Solid Waste Program Evaluation

For Mono County, California

Prepared for:

Mono County

Department of Public Works

74 North School Street

Bridgeport, CA 93617

November 30, 2010

Prepared under the responsible charge of

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1.0 Executive Summary

1.1 List of Recommendations

Based on the analysis included in this report, HDR recommends the following:

- Implement cost cutting measures to include the following:
  - Discontinue Sunday operations at the Benton Crossing Landfill (BCLF) and reduce one laborer position in order to save costs.
  - Solicit private bids for grinding, inert disposal and other services performed infrequently, and award to private companies if the bids are lower than the incremental cost for County staff to perform these functions.
  - Consider private bidding of the transfer station (TS) operations contract next year.
- Raise the tip fee schedule to $100/ton, coupled with a cash infusion from the County general fund of $1M to remedy the FY 09/10 shortfall. The $1M infusion would remedy the approximate $907,000 shortfall[1] at the end of FY 09/10 and provide approximately an additional $100,000 required for additional closure funding for the BCLF. The $100/ton tip fee is modeled to provide approximately a modest $47,000 annual positive fund balance starting in FY 2010/11 (approximately 1.6 percent).

  Although it is not clear when waste quantities would rebound to historical levels, if this were to occur any surplus should be used to gradually pay back the general fund after accruing a modest cash reserve[2] for unexpected events and a rate-stabilization fund.
- Retain the regional solid waste system (System) to serve both the Town and County while continuing to use the BCLF until the transition to a Long Haul Transfer Station (LHTS) serving both the County and Town is available. Splitting the System and the County and Town using separate LHTS would have negative economic impacts on the County, and potentially increase illegal dumping.
- All factors considered, we recommend pursuing the establishment of a LHTS located in the Town at the existing Mammoth Disposal Transfer Station/Materials Recovery Facility (MD TS/MRF). This should be contingent upon the Town and County being able to working out agreements for public ownership of the site, private operations of the site preferably through bidding, and conditions similar to those projected in this report.

[1] This is excluding consideration of the positive balance of closure expenses and revenue in FY 09/10, which was positive only due to revenue cash flow timing from the closure fund also covering expenses in FY 08/09.

[2] A reserve of 10% of the SWEF would be about $300,000 and could provide stability given varying annual closure cost requirements prior to obtaining approval for release of revenues from the closure fund and contingency for unforeseen events such as stricter landfill compliance or changes in gate receipts.

- Implement closure of the BCLF to be accomplished in 2020 with transition to the recommended LHTS. This will require developing and gaining approval of a revised final grading and closure plan, and landfilling enhance drainage in the interim.
- Start projects by 2015 (at the latest) will provide for implementing the LHTS recommended above. This is based on needing at least one (1) year for bidding or negotiations for a contractor, and then four (4) years for the Town, County and contractor to design, permit, and construct a LHTS facility.
- Work with the Town regarding the use of the Solid Waste Enterprise Fund (SWEF) for the self-haul portion of the MD TS/MRF facility. This may require public ownership of the facility and differentiation of self-haul TS costs from other facility function costs that should not be funded by the SWEF. This is based on the rationale that Town residents pay a majority of the SWEF System costs; however, the Town does not receive any funding of self-haul TS costs, whereas the County does.

  It should be noted that any funding of the MD TS/MRF by the SWEF would require public ownership and/or appropriate agreements, ownership title, leases and other items in accordance with legal requirements. HDR is not a legal firm and cannot render legal opinions. Any establishment or fee increases would also have to meet legal requirements including recently enacted Proposition 26.

The remainder of this executive summary section contains a discussion of the project and scope, a summary of findings, followed by more detailed discussion of the basis for the recommendation listed above.

1.2 Background

The System in unincorporated Mono County is managed by the County Public Works Department, within the Town of Mammoth Lakes (Town), and is administered by the Town. Figure 1 shows the arrangement of the current solid waste facilities in the System. The current arrangement in the unincorporated area consists of seven disposal facilities, including the regional Benton Crossing Landfill (BCLF), four Transfer Stations (TS), and two combined landfill / TS facilities (LF/TS). The County currently contracts with Mammoth Disposal, Mammoth Lakes, California (MD) to operate its six TS's. In addition, the Town currently contract with MD to provide collection services as well as operate the MD TS/materials recovery facility (TS/MRF) in the Town. The MD TS/MRF services self-haul residents of the Town and transfers this waste to the BCLF. The Town's residential and commercial collection services currently provided by MD generally involve direct hauling of waste to the BCLF.

Following diversion efforts at the County TS's, all residual residential and commercial waste received at those facilities is hauled to the BCLF for disposal. The BCLF is operated by the County on land leased from the Los Angeles Department of Water and Power (LADWP). The lease is due to expire in 13 years, or 2023.

The System is funded by a SWEF administered by the County mainly supported by gate fees at County facilities, as well as solid waste fees imposed on all parcels within the County. They're also franchise fees imposed on haulers within the County, and a fee imposed on waste that is exported from County that funds a small portion of the SWEF. The Town generates a majority (roughly 70 percent) of the waste that is handled by the System and provides a majority of the fees (both parcel and tip fees) supporting the System SWEF.

The County issued an RFP for assessing measures to increase efficiency and review alternatives to recommend an efficient and effective long term waste management strategy. The County identified alternatives to be analyzed included siting a new landfill, transferring waste out of the County, or inclusion of composting or other alternative technologies. HDR was subsequently retained by the County to evaluate the System and to provide this report.

During the course of this study a funding deficit and concerns over System funding were indentified. The System costs include variable and fixed costs, much of which are fixed for such a small tonnage operation. Although the System revenues include parcel fees that have generally been steady, revenues resulting from the System tonnage drop from the economic downturn have resulted in a drop in gate fees of approximately 40 percent between 2006 and 2009. Appendix A contains a chart showing this decline.

The large drop in System tonnage has created a deficit in the SWEF and an unsustainable condition without increasing fees. The Chart below shows this problem condition. HDR has also included a fee analysis with recommendations on measures that need to be taken to stabilize the SWEF problem.

1.3 Scope of This Report

The scope of this report was based on the County's RFQ dated February 18, 2010; HDR's interview with the County selection panel on March 25, 2010, and subsequent discussions with County staff. This included the following work elements.

1. The efficiency of how waste is currently managed throughout the county and options to improve program efficiencies. Included in the report should be an analysis of the gate fees, their equity as applied county-wide, and their relative ranking compared to similar systems.
2. The potential of hauling waste to a regional landfill located outside the county
3. The cost effectiveness and efficiency of disposing all waste at a new regional landfill located in close proximity to Mammoth Lakes.
4. Management of all waste through a long-haul TS located at the current MD TS in Mammoth Lakes.
5. Managing of all waste through a LHTS owned and operated by D&S Waste Disposal at its property located on State Route 167 north of Mono Lake.

6. The viability of other waste management options available, such as a regional material recovery facility, a waste-to-energy facility, a regional compost facility, or alternative systems.
7. The potential of combining waste from Mono County and northern Inyo County in the system.

Gate Fee Issues **-** Item 1 of the RFP was addressed in two separate Technical Memoranda (TM) prepared in June 2010 prior to the end of FY 09/10, included in Appendices B and C. These TM evaluated FY 08/09 fee issues relative to equity of fees charges to the Town and County and comparison of fees to other similar Counties. The TMs are described in Section 3.1; however, the gate fee analysis in the TM's is superseded by more detailed gate fee analysis and recommendation contained in Section 3.4. The newer and more detailed analysis evaluates more current information from FY 09/10. Section 1.5.3 discusses a recommendation for tip fee increases based on HDR's review of the SWEF and other elements analyzed in this report.

Waste Management Alternatives and Efficiency **-** The main content of the report includes a comparison of Alternatives covering elements 2 through 7, described in Section 3.2. The alternatives are compared in terms of economics, service levels, landfill diversion and environmental impact issues. Section 3.3 contains opinions on the efficiency of current operations.

