at their work. Most showed the ability to safely and effectively control their equipment. We observed few issues in regard to skill.

We compared the number of operators to the current number of machine hours. Typically, we assume that an operator is available to work approximately 4 weeks per month …or 48 weeks per year. This allows for vacation, sick days and holidays. Accordingly, this is 1,920 hours per year. Thus, an operator has the potential to log 1,920 machine hours per year.

Based on this model, under ideal conditions, each operator would be expected to log 1,920 machine hours per year. The following table shows the actual number from each landfill.

Annual Operator Hours v. Annual Machine Hours				
Facility	**No. Operators**	**Expected *(Ideal)* Annual Machine Hours**	**Actual Annual Machine Hours**	**Operator Staffing Efficiency**
Blythe	1	1,920	999	52%
Badlands	8	15,360	14,602	95%
Lamb Canyon	10	19,200	15,151	79%
Overall Total:	19	36,480	30,752	84%

Blythe is a unique situation, where the Site Supervisor has also been serving as the only operator. Thus, based on the assumption that an operator could log 1,920 hours per year does not directly apply …and if it were applied (i.e., in the above Table), the overall efficiency would be calculated at a lower rate. This should not be misinterpreted to infer that Blythe is inefficient, because it is in fact operating at a very high efficiency in regard to operator effort vs. machine hours.

The two larger landfills both show relatively high efficiency, with Badlands slightly higher than Lamb Canyon.

It should be noted, that this analysis looks at the utilization of machines vs. the number of operators. It does not necessarily indicate that the number of machines and/or operators is ideal, but simply looks at the current relationship between the two.

Our recommendations, as explained throughout this report lean toward a reduction in machine hours, which may also indicate a reduction in staffing. We suggest the County re-visit the operator staffing and/or scheduling, once the machine use has been re-evaluated.

12.3 *Waste Inspectors and Landfill Safety Monitors*

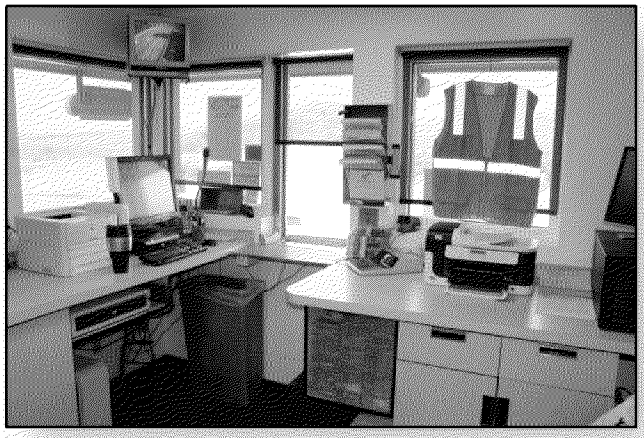
The County has put a great deal of time and effort into the waste inspection program. We feel that this amount of effort often exceeds the industry standard and in some cases is unnecessary. For example the number of loads that are checked at the Blythe Landfill often exceeds what is required by County Ordinance 779. We understand that the County uses this same employee for litter control, waste recycling, traffic direction and fee collection duties to offset his work week and limit his time spent on waste inspection; however, we feel even less time can be spent on waste inspection by focusing on meeting the minimum requirements.

After reviewing the organizational charts we noticed sufficient staffing regarding traffic direction. We understand and support the need for Landfill Safety Monitors also known as "spotters".

12.4 *Maintenance and Construction Workers*

We had limited interaction with the Maintenance Construction Workers. After reviewing the organizational charts we noticed that this position is used for many different tasks. We feel that the adaptability of this position is an efficient practice and should be continued.

13 SAFETY



Riverside County has taken significant steps in their operation to improve safety for workers and customers. One clear example is the All Stop system, by which any worker can transmit an alarm – which everyone else on the crew hears – causing all machines and activity to immediately halt.

Another example of attentiveness to worker/customer safety is the established procedure of requiring all people on site to wear safety vests. Not only are the safety vests required but

they are available to purchase at the scale house if a person does not have one available. This level of action clearly shows how the staff is interested in insuring that safety procedures are followed without exception.

13.1 *HEALTH AND SAFETY PLANS*

Safety plans and procedures appear to meet or exceed industry and regulatory standard.