Other Issues **-** During the preparation of the report issues were raised regarding funding of the planned expansion of the MD TS/MRF located in the Town and the economics of separate Town and County long haul transfer stations. Although not specifically included in the RFP, analysis and opinions regarding these issues are also included in this report. In addition HDR provided financial tip fee analysis under an additional Task Order to assess a funding strategy to solve the current SWEF shortfall and provide a sustainable funding level for the system. This analysis is included in Section 4.1.6.

1.4 Summary of Findings

1.4.1 Gate Fee Equity and Comparison Issues

HDR submitted two technical memoranda in June 2010 that analyzed the issue of fees paid by the Town compared to allocated service costs at the BCLF and a comparison of fees to other similar rural counties. The TM review of the issue of equity of fees using FY 08/09 data found that the Town paid approximately 56 percent of the System fees. This compared to an "allocation" of 31 percent of the total SWEF expenses for services attributed to use at the BCLF as calculated by HDR. HDR's assessment of 31 percent was similar to previous analysis performed by the County staff of 33 percent. The HDR assessment of a 4-year average was similar and slightly higher at 35 percent.

However, it should be noted that the 31 percent allocation above for FY 09/10 in the TM developed in June 2010 included extraordinarily large one-time closure costs at County TS/LF sites (primarily the Bridgeport site) allocated exclusively to the County. For a more

representative general expected allocation the unusually large one-time FY 09/10 closure costs should be removed from the equation given that regular annual financial assurances closure deposits are allocated and intended to fully fund closure of remaining landfill sites at currently planned future closure dates. *If this more representative adjustment is used to the data the cost allocation to the Town is adjusted from 31 percent to 40 percent. This indicates that the Town is paying an amount approximately 16% higher in fees to the SWEF than the costs allocated to the Town.*

Comparing seven other similar rural counties to Mono County found that Mono County's solid waste budget was somewhat higher than other counties. However, when considering the budget on a unit basis regarding number of facilities and population density the Mono County budget size; the larger budget may be a reflection of the level of service and diversion provided in the large service area. In addition it is noted that the high rate of seasonal recreational visitors to the County put demands on the system that affect system costs and rates to users and judgments regarding the comparative cost of the system require more detailed analysis of the system costs based on the County's specific services, conditions and needs.

This report includes a recommendation to increase the tip fee schedule to $100/tons for trash. This is recommended in lieu of greater difficulty expected in raising parcel or other types of fees. Among rural counties some have hauler trash disposal fees less than $100/ton and some have fees above that level[3]. The funding of many rural systems is based varying combinations of tip fees, parcel fees, and other fees, which directly affect the tip fee level. Self-haul trash-can gate rates are typically subsidized compared to the full cost of service. Regarding the minimum self-haul fees for trash cans, the current $1.75/can Mono County rate is below most other counties and even if doubled would be around the average for rural counties and below average considering all types of counties.

1.4.2 Efficiency of Current Operations

Based on limited review of County operations, HDR found that staffing at the BCLF generally appears efficient given the operations and days of service currently provided. HDR understands that County staff had proposed reduction of one staff and discontinuing Sunday operations. We concur with these efficiency measures given that the site has limited usage on Sunday. HDR is aware of other operations that receive much more traffic than the BCLF that have discontinued operations on Sundays as a way to reduce costs.

HDR was also asked to provide an opinion on privatization of County operations. Currently, the County short-haul TS operations are already privatized. The County's public operations of the BCLF do not appear to be excessively staffed, and therefore privatization does not appear

[3] Higher rural County franchise hauling disposal rates include Trinity $135/ton, Mariposa $121/ton, and Del Norte $120/ton. Lower rates include Amador $68/ton, Butte $37/ton, Colusa $69/ton, Glenn $70/ton, Lassen $59/ton. *Source Regional Council of Rural Counties survey information.*

warranted. Privatization of the BCLF could also pose potential liability risks and a risk that private operations could result in lower diversion levels.

1.4.3 Comparison of Transfer/Disposal Alternatives

Table ES-1 below, is a summary of economic findings from the comparison of alternatives to the current system configuration, termed the Base Case. Figure 2 is a bar chart portraying the cost comparison of the alternatives. The left portion of Table ES-1 shows the base case and six facility alternatives for the current System. The right portion of the Table shows an additional comparison of costs estimated for the Town and County implementing separate LHTS facilities.

Following are the findings of the economic comparison between the six main facility alternatives assuming funding of the current System SWEF. The base case for comparison is the current system including use of the BCLF. Other non-economic findings are also noted below.

- ***Closure of Transfer Stations, Alternative 1 -*** Involved evaluating a major reduction of four TS; but due to accelerated closure costs that would be compressed over a few years much sooner in the near term and consideration of increased user hauling costs this Alternative is not significantly more economical that other Alternatives. It also has the negative aspects of reducing services significantly which would require the public to haul their wastes to the relatively long distance to the BCLF and potentially resulting in increasing illegal dumping.
- ***Long Haul Transfer Stations - Alternatives 2, 4, and 5*** - Involves implementing a LHTS at three potential sites using the Lockwood Landfill in Nevada for landfill disposal. These are more economical than the other Alternatives; and comparable to the base case in cost, well within the accuracy of this study. The comparative System cost for all three alternative locations for a LHTS were calculated to be within 6 percent of the base case and even closer if incremental hauling costs to the Town are considered.

  HDR also assessed the risk in the long term the LHTS alternatives might ultimately rise in cost above a new in-County landfill. This is considered unlikely as a long term contract Lockwood Landfill tip fee would have to rise to $40/ton ($2009) to make it equal to Alternative 3. Long term contracts are speculated and assumed in the LHTS alternatives to currently be on the order of $15/ton.
- ***New Landfill - Alternative 3 -*** Developing a new landfill appears approximately 24 percent higher than the base case and similarly higher in cost than the LHTS alternatives. This higher cost would primarily be caused by the cost to develop and operate a new lined LF at the small volume scale of the solid waste System. It is also noted that landfill regulations and compliance costs have historically risen much more than transfer station compliance costs and therefore the landfill costs are more likely to rise more than the LHTS options. HDR also believes that there would be more

significant effort and challenges related to identifying an acceptable site for a new landfill in the County as compared to implementing the LHTS alternatives.

- ***Other Non-Disposal Alternatives, Alternative 6 -*** Involved evaluation of implementing various other non-disposal alternatives. These alternatives include composting, a transfer station/materials recovery facility (TS/MRF), and other alternative technologies. This alternative is more expensive than the base case and provides the possibility of a slight increase in diversion compared to the current diversion system at a relatively low cost of diversion considering the very small scale of the solid waste system serving a very large remote service area. It is not clear that composting would yield significant amount of diversion over and above the current grinding diversion program and it would involve an added facility cost above the current grinding and diversion program. Given the small scale involved and lack of markets for compost material in the County it could even have even more challenging economics than the costs of the other prior alternatives.

  A MRF and alternative technologies such as Anaerobic Digestion would be more expensive (approximately an additional 50 percent) and do not appear warranted unless the State raises diversion mandates and the County would then have compliance issues. The Town previously evaluated the economics of a MRF and CT facilities and concluded that the economics are not viable at the small scale involved. Given that the Town possesses a majority of the waste stream and is not interested, the economics of a MRF or CT facility would be even more unfavorable for the County to implement for the System, and would likely cost more for the County to implement alone; which makes this option unviable. There are also technology performance risks associated with CT facilities that do not exist with the more traditional disposal and diversion methods used by the County.

- ***Inyo County Combination, Alternative 7 -*** Inyo County informed HDR that the County has over 60 years of capacity left in its landfill and was not interested in exporting its wastes to Mono County using the alternatives being assessed in this study for Mono County. Inyo County staff also expressed that the county has not considered importation of non-Inyo wastes and prefers to retain its landfill capacity for its county users. Regarding exporting waste in combination with Mono County, Inyo County staff felt it did not appear viable. HDR agrees with this assessment because as an example typical travel trip times indicate only an additional ½ hour each way to the Lockwood Landfill comparing the BCLF site and Bishop Landfill; therefore dropping waste at an additional transfer point would cost more than keeping it on a transfer truck directly to Lockwood.

1.4.3.1 Additional Considerations for Alternative 5

In Comparing alternatives, Alternative 5 would incrementally cost the Town on the order of $320,000 annually more than Alternative 4 due to increased collection truck off-route mileage to haul wastes using the MD collection fleet directly to the D&S site (compared at roughly $21/ton using 2009 figures). Due to the increases in off-route collection truck hauling costs,

MD has indicated that it would not use a LHTS at the D&S site. MD stated they would implement a waste transfer system rather than direct hauling wastes using their collection fleet to the D&S site. MD also stated that if they implemented a transfer operation, they would develop a LHTS at their existing site and would likely transfer directly to a disposal site out of the County[4]. Although overall System costs compared to the base case are similar for these Alternatives within the accuracy of this study; the Town would bear this incremental higher cost under Alternative 5 given these logistics and apparently would not consider use of a LHTS at the D&S site given the MD position described above.

Town staff have indicated that they have an option to purchase and are in the process of considering buying the MD TS/MRF property in total (including the expansion parcel) to continue to serve as a TS for Town residents and potentially have the option to bid out facility operations in the future[5]. With Town ownership of a transfer station at that site they would strongly prefer to augment the existing small self-haul transfer station into a LHTS on that property and would not consider using the D&S site as an interim transfer point.

HDR typically would recommend bidding of the three potential sites based solely on competitive economics and the principle that competition provides the most efficient System to County and Town users. However, the additional consideration that the D&S site would raise the collection costs to the Town, apparently an amount that may compel MD and the Town to develop a LHTS at the MD TS/MRF site even if D&S could provide a lower LHTS tip fee bid, appears to be an overriding consideration that may make competitive bidding of the three sites impractical. Given that the Town comprises 70 percent of the System waste stream Alternative 5 does not appear to be a viable option for the System comprised of the Town and County waste steam.

Although comparison of a separate Town and County system was not included in the scope of this report as identified in the RFP, this issue raised this question and additional economic analysis was performed as summarized in the following section. It is assumed that a County-only LHTS could be operated at the D&S site (termed Alternative 5A).

1.4.3.2 Additional Considerations for Alternative 2

Regarding Alternative 2, MD has indicated that they would consider use of a LHTS at the BCLF, as it would have the same collection hauling as current conditions. The Town staff stated they might consider the concept of using a LHTS at the BCLF; however, the Town has a preference to the LHTS being located at the MD TS/MRF site given the hauling advantages and the Town's strategy to purchase the adjacent parcel.

[4] Based on conversations between Michelle Irwin, MD, and Mark Urquhart, HDR, November 12, 2010.
[5] Based on telephone conversation between Rob Clark, Town Manager, Ray Jarvis Town Director of Public Works and Mark Urquhart, HDR; November 15, 2010.

1.4.3.3 Additional Analysis - Separate County and Town LHTS

HDR prepared an additional comparison of the economics of a separate Town and County system. This analysis included issues raised by the Town, MD and the County during completion of this report. The right portion of Table ES-1 includes analysis of the comparative economics for separate LHTS for the County and Town (Alternatives 4A and 5A). The analysis indicates a comparative unit cost of $84/ton for the Town using a LHTS facility at the MD TS/MRF (Administrative Costs are unknown and therefore not included).

For direct comparison the $198/ton County unit cost should be adjusted to $166/ton after removal of administrative costs not included for the Town. This indicates that the unit cost for the County would be approximately double that of the Town ($166/ton versus $84/ton).

HDR would anticipate the large increase in tip fees for the County-only system would likely result in an increase in illegal dumping in the unincorporated area. However, this could also have a negative affect on the aesthetics and environment affecting residents of both the Town and County and tourists to the area that are important to the economy of both the Town and County.

1.5 Recommendations and Discussion

1.5.1 Immediate Efficiency Measures

Given the SWEF budget shortfall and low historic use on Sundays at the BCLF, HDR recommends the BCLF be closed on Sunday. Doing so, combined with other efficiency measures, will allow the County to reduce staffing by one position. Our efficiency review did not indicate the clear ability or need for additional staff reductions beyond this. We therefore do not recommend privatization of BCLF operations also considering that the life for landfill is limited, combined with concerns of increased risk in environmental liability and a potential for a reduction in diversion at the site. Consideration could be given to contracting out specific services such as grinding of wood wastes, inert disposal, and other functions which are infrequently performed at the transfer station or landfill sites[6]. HDR recommends the County solicit bids for these services and award the services to private companies if the bids are lower than the incremental cost for County staff to perform these functions.

1.5.2 County Transfer Station Operations

HDR concurs with County staff plans to bid out the TS operations contract next year. There appears to be interest in competition from local firms. However, based on the analysis performed for Alternative 1, we do not recommend closing any of the County transfer stations.

[6] Based on conversations with County staff HDR understands that grinding of organic and inert material occurs up to annually at County transfer stations and disposal of inert material quarterly.

1.5.3 System Fees

The FY 09/10 expense and revenue information provided by the County indicated a shortfall of approximately $907,500 for FY 09/10 excluding consideration of closure expenses and revenues received from the financial assurance closure fund[7]. Given the reduction in waste stream revenues from the economic downturn, the current tip fee schedule is unsustainable. See Chart 1 in Section 3.4 for the tip fee model.

HDR recommends raising the tip fee schedule to provide a stable trend coupled with a cash infusion to remedy the FY 09/10 shortfall. A general fund infusion on the order of $1M to solve the current shortfall combined with raising the tip fee to on the order of $100/ton, with other waste type tip fee increases[8] appears warranted and the most viable approach considering the difficult political, legal[9], and other implications of raising parcel, franchise or other fees.

Although it is not clear when waste quantities and tip revenues would rebound to historical levels, if this were to occur, any surplus should be used to pay back the general fund after compiling a modest cash reserve[10] for unexpected events and to provide a rate-stabilization fund if the rebound in the waste quantity is adequate. It should be noted that if the tip fee tonnage does not increase at a level at least equal to inflation then repayment of the cash infusion would not be possible and additional tip fee increases may be needed.

The actual tonnage and associated tip fees is the major variable and the $100/ton case in the tip fee model is recommended as it represents approximately a modest $47,000 (1.6%) annual positive balance starting in FY10/11. The model indicates this would only repay about 55% of a $1M cash infusion over the ensuing 10 years through to 2020. Conversely, a $96/T tip fee (Case 3-$1M infusion) as shown in the model indicates a negative annual balance of approximately -$17,000; predicting a deficit of $440,000 by 2020 even with the $1M cash infusion in 2011. This indicates that a $100/T tip fee is warranted and prudent based on the model assumptions and current conditions. A stepped[11] approach on three year increments starting in 2011 is also not a viable approach given the same $1M infusion in 2010 because the negative deficit that grows under the $90/ton and $96/ton tip fee three year increments is

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[7] Closure revenues and expenses were excluded from developing a funding plan because the variance between expenses and revenues were approximately $638,954 ($909,346 in revenues and $264,392 in expenses for FY 09/10) higher in revenues, and were therefore interpreted as more of a scheduling and cash flow issue between payments for closure services and approved accrual of financial assurance funds to the SWEF. Review of previous years also indicated large variations in closure activities and funding from year to year.

[8] See Table 3-7; Case 4 for the full tip fee schedule for various materials.

[9] In addition to Proposition 218 voting requirements involving parcel fees, consideration of continuing or raising tip fees and other types of fees would require a legal opinion regarding recently enacting Proposition 26. HDR is not a legal firm and can therefore not render a legal opinion regarding Proposition 26 legal requirements for raising tip fees or other solid waste fees.

[10] A reserve of 10% of the SWEF would be about $300,000 and could provide stability given varying annual closure requirements and contingency for unforeseen events or changes in gate receipts.

[11] Stepped approach modeled: $90/ton assumed in 2011; Case 3 ($96/ton) assumed in 2014 Case 4 ($100/ton) assumed in 2017.

modeled to result in a deficit that grows to $750,000 in 2016 that decreases to a level of approximately $560,000 in 2020.