13.2 *PERIODIC TRAINING*

Overall, workers should be continually challenged to expand their knowledge base – which of course includes a wide range of topics related to safety, environmental, regulatory, economic and operational issues.

While performing our Blythe site visit the County's online training program was pointed out by staff. We are unclear if this system is used at all of the sites. We feel that this is a unique and effective form of conducting periodic safety training.

13.3 *SAFETY RECOMMENDATIONS*

Overall, we suggest that worker presence on the ground, near the tipping area be minimized whenever possible. For the spotters, this means staying in pre-determined areas (i.e., the spotter station). During pre-dawn and other periods of low-light, we further recommend the spotters stay at the light plants and minimize mobility on and near the tipping pad whenever possible.

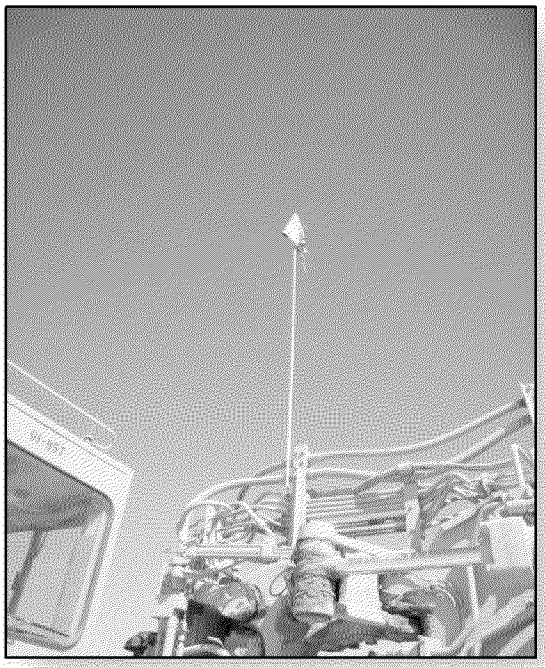
For the waste inspectors, we also suggest their presence at the tipping pad be minimized whenever possible. And, while we understand the necessity of conducting waste screening (per California Code of Regulations Title 27, County Ordinance 779 and the facility's operating permit), the benefit of extracting a relatively small quantity of prohibited waste is small compared to the risk of placing a worker on the ground, at the tipping pad.

We feel that it is important to acknowledge that all of the Landfills we visited had many safety procedures in place to protect workers on or near the tipping pad. The Emergency All-Stop system, use of two way radios, portable light plants and required personal protective equipment are all examples of excellence. The fact that these procedures are in place clearly shows that worker safety is not taken lightly.

While performing our Landfill site visits we spent a substantial amount of time reviewing the Scraper haul routes. Most of this effort was related to assessing the operational effectiveness of the Scraper

routes. We determined that at all three landfills there were safety issues regarding "blind spots" and "bottlenecks" in the Scraper haul routes. Limited visibility in Heavy Equipment compounded by "blind spots" could become a serious issue if a smaller vehicle was unexpectedly encountered on the haul road.

For example, the Lamb Canyon site had an area that had an elevation change and an "s turn". We noticed similar issues at the Badlands and Blythe Landfills. The most practical solution to solving these haul road issues would be realigning the haul roads. A byproduct of this road realignment would be an increase in Scraper production rates.



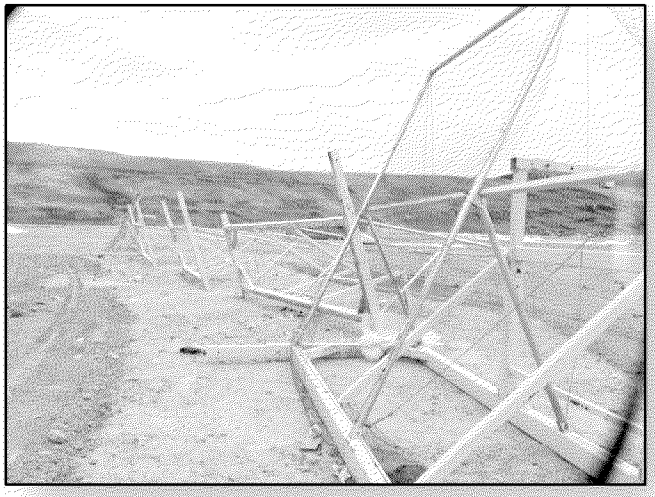
We feel that the practice of backing up while watering in the Water Trucks should be discontinued. The risk of backing into a worker or another piece of equipment could be eliminated by watering in a forward motion.