1.5.4 System Structure and Funding Issues

HDR recommends that the regional solid waste system (System) continue to serve both the Town and County in the interim when the BCLF is used, and in the future using the recommended LHTS facility serving both the County and Town. There is an economy of scale of the combined System that helps the County.

Although the analysis of equity of fees performed for FY 08/09 showed a differential of about 16 percent between the Town's fees contributed to the SWEF and allocated costs for Town use of the BCLF (normalized for one-time closure costs), and Table 1-1 indicates the a separate Town LHTS might save a percentage[12], these differences are not nearly as great as the roughly double unit cost for the County compared to the Town if conditions changed to a split system ($166/Ton Vs $84/T, without consideration of administrative costs).

One possible significant concern is if the Town and County were to have separate LHTS operations, there is the possibility of increased risk of illegal dumping as a result of the much higher County tip fees. Even if occurring mainly in the County, illegal dumping would negatively affect the environment for both the Town and County. For comparison the county-only system would approach double the cost of a LHTS for the combined System at the MD TS/MRF site ($198/Ton compared to $114/Ton as in Table 1-1; Option 4 without consideration of Town collection savings compared to 5A).

We understand that the Town wants to purchase the MD TS/MRF property and consideration from the County for the SWEF paying for a portion of the expansion parcel and transfer station improvements and operations at the site. Public ownership is probably required and there may be legal issues involved in such an arrangement as it is not clear if public County funds (SWEF) could be used on financing or property not owned by the County without appropriate agreements. It would appear that consideration would also have to be given to whether the SWEF would fund any improvements or property related to collections operations as that practice is not currently done in the System and this issue would also require appropriate legal advice regarding what level of County ownership would be required. HDR is not a legal firm and therefore cannot give such advice.

To enable joint funding, financing and ownership of facilities, some jurisdictions have undertaken governing, financing and funding of solid waste facilities through formation of Joint Powers Authorities (JPA).

[12] Comparative costs in Table 1-1 indicate 22% less than base case without any Town administrative costs included. If a number similar to County administrative costs ($280,000) is applied to the Town Alternative 4A the difference drops to 10%.

1.5.5 Disposal/Transfer System (Long Term Alternatives)

HDR recommends that the County and Town pursue the LHTS at the MD TS/MRF (Alternative 4) based on the following rationale and conditions:

- The LHTS alternatives are similar in economics and more economical that other alternatives
- As described above, HDR estimates that Alternative 5 would theoretically cost the Town on the order of $320,000 more annually in collection costs. MD and the Town believe the collection conditions for Alterative 5 would force the Town into short-haul transfer of all their collection truck waste and the Town therefore would otherwise implement a separate LHTS and bypass Alternative 5 in any case. If the County and Town were to have split systems there would be negative economic impacts on the County (See 1.4.2.1 and 1.3.3.3).
- The Town's goal to bid out transfer services that could be performed at the site. LHTS operations lend advantages to private companies for competition on the open hauling market and bundling of hauling with other hauling operations that the County or Town would not possess. Bidding also provides competition to theoretically provide the lowest cost.

As a contingency to this recommendation, the long term lease of the BCLF site for a LHTS is a potential regarding Alternative 2. This alternative is only viable if potential long term lease use could be confirmed with the LADWP. If the BCLF site were viable this would also give the County flexibility to bundle contract LHTS operations with private contract operations of the County six small volume TS's.

1.5.6 Implementation Schedule

HDR recommend implementation of a LHTS alternative according to the following schedule:

- County plan to implement final filling for accelerated closure, including starting developing and gaining regulatory approval of the revised final grading plan in the next two years.
- After approval, landfill operations should be configured to build to the new final grading plan for closure of the BCLF in 2020 and transition to start LHTS operations in 2021.
- The project for implementation of a LHTS for the system should be started beginning in 2015 at the latest to provide a year for bidding or negotiations for a contract for a LHTS provider and then four years for the Town, County and contractor to implement the project to include design, permitting, and construction of a LHTS facility.

1.5.7 Funding of Expansion of the MD TS/MRF or a LHTS at MD TS/MRF

During preparation of this report, the Town staff raised with HDR the issue of the SWEF funding portions of MD TS/MRF property, improvements and operations. This is based on the premise that the SWEF currently funds the contract operations and bond infrastructure for the County TS system used exclusively by the County and thus similar consideration should be given to the Town. As noted in this report, much of the improvements illustrated on the plans shared with HDR by the Town for the site did not appear to be directly related to transfer operations and appear to relate to MD hauling or administrative services[13]. However, a portion of station is currently used for transfer operations for self-haul users from the Town similar to the County TS system.

HDR recommends that the County work with the Town to explore possible shared funding of a portion of the MD TS/MRF costs both in the near term and long term if the recommended LHTS (Alternative 4) at the MD TS/MRF were implemented. This is based on the main reasoning that Town residents pay a majority of the SWEF System costs through the combination of parcel fees and pass through of BCLF tip fees; however the Town does not benefit from the SWEF in a similar manner as the County with respect to TS costs. This is also based on the recommendation that the County and Town continue joint funding and use of the System because splitting of the County and Town using separate LHTS would have negative economics impacts on the County and potentially increase illegal dumping. It is assumed that long term LHTS operations at a publicly owned MD TS/MRF (assumes purchased from MD) site could be funded by the SWEF using a facility tip fee to Town and County users.

This recommendation is based on assumed conditions listed below:

- SWEF funding should include public ownership of the properties MD TS/MRF current and expansion properties. The Town has an option and indicated to HDR it intends to pursue purchase the existing TS/MRF parcels and property and a 1-acre expansion parcel. The possible purchase of this property requires legal counsel review concurrence. This is beyond the scope of this report as HDR is not a legal firm and cannot provide legal opinions regarding ownership requirements to allow SWEF funding.
- Appropriate agreements ownership title, leases and other items would have to be worked out between the County, Town and the operator in accordance with legal requirements.
- For consistency, the level of funding should be worked out between the County and Town based on costs directly attributed to serve transfer operations for self-haul users (portion of capital, land, operations costs); as the SWEF currently does not provide funding for collection services, transfer of private company hauler waste, or related

[13] Based on email received by Mark Urquhart, HDR, from Mike Grossblatt, August 18, 2010.

private collection facilities. Any change in this policy regarding use of the SWEF should be considered County-wide.

- Assuming Town or County ownership of the property as required by legal agreements for funding, services should be bid to a private operator.
- A unified tip fee should be established and offered to the Town and County to use the facility and fund operations through the SWEF.
- Any establishment or fee increases should meet legal requirements, including recently enacted Proposition 26.

Table 1-1: Summary of Estimated Annual Cost Comparison of Alternatives Including Separate County and Town LHTS Alternatives

Cost Element	Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.	County only at D&S LHTS	Town only MD LHTS
Alternative	**BASE**	**1**	**2**	**3**	**4**	**5**	**6A**	**6B**	**5A**	**4A**
Transfer Station	$840,000	$680,000	$2,860,000	$840,000	$3,020,000	$2,660,000	$2,600,000	$2,430,000	$1,400,000	$1,610,000
Landfill	$2,080,000	$2,470,000	$70,000	$2,860,000	$70,000	$70,000	$60,000	$60,000	$70,000	$130,000
General and Administration	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$0
Added Diversion and Alt Tech	$0	$0	$0	$0	$0	$0	$480,000	$2,010,000	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL SYSTEM COST	**$3,200,000**	**$3,430,000**	**$3,210,000**	**$3,980,000**	**$3,370,000**	**$3,010,000**	**$3,420,000**	**$4,780,000**	**$1,750,000**	**$1,740,000**
Difference from Base Case $	$0	$230,000	$10,000	$780,000	$170,000	($190,000)	$220,000	$1,580,000		
System Tonnage	29,515	29,515	29,515	29,515	29,515	29,515	29,515	29,515	8,855	20,661
Comparative $/Ton	**$ 108**	**$ 116**	**$ 109**	**$ 135**	**$ 114**	**$ 102**	**$ 116**	**$ 162**	**$ 198**	**$ 84**
Difference from Base Case %	**0%**	**7%**	**0%**	**24%**	**5%**	**-6%**	**7%**	**49%**	**82%**	**-22%**
Incremental Hauling Value										
Commercial Hauling Co.	$0	$0	$0	$0	-$120,000	$200,000	$0	$0	$0	$0
Self Haul Customers	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL COMPARATIVE VALUE	**$3,200,000**	**$3,630,000**	**$3,210,000**	**$3,980,000**	**$3,250,000**	**$3,210,000**	**$3,420,000**	**$4,780,000**	**$1,750,000**	**$1,740,000**
Comparative $/Ton	**$ 108**	**$ 123**	**$ 109**	**$ 135**	**$ 110**	**$ 109**	**$ 116**	**$ 162**	**$ 198**	**$ 84**
Difference from Base Case %	**0%**	**13%**	**0%**	**24%**	**2%**	**0%**	**7%**	**49%**	**82%**	**-22%**

2.0 Introduction

This Report was prepared under an agreement between HDR Engineering, Inc. (HDR) and the County of Mono (County) dated May 7, 2010 for solid waste consulting services (Agreement). HDR collaborated with California Waste Associates (CWA) as a subconsultant to HDR on certain tasks as noted, with those elements hereinafter noted as performed by the "HDR team".

The following subsections describe the background, purpose, scope and methodology of this report.

2.1 Background

2.1.1 System overview

The System in unincorporated Mono County is managed by the County Public Works Department and that within the Town is administered by the Town. The current system in the unincorporated area consists of seven disposal facilities, including one regional landfill (LF), four TS, and two combined landfill / TS facilities (LF/TS). Following diversion efforts at the TS's, all residual residential and commercial waste received at those facilities is hauled to the BCLF for disposal. Bulky recyclable items from the TS's (e.g., appliances, tires, CRTs, scrap metal) are hauled separately to the regional landfill where they are stockpiled and processed for recycling.

The County currently contracts with MD (Mammoth Lakes, California) to operate its six TS's, which are owned by the County and located in the communities of Benton, Bridgeport, Chalfant, Lee Vining, Paradise, and Walker. The TS serving businesses and residents in the Town is owned and operated by MD (MD), the Town's franchise hauler. Locations of the eight facilities in the context of county and state borders are presented in Figure 1.

The BCLF is used for disposal of all household and commercial wastes generated in the county, except construction and demolition (C&D) waste generated in the service areas for the Pumice Valley and Walker landfills that is buried at those sites on a quarterly basis by County Public Works personnel. The BCLF is operated by the County on land leased from the LADWP. That lease is due to expire in 13 years, or 2023.

Diversion occurring at County landfills and TS's includes organics (e.g. grass clippings, sod, hay, manure, pine needles, bark), inert debris (soil, gravel, small concrete and asphalt), wood waste, scrap metal, appliances, CRTs, cardboard, beverage containers, waste tires, used motor oil and filters, household hazardous waste (HHW), and universal wastes. These wastes (except organics, inerts, and wood) are also diverted at the MD Transfer Station. The County, the Town, and the Town's franchise hauler then coordinate efforts to consolidate appliances, CRTs, HHW, and universal wastes at the County's regional landfill prior to shipment to market. In addition, cardboard and beverage containers are managed and marketed for both jurisdictions by MD.

The County's program is a SWEF supported by gate fees assessed on every load delivering waste to the system, as well as solid waste fees imposed on all developed parcels within Mono County. In addition to self-haul, waste collection service is provided by MD and D&S Disposal (D&S) as franchise haulers in the unincorporated area of Mono County, and by MD within Town limits.

2.1.2 Disposal Data

Of the waste buried in County landfills in 2009, 94 percent was landfilled at the BCLF. Based on daily gate receipts in 2009, the County estimated that the Town accounted for 75 percent of all waste landfilled at the site in 2009. A summary of 2009 waste disposal, diversion, and traffic data compiled by the County for the County's facilities is in Appendix A.

The quantity of waste received compiled by the County in recent years is graphically presented in Appendix A as included in the RFP. The annual quantity of waste received at Mono County disposal sites as shown in that data has decreased by approximately 40 percent since its high in 2005. While a very minor amount of this can be attributed to waste hauled out of state, the primary factors are thought to be the dramatic reduction in Mammoth Lakes development since 2006 and the overall economic downturn since late 2008.

2.2 Purpose of this Project Report

The overall purpose of this project is to compare alternatives for solid waste management of the System to recommend the most efficient and effective strategy for waste management in the future. The alternatives identified in the RFP include alternatives of landfill waste disposal either within or outside of the County, potential modifications to the TS system or arrangement, and consideration of other waste management options such as a regional MRF, composting facility, or other alternative technology facility. An initial task includes assessment of current fee conditions in terms of the application of gate fees county-wide, and comparison of fees for the County system to other selected similar rural jurisdictions in California.

2.3 Scope of Report and Methodology

2.3.1 RFP and Scope of Services Tasks

The scope of work for this project was based on the County's RFQ dated February 18, 2010; HDR's interview with the County selection panel on March 25, 2010, and subsequent discussions with County staff. The RFQ listed the following general project work:

1. Prepare a detailed report regarding the efficiency of how waste is currently managed throughout the county and options to improve program efficiencies. Included in the report should be an analysis of the gate fees, their equity as applied county-wide, and their relative ranking compared to similar systems.

2. Evaluate the potential of hauling waste to a regional landfill located outside the county and its barriers of entry, including cost, infrastructure, employment, travel time, and winter road closures.

3. Evaluate the cost effectiveness and efficiency of disposing all waste at a new regional landfill located in close proximity to Mammoth Lakes, including property acquisition, facility construction, and long-term operation.

4. Evaluate the cost effectiveness and efficiency of managing all waste through a long-haul TS located at the current MD TS in Mammoth Lakes, including the purchase of adjacent properly, facility construction, and long-term operation.

5. Evaluate the cost effectiveness and efficiency of managing all waste through a LHTS owned and operated by D&S Waste Disposal at its property located on State Route 167 north of Mono Lake.

6. Evaluate the viability of other waste management options available, such as a regional material recovery facility, a waste-to-energy facility, a regional compost facility, or alternative systems proposed by local waste collection firms.

7. Evaluate the potential of combining waste from Mono County and northern Inyo County in the system.

The RFQ required the project report be prepared under the direction of a California licensed civil engineer. In addition to economic considerations, the County required that other factors be considered.

Based on the above the following Tasks were completed for the project:

- Task 1 – Site visit and interviews were performed by the HDR project manager
- Task 2 – A working draft report was completed for County review:
  - 2. A.1 – A TM that evaluated the equity of the current gate fee system was compiled (Section 3.1.1; Appendix B).
  - 2. A.2 – A TM that compared the County fee system to most similar systems was compiled (Section 3.1.2; Appendix C).
  - 2B – An Evaluation of Transfer/Disposal System Economics based on the RFQ alternatives was compiled (See Section 3.2.1; Detailed calculations in Appendix D).
  - 2C – Evaluation of other waste management options was included in the alternative comparison (composting and alternative technologies) was compiled.
  - 2D – A working draft of this report was completed for County review.

- Task 3 – This included preparation of the final report after County comments and HDR developing and making a final presentation to the County Board of Supervisors.

2.3.2 Methodology

The overall methodology included developing the two TM to provide baseline and comparison information which is pertinent to the comparison of the alternatives. Economics is an important factor; however, comparison of the alternatives in terms of other factors is included in this report. This report should be viewed as a general planning level comparison of the Alternatives, which is discussed in following sections in terms of:

- Economics – Annual comparative system costs are compared. These are generally System cost to the County unless noted otherwise.
- Services – Given the differences between the options the level of services to the customers is discussed.
- Landfill Diversion – Changes in the configuration of the facilities in the system portrayed in the alternatives would potentially affect the cost or rate of landfill diversion. These differences are discussed.
- Environmental Issues – Changes in the fee structure and/or configuration of the facilities can change the risk of environmental impacts. The key issues of potential for increased illegal dumping and environmental liability with changes in the landfill and transfer system are discussed.
- Regulatory or Implementation Issues – These are discussed if applicable to the various alternatives. For example the alternative to site a new landfill in the County (assuming that the LA Department of Power and Water will not renew the BCLF lease) would face opposition from some public groups and have significant permitting requirements compared to other alternatives.
- Financial Tip Fee Analysis – During the course of the Study, after draft results of the economic comparison of alternatives was completed, HDR was requested to perform additional work involving financial analysis of a funding plan for the County System given the budget shortfall in the SWEF noted in the fee analysis under Task 2A. This included analysis of the tip fee and other funding mechanisms needed to deal with the shortfall.