We noticed that a majority of the Landfill equipment had safety flags or "whips" installed. We support this practice and feel that it demonstrates the level of safety awareness within the department. Our issue is that most of the flags were in poor condition and were not very visible. We feel that these flags should be replaced on a regular basis so they may maintain their intended purpose.

14 ENVIRONMENTAL CONTROLS

14.1 *LITTER*

Based on the LEA inspections for the last 5 years litter has been an issue at all of the Riverside County Landfills. Over the past 5 years there has been a total of 31 NOV's or AOC's related to litter. It does appear that over recent years these numbers have started to decline. The following paragraphs summarize our findings and opinions based on the conditions of the sites when we visited them.



The Blythe Landfill was exceptionally clean in regards to litter. This is most likely a result of the low inbound tonnage. In our opinion the current

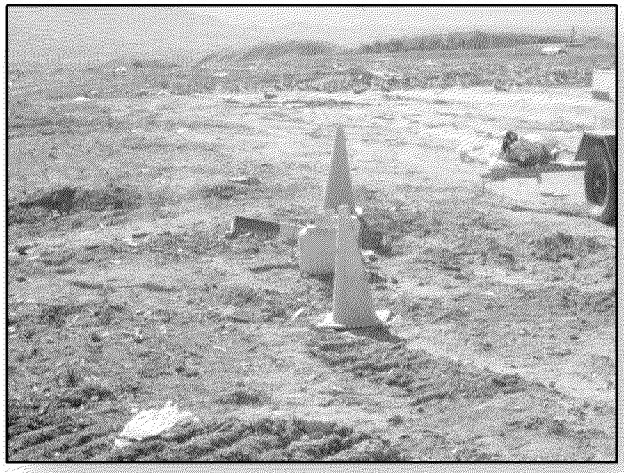
cleanliness of this site exceeds the industry standard. The current practice which requires the litter crew to travel an excessive distance is not efficient. We would recommend using a local litter crew, possibly through a staffing agency or as work release program.

In our opinion the amount of litter at the Badlands Landfill is within the industry standard. The quantity of litter at this site is in line with what one would expect to find at a privately operated Landfill. We do suggest that more effort be put into containing the litter as close to the daily cell as possible as opposed to allowing the litter to migrate throughout the site. Less labor would be needed if the litter was captured in a more confined area.

Lamb Canyon had much more litter present when compared to the other two Landfills. We recognize that seasonal high winds at the Lamb Canyon site can make litter control efforts very difficult. We feel that the amount of litter at this site is within the industry standard but if not kept in check could become an issue. We did notice a small amount of litter on the outskirts of the Landfill. The impressive network of perimeter litter fencing at this site did seem to catch a majority of the blowing litter but also requires a large amount of labor to keep clean. We would suggest that the Landfill revisit the use of portable litter fencing, similar to the ones that are already on site. By arranging the portable fences as close as possible to the daily cell migrating litter should be minimized. The intended result would be a reduction in labor that is needed to keep the perimeter fencing clean.

14.2 *BIRDS*

We found that the "bird canons "were not effective. The birds have become habituated to the canons and would often land very close to them. We suggest that the canons be used more intermittently and possibly in conjunction with other accepted methods (i.e., predator decoys, acoustic controls and model airplanes). When compared to the industry as a



whole there did not appear to be an excessive number of birds at any of the landfills that we visited. We do not feel that the current conditions justify the need for a falconer.

14.3 *COYOTES*

Due to the remote location of the three landfills, coyotes will most likely be present. We did see coyote tracks during our site visits. We feel that proper tarp maintenance and placement is the most effective means of limiting coyote activity. The current level of activity does not appear to be an issue, we do recommend ongoing monitoring.

14.4 *ODOR*

We did not notice any excessive odor while conducting our site visits. Nor did we see specific loads such as dead animals or sludge which are typically associated with odor. It is true that any putrescible waste can cause odors, but the lack of offensive odor at the facilities is most likely be attributed to good operational practices such as proper tarp utilization and the application of cover soil.