Other Analysis – In addition to the Scope of Work in the RFP and the additional tip fee analysis HDR was requested to provide analysis, opinions or recommendations regarding an implementation plan for the preferred alternative(s) and analysis of comparative economics and fee issues regarding separate systems for the Town and County.

3.0 Solid Waste System Review and Alternatives Comparison

3.1 Fee Equity and Comparison to Other Systems

3.1.1 Equity of Current Fee System

The HDR Team prepared a TM, dated June 22, 2010 (Appendix B), which analyzed issues surrounding the equity of fees paid to the County system by users, in particular analysis of the Town's share of system funding. Selected major findings include:

- HDR's review of "allocation" of costs to landfill costs used by the Town is similar to previous analysis by the County staff and provided a 31 percent allocation of total SWEF for FY08/09 and 35 percent using a 4-year average.
- The Town paid approximately 56 percent of the System costs in FY08/09 based on consideration of both gate fees and parcel fees.
- Cost ledgers provided to HDR showed approximately a $2.6M shortfall between revenues and expenses charged for FY 08/09; which for planning purposes was noted to represent a trend of a $1.7M deficit after large one-time closure costs (primarily at the Bridgeport Landfill) are adjusted from the analysis.
- The unit cost of combined waste transfer and disposal at the much smaller and remote County sites is much higher than for BCLF disposal services used by the Town. After the FY 08/09 parcel fees and other non-gate revenues were removed, the system cost balance allocated using the 31 percent cost allocation to the Town for FY 08/09 resulted in costs of about $37/ton to the Town and $246/Ton to the County. Given that $246/ton is an impractical gate fee at County sites a more realistic gate fee structure and parcel fee amount would need to be considered to fund the system.

It should be noted that the 31 percent allocation above for FY 09/10 in the TM included extraordinarily large one-time closure costs at County TS/LF sites allocated exclusively to the County. For a more representative general allocation the large one-time closure costs could be removed from the equation given that regular annual financial assurances closure deposits are allocated and intended to fully fund closure of remaining landfill sites at the currently planned future closure dates. *If this more representative adjustment is used the cost allocation to the Town is adjusted from 31 percent to 40 percent.*

Although the Town pays a higher percentage of system costs allocated solely on the services it uses at the BCLF, the County bears the burden of hosting the landfill and the BCLF location close to Mammoth Lakes benefits the Town in terms of haul costs to the landfill to a greater degree than the County which has even its closest TS facilities located further from the BCLF.

3.1.2 Comparison of County Rates to Other Systems

The HDR Team prepared a TM, dated July 28, 2010 (Appendix C) that compared the fees of the County system to other Counties. Information on demographics of California Counties was

compiled and analyzed to develop a comparison list of eight other rural counties similar to Mono County for comparison. The eight counties were contacted to survey information on the annual solid waste budget, tonnage, gate fees, and use of parcel fees.

Comparing the counties to Mono County found that Mono County's solid waste budget was somewhat higher than other counties. However, when considering the budget on a unit basis regarding number of facilities and population density the Mono County budget size may be a reflection of the level of service and diversion provided in the large service area. In addition it is noted that the high rate of seasonal recreational visitors to the County put demands on the system that affect system costs and rates to users and judgments regarding the comparative cost efficiency of the system require more detailed analysis of the system costs based on the County's specific conditions and needs. Regarding use of parcel fees, four of seven counties responding did not use a parcel fee to fund the solid waste program, while the remaining three reported using parcel fees to fund a greater degree of the solid waste program than Mono County (based on comparison to 24 percent used by Mono County based on 4-year average).

3.2 Comparison of Alternatives

3.2.1 Description of Alternatives

Table 3-1 summarizes the major depiction of the alternatives. This is followed by a table that lists the facilities by type, a table chart of the facilities, figures, and then overview descriptions of the alternatives.

Table 3-1: Alternatives Major Elements

Alt	Name	Assumed Major Elements
	Base Case	Current system of six rural TS, BCLF, and Town TS/MRF
1	Reduced TS System	Closure of four rural TS in effort to reduce budget shortfall
2	County LHTS	County LHTS hauling to Lockwood Landfill, NV
3	New Landfill	New County Regional Landfill
4	Mammoth Disposal LHTS	Mammoth Disposal LHTS hauling to Lockwood Landfill, NV
5	D&S Disposal LHTS	D&S Disposal new LHTS hauling to Lockwood Landfill, NV
6A	Add Composting	County provide regional composting facility at BCLF
6B	MRF/Alt. Tech.	System MRF and/or Alternative Technology at Town MRF
7	Portion Inyo County	System provides disposal for some of Inyo County waste

Alt. Tech. *Alternative Technology*
BCLF *Benton Crossing Landfill*
LHTS *Longhaul Transfer Station*
MRF *Materials Recovery Facility*
NV *Nevada*
TS *Transfer Station*
TS/MRF *Transfer Station/Materials Recovery Facility*

Table 3-2 notes the number of facilities by transfer, landfill, and diversion functions according to County and Town locations. Table 3-3 is a chart list of the facilities that would be in the System. Figures 3 through 8 show the facility configurations for each alternative.

The differences between the alternatives generally are related to locations of new facilities for a LHTS; however, all of the out-of-County transfer alternatives assume waste would be hauled to the Lockwood Landfill in Nevada. This was assumed after research because Lockwood provides long term stable capacity and rates compared to the other nearest option in Hawthorne, Nevada, which has limited permitted throughput and site capacity.

Table 3-2: Alternative Facility Configurations by Function

Alt	System	Transfer Station	Landfill	Diversion Facilities	Facility Closures
	Base Case	Current 6 Co. TS; Town TS	BCLF (only 13 yrs)	Co.: 4 TS, 2 TS/ILF, BCLF; Town TS/MRF	N/A
1	Reduced TS System	2 Co. TS and Town TS	BCLF (only 13 yrs)	Co.: 2 TS, 0 TS/ILF, BCLF; Town TS/MRF	Co.: 2TS, 2TS/ILF
2	County LHTS	6 Co. TS, Town TS; Co. LHTS	Lockwood, Nevada	Co.: 4 TS, 2 TS/ILF, BCLF/LHTS; Town TS/MRF	Co.: BCLF
3	New Landfill	6 Co. TS, Town TS	New LF	Co.: 4 TS, 2 TS/ILF, NEW-LF; Town TS/MRF	Co.: BCLF
4	Mammoth Disposal LHTS	6 Co. TS, Town LHTS	Lockwood, Nevada	Co.: 4 TS, 2 TS/ILF ; Town LHTS/MRF	Co.: BCLF
5	D&S Disposal LHTS	2 Co. TS, Town TS; D&S LHTS	Lockwood, Nevada	Co.: 1 TS, 1 TS/ILF; D&S LHTS; Town TS/MRF	Co.: 3TS, 1TS/ILF
6A	Add Composting	6 Co. TS, Town TS; D&S LHTS	Lockwood, Nevada	Co.: 4 TS, 2 TS/ILF, NEW CF; Town LHTS/MRF	Co.: BCLF
6B	MRF/Alt. Tech.	6 Co. TS, Town TS; D&S LHTS	Lockwood, Nevada	Co.: 4 TS, 2 TS/ILF, NEW CF; Town LHTS/MRF/CT	Co.: BCLF
7	Portion Inyo County	6 Co. TS, Co. LHTS; D&S LHTS	Lockwood, Nevada	Co.: 4 TS, 2 TS/ILF, BCLF/LHTS; Town TS/MRF	None

Table Acronymns

Alt. Tech. *Alternative Technology*
BCLF *Benton Crossing Landfill (note only 13 service years remaining)*
CF *Compost Facility*
Co.
CT *Conversion Technology Facility*
LF *Landfill*
LHTS *Longhaul Transfer Station*
TS *Transfer Station*
TS/ILF *Transfer Station/Inert Landfill*
TS/MRF *Transfer Station/Materials Recovery Facility*

Table 3-3: Alternative Facility Chart List

	FACILITY LIST	Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.
	Alternative	**BASE**	**1**	**2**	**3**	**4**	**5**	**6A**	**6B**
	Transfer Stations								
1	Walker (closed LF/permitted inert disposal)	X	O	X	X	X	X	X	X
2	Bridgeport (closed LF)	X	X	X	X	X	X	X	X
3	Pumice (closed LF/permitted inert disposal)	X	O	X	X	X	X	X	X
4	Chalfant (closed LF)	X	O	X	X	X	X	X	X
5	Benton (closed LF)	X	X	X	X	X	X	X	X
6	Paradise	X	O	X	X	X	X	X	X
7	Mammoth Disposal (Town of ML)	x	x	x	x	X	x	x	x
8	D&S (Hwy 167)						P		
	Landfill								
A	Benton Crossing	X	X						
B	Lockwood			X		X	P	X	X
C	Hawthorne								
D	Other OOC								
E	Bishop Sunland (120 TPD permit)								
F	New Regional Landfill near Mammoth				X				
	Other								
I	Composting							X	
II	Conversion or Technology								X

Base Case – Includes 6 existing TS's, the Benton Crossing Landfill, and the MD (Town) TS/MRF.

1. *Reduced TS System* – This alternative is the same as the base case and was included for comparison because of the current deficit situation described in 3.1.1. It presents a deep system cut in that it assumes closure of four County TS's including two that provide on-site disposal and reuse of inert material (See Table 3-2). Assumed closures of four was based on providing facilities within roughly an hour rather than ½ hour drive for users as is current, and the remaining Bridgeport TS, BCLF, and Benton TS would remain to serve users. (Alternatively Benton rather than Chalfant could be closed). Note that most other alternatives assume no TS would be closed, except Alternative 5 as discussed, below.
2. *County LHTS* – This assumes use of the base case facilities except that the BCLF would be closed and the County would site a LHTS near (20 minutes) from the MD TS/MRF. It is assumed this LHTS would be at the BCLF site as the closed landfill is already a solid waste facility and the diversion activities could remain in conjunction with operation for the LHTS and closed landfill maintenance.
3. *New Landfill* – This assumes that a new landfill would be sited within 30 minutes of the Town. This location is because most of the System waste is generated in the Town, and therefore in general provide better economics. This alternative was included in the RFP because the BCLF only has 13 years of remaining capacity and the LADWP does not want to renew the BCLF lease or provide other leases for land for waste disposal maintaining a landfill provides a greater degree of long-term control of future disposal rates compared to outside private facilities. However, siting and developing a new landfill in the County would require acquiring a suitable parcel and then undertaking the significant project of permitting a developing the new landfill, which could be controversial.
4. *MD LHTS* – This assumed that the existing MD TS/MRF would be expanded to include a LHTS for all of the system waste. This would provide a cost savings to the Town from less off-route travel by collection trucks (rather than using the BCLF). It is assumed that this station would allow closure of the BCLF. The Town is in the process of acquiring a parcel south and adjacent to the existing TS/MRF site owned by MD which could provide space for expanding the operations to include a long haul component.
5. *D&S Disposal LHTS* – This assumes that D&S Disposal would site a LHTS on its property on Highway 167 relatively near Highway 395. D&S has approached the County staff with this idea and the location would be relatively centrally located in the County and provide a route to the Lockwood Landfill that is about an hour shorter than a LHTS at Mammoth Lakes. However, this would about double (increase by ½ hour each way) the direct haul driving time from collection vehicles from the Town for

disposal[14]. This alternative similar to Alternatives 2 and 4 assumes the County would retain the County TS system in the Base Case. It is noted that this raises the questions of closure of the Pumice TS given nearly logistic and D&S has discussed with the County staff that the new LHTS could allow more effective collection services in the unincorporated area, which may provide more subscription to collection services thus reducing the already low throughput of the County TS system. However, given the closure cost liabilities for the current transfer system discussed in the Alternative 1 economics, below, this was not assumed in the comparison.

6. *Add Compost (A,) and/or (B) Conversion Technologies (CT) & MRF* – These two relate to "other" options mentioned in the RFP, generally consisting of alternatives to disposal. The County currently achieves relatively low cost diversion at its sites through user separation and drop of materials and beneficial reuse of inert and organic materials but does not current operate composting, sophisticated MRF or CT facilities. In this context a MRF is assumed to be a facility with automated sorting equipment of a higher level than is employed at the MD existing TS/MRF.

   Composting and MRF are more proven and competitive with disposal than CT, which is still a research element if applied to municipal solid waste. The types of CT (anaerobic digestion, gasification, thermal Waste to Energy, ect.) are discussed further in the sections below; but for facility location assumptions for Alterative 6 it is assumed that if any of these facilities were implemented they would be located relatively near the Town due to waste generation and transportation economics and that a MRF would be integrated within a TS. It is also assumed that consideration of any CT would involve co-location with a MRF because (1) most law and regulation policy in effect or considered to date requires that municipal solid waste would be processed at a MRF to the "maximum extent" to receive diversion or renewable energy consideration, and (2) most CT requires some level of waste feedstock separation as would be provided by a MRF.

In terms of locations for potential facilities primary consideration for a composting facility would be the BCLF, or an alternative site if LADWP would not lease for composting. The BCLF is already a solid waste function and the composting facility could be sited at the closed landfill.

However, siting for a more sophisticated MRF and/or CT facility is would be more problematic. In a general technical design sense expanding the existing MD TS/MRF would make more sense than one of the County sites because it is closer to the centroid of waste generation and already has more MRF function than the County sites. However, the Town staff contacted during preparation of this report indicated that the Town already studied the concept of providing more sophisticated and automated MRF elements at the facility and determined it to be too costly at the small scale of the facility. This is consistent with HDR experience as

[14] Google Earth auto driving times from the Town TS to BCLF and to the D&S property are listed as 21 and 53 minutes, respectively.

such small facilities provide more economical recovery using user separated "drop-off" approaches and limited non-automated floor recovery. Given that the Town has already discounted the idea of a full scale MRF at the MD TS/MRF, consideration would have to be given to a County site, and the most viable facility would be the BCLF as it would be transitioned to a LHTS as is assumed for Alternative 2. However, it should be noted that the same concerns over economy of scale (as voiced by the Town) would exist for this site or any facility in the system.

This report discusses the economics and other factors of a potential MRF and CT facility for the County system but notes that CT facilities are considered by HDR to be very expensive at a small scale and having considerable financial risk. This is discussed further in the sections, below.

1. *Portion of Inyo County* – The potential for collaboration regarding waste from northern Inyo County would require an interest by Inyo County in using the Mono County system for disposal, or the reverse. To assess interest in this HDR contacted Inyo County[15] to discuss interest in either direction, or what conditions might be involved.

   Inyo County informed HDR that the County has over 60 years of capacity left in its system and is therefore not interested in export to Mono County using the alternatives being assessed in this study for Mono County. Inyo County has a fee system set up for self haul users that includes relatively low fees for disposal; as its system is also funded by commercial hauler user fees based on 5 percent of gross annual revenues and roughly a 70 percent portion of a ½ cent sales tax. Inyo County has not considered importation as it want to provide the landfill capacity for its county users and so to date it has not set up a fee structure for importing waste and would have to assess what an importation cost would be.

Regarding exporting Inyo County waste and combining waste with the Mono County system it does not appear viable to Inyo County staff as long haul transfer to Lockwood would likely be most economical for Inyo County and similar in cost to Mono County situation. HDR would agree as based on review of driving times it is not clear that there is an economic value in this to Inyo County as for example the additional travel time (one way auto) is only about ½ hour further from Bishop to Lockwood as compared to the time from BCLF to Lockwood. Even if Inyo County were to close its landfill and develop a TS it is not clear that dropping and transferring in Mono County (and paying the associated incremental transfer cost) makes sense compared to leaving it on a long haul truck destined directly to Lockwood. A long haul trip from Bishop to Lockwood is a long day (Google auto time one way of 4 hours 18 minutes); however, it is not much longer than BCLF to Lockwood (3 hours 50 minutes).