15 SITE CONDITIONS

15.1 *LIGHTING CONDITIONS*

We agree with the current practice of utilizing portable light towers during low light conditions. From a safety standpoint we stress the importance of limiting the number of workers on the ground even when the light towers are being used. We also suggest that workers stay within close proximity to the light towers, preferably within a protective structure (i.e., spotter's station), similar to what is currently in use at Lamb Canyon.

15.2 *ACCESS*

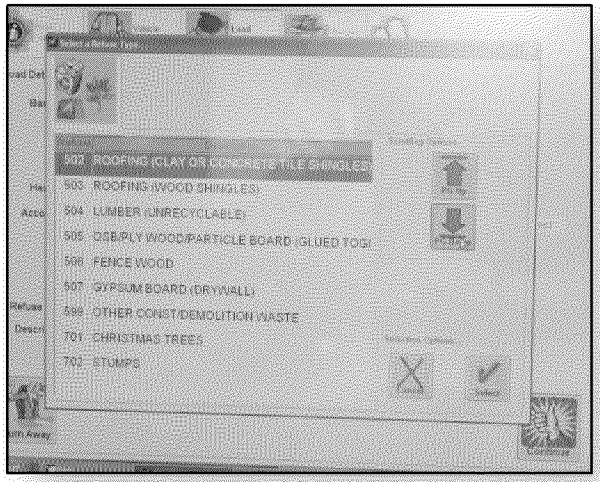
All of the sites we visited were easily accessible. The signage directing customers to the appropriate dumping areas was clear and easy to understand. The access roads within the Landfills were satisfactory. We did note that some of the roads at Badlands and Lamb Canyon would benefit from more frequent grading. From a safety and supervision standpoint we recommend that the recycling area at the Blythe Landfill be moved closer to the active area of the Landfill.

15.3 *WILDFIRE PROTECTION*

We recognize the need for vegetation as an erosion control measure at all the landfills. Due to the remote nature of the Landfills the possibility of a wildfire encroaching onto the sites needs to be

considered. It is suggested that areas around the gas system and other improvements continue to be adequately protected from wildfire through removal of vegetation and debris.

16 SCALE BOOTH OPERATION

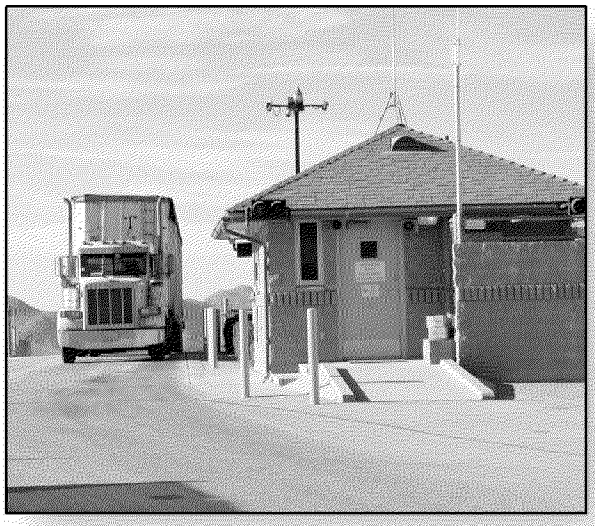


As part of our evaluation, we spent time in each of the three scale booths and talked with the current attendants. Overall, the booths are organized and operated efficiently. All are using the same scale software program. It is simple, intuitive, and appears to provide adequate subdivision of waste categories.

There appear to be few conflicts with customers, and those that do occur, are usually reconciled easily by the attendant. On a rare occasion, the Site Supervisor will intervene. Here are some of the more common issues:

- **NOT HAVING A SAFETY VEST**
  Solution: Customer may purchase a plastic safety vest for 75 cents …or $9 for a cloth vest.
- **DOES NOT HAVE A TARE WEIGHT**
  Solution: The customer must weigh back on the way out
- **DOES NOT HAVE A VALID DRIVER'S LICENSE**
  Solution: The customer is instructed to return with his/her license. Alternatively, the customer is given a list of disposal sites that will not require a driver's license.
- **DOES NOT COMMUNICATE ORIGIN OF WASTE**
  Solution: Generally, when this happens it is simply a communication issue. By re-phrasing the question, the attendant can usually obtain the correct answer.

Any vehicle (including Mom & Pop vehicles) can obtain a tare weight sticker. This allows them to pay on their way in. However, many elect not to do so because they want an exact tare on their "weigh back."



Some vehicles will leave without stopping for a "weigh back" and avoid paying their fee. When this happens, the scales distribute the driver/vehicle information to other county facilities to minimize the chance of it occurring again.

There are cameras at the two larger landfills, but the old style CRTs are difficult to see when there is bright sun outside. We'd recommend changing them out with flat-screen units that provide better contrast and viewing ability.

The following discussion addresses the individual sites.

16.1 *BLYTHE*

The gate attendant at Blythe appears to range from less than 10 transactions per day ...to over 40 on a busy day. The average is approximately 24. The manual system of entering every transaction is quite easy.

Because of this relatively light workload, the gate attendant regularly does other activities that can be performed in close proximity to the scale. These include picking up litter and maintaining the landscaping around the scale booth. Discussions with the scale-booth attendant indicate she would have time to assist with other duties (i.e., paperwork) that is currently being performed by the site manager.

The attendant also transports cash and makes deposits to the local bank, but because the daily amount is quite small, there appears to be no significant security risk.

The Waste Inspector and/or the Site Supervisor help fill in. Similarly, the Waste Inspector and the Scale-house Attendant rotate to cover the occasional Saturday the site is open.

16.2 *BADLANDS & LAMB CANYON*

The scale operations at Badlands and Lamb Canyon are straight-forward. Inbound commercial vehicles are logged into the system using unique I.D. numbers assigned to each truck and trailer. Some issues may occasionally arise when a transfer truck switches to another trailer, but typically when this occurs, the drivers are attentive and provide the correct vehicle/trailer I.D. numbers.

In regard to the efficiency of the current operation, we believe it is well-matched to the inbound tonnage. In regard to the potential for automation, many of the transactions could be automated, but it is our opinion that the benefits do not currently justify the change – from manual to an automated system. There would still be the need for a scale-booth attendant, and the automation would be somewhat of a redundancy.

Because most of the waste entering the landfills is delivered by commercial haulers, there is relatively little cash on hand and the cash that is collected is picked up by a security vehicle. Accordingly, we see little security risk with the current system related to cash handling.

The traffic director also helps operate the fee booth early in the morning, until the regular attendant arrives.

17 SUMMARY

Overall, the landfills are being operated in an efficient and proactive manner. From a utilization and operational requirement standpoint, it is our opinion that the County can reduce the number of

machines at these landfills, while still maintaining a sufficient fleet to efficiently handle the inbound waste and other necessary construction activities such as site maintenance.

While our recommendations could lead to an optimum fleet size for the current landfill condition, a detailed analysis that incorporates equipment resale value, opportunity cost, tonnage trending, system expansion, replacement costs, rental availability and costs, and mobilization costs should be carefully considered before releasing any equipment.

Further, when remaining machines have exhausted their useful life and are replaced, the sizing of new machines should be carefully considered in light of operational improvements and anticipated waste tonnage. Two examples to consider are: Replacing the D10 dozer with a D9; and replacing the dozer/compactor/scraper at Blythe with a single machine (i.e., a track-loader). We also recommend a continual effort to minimize soil use through maximizing the current use of tarps. Increased attention to road maintenance is suggested, as is an improved layout for the scraper haul roads.

We also recommend the County maintain the benchmarking system, in order to monitor ongoing performance. This is vital if the County is to continue along the path of increasing efficiency and reducing operating costs.

Further, we suggest the County continue to train operators in regard to the overall process of landfill operation. This should include specific training on the *why* – as well as the *how* – of landfill operation. The training should include continued emphasis on the interaction between the entire crew in regard to waste flow into the landfill – and how it impacts the operation. Developing clear lines of communication and process will be important. For example, the waste flow at the tipping pad and face should focus initially on maximizing the effectiveness of the compactor. This would include managing inbound traffic, pushing waste to the face, and perhaps most importantly, the development of a fill pattern that would allow the dozer and compactor to work more in unison.

We suggest the landfills work toward developing a process that incorporates a pancake system of filling to maximize compaction effort, better control surface grades and more efficiently use equipment (downhill operations).

We suggest there be continued effort to streamline the machine maintenance and repair process, with an effort to make sure machines are properly maintained and that the repair process moves as quickly as possible.