It was also discussed that Inyo County may be open to the idea of Mono County using the Bishop Landfill for disposal in emergency situations if winter conditions forced road closure

[15] Telephone conference on August 5, 2010 between Chuck Hamilton, Inyo County, Deputy Administrator; Matt Carter and Jeff Walters, Mono County; and Mark Urquhart, HDR

that would not allow Mono County to long haul to Lockwood for a few days. Inyo County would have to develop a per ton cost structure for this situation to cover its costs but it would likely provide an economical situation for emergencies given that the transfer time from the BCLF area is about one hour.

Give the above situation the alternative of combining Inyo County waste with the Mono County system is not discussed further in this report.

3.2.2 System Economic Comparison

Table 3-4 presents a summary of an annual economic comparison of the alternatives described above. Appendix D contains the detailed spreadsheet calculation table followed by the economic calculation assumptions.

The economic comparison is based on County System cost and do not include evaluation of costs of the solid waste transfer station operated by the Town but do include fees paid by the Town to the County System budget, as the Town is the major fee user of the System. Following is a description of the comparative analysis of the Alternative System Costs in the upper portion of Table 3-4. This is followed by a Section with a "Summary" of economic comparison that also includes the incremental hauling cost analysis shown at the bottom of Table 3-4. The incremental hauling cost analysis was include because although these cost are not part of the System budget they borne by system users (self-haul users of County transfer stations and the collection hauler in the Town) that would result from alternative changes in facilities from the current base case system.

In general the economic comparison employed review of the solid waste budget for FY08/09 when the TM analysis for Tasks 2A was performed (Section 3.1.1), which was used as the basis to configure the "Base Case" economics. The alternatives were then compared by estimating the costs for the System under the various alternative configurations. This is followed by an analysis of "incremental hauling value" to provide the total alternative comparative costs.

Table 3-4: Summary of Economic Comparison of Alternatives

Cost Element	Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.
Alternative	**BASE**	**1**	**2**	**3**	**4**	**5**	**6A**	**6B**
Transfer Station	$840,000	$680,000	$2,860,000	$840,000	$3,020,000	$2,660,000	$2,600,000	$2,430,000
Landfill	$2,080,000	$2,470,000	$70,000	$2,860,000	$70,000	$70,000	$60,000	$60,000
General and Administration	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000
Added Diversion and Alt Tech	$0	$0	$0	$0	$0	$0	$480,000	$2,010,000
Other	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL SYSTEM COST	**$3,200,000**	**$3,430,000**	**$3,210,000**	**$3,980,000**	**$3,370,000**	**$3,010,000**	**$3,420,000**	**$4,780,000**
Difference from Base Case $	$0	$230,000	$10,000	$780,000	$170,000	($190,000)	$220,000	$1,580,000
System Tonnage	29,515	29,515	29,515	29,515	29,515	29,515	29,515	29,515
Comparative $/Ton	**$ 108**	**$ 116**	**$ 109**	**$ 135**	**$ 114**	**$ 102**	**$ 116**	**$ 162**
Difference from Base Case %	**0%**	**7%**	**0%**	**24%**	**5%**	**-6%**	**7%**	**49%**
Incremental Hauling Value								
Commercial Hauling Co.	$0	$0	$0	$0	-$120,000	$200,000	$0	$0
Self Haul Customers	$0	$200,000	$0	$0	$0	$0	$0	$0
TOTAL COMPARATIVE VALUE	**$3,200,000**	**$3,630,000**	**$3,210,000**	**$3,980,000**	**$3,250,000**	**$3,210,000**	**$3,420,000**	**$4,780,000**
Comparative $/Ton	**$ 108**	**$ 123**	**$ 109**	**$ 135**	**$ 110**	**$ 109**	**$ 116**	**$ 162**
Difference from Base Case %	**0%**	**13%**	**0%**	**24%**	**2%**	**0%**	**7%**	**49%**

Following some basic assumptions used for all or similar alternatives:

- Facility costs are typically amortized over 20 years using 5.5 percent interest (assume would cover total financing costs), unless noted for Alterative 6A and 6B based on service life or other conditions.
- The LHTS facility is assumed to be a basic three-walled pre-engineering metal building 80' x 80'; with a partially depressed load out tunnel.
- General administrative costs from County Public works are assumed at $280,000 for all alternatives.

Following is a discussion of the differences in the comparative costs for the alternatives in terms of the major cost elements in Table 3-4.

3.2.2.1 Alternative 1 – Reduced Transfer Station System

This alternative is most similar to the base case as it mainly takes significant efficiency measures to solve current budget shortfall trend. These involve closure of four TS facilities and other cost cutting measures County staff is proposing in the near term. Cost changes would mainly result from:

- Reduced facility only operational portion of the contract approximately $500,000 to $350,000.
- Transport portion of TS contract the same as base case assuming that the same tonnage would have to be transported from fewer stations.
- A 15 percent "efficiency" cost reduction is assumed for operational and maintenance items in some County operations budget items at a level of about $170,000 based on discussion of potential efficiency measures discussed with County staff.
- A comparative cost increase item of about $0.5M due to closure costs for the two TS's that have landfills. The value assigned to these was based on the current landfill closure liability of $2,174,632 for these two sites minus the closure fund balance of $448,305 for a total liability of $1,726,327. Although economic comparison of cost items was generally based on a 20-year amortization if the elements would serve in some long term period, for Alternative 1 the closure liability was only distributed over only three years because closure of the stations would require funding the landfill closures over that order of a period once implemented. This results in a $575,442 annual increase over the base case in the comparison above. This is discussed further below in the economics summary section as sensitivity analysis of spreading the TS/LF closure costs over a longer period (would have to fund sooner so loan from general fund or other source would have to be employed) bring a long term view to this item which may be appropriate for this study.

It should be noted that closure of four stations would be a controversial move in it would be a major reduction compared to current service levels. The total comparative System cost for

Alternative 1 is $230,000 higher than the base case given the assumptions below. This is because of the assumed three year period to fund closure of the two TS/LF sites, which is discussed further in the economic summary, Section 4.1.2.1, below.

3.2.2.2 Alternative 2 – County LHTS

The economics for this alterative would see an increase in transfer system costs for a new LHTS and landfill tip fees at Lockwood, offset primarily by closure of the operations at the BCLF. It was assumes that the LHTS would be located at the closed landfill site. Major cost assumptions and differences would mainly result from:

- Assumes the current land lease level at BCLF would be maintained by LADWP for a LHTS at the closed landfill.
- The small TS system is assumed to retain all six of the current TS, the same as the base case.
- Transfer Station system operating costs would increase for the new LHTS, assuming roughly a $15/ton cost for pad operations only.
- Transport costs to Lockwood Landfill are estimated to be approximately $34.60 per ton, not including tipping fees at Lockwood.
- It is assumed that a LHTS could be constructed at the BCLF for approximately $700,000 using some of the existing facility improvements. This is amortized or 20-years in the annual comparison.
- Comparative disposal tip fees are assumed to be $442,725 under an assumed $15/ton tip fee at Lockwood for a long term contract. This is speculative; however, this same tip fee was used for all LHTS alternatives as an estimate of an average fee that could be negotiated to cover over the next 10 to 20 years.
- Landfill system costs are assumed zero except for the current $69,500 financial assurance fund the same as the base case. This was done as the County may wish to use the remaining life of the BCLF as it would transition to the LHTS over the next 13 years.

The comparative System cost for Alternative 2 is $10,000 higher than the base case or about equal given the accuracy of this study.

3.2.2.3 Alternative 3 – New Landfill

The economics for this alterative is similar to the base case as the transfer system is assumed to remain the same and the new landfill would be roughly the same scale as the BCLF. However, there is roughly a $600,000 annual increase to the landfill system component because based on the following:

- Assumes the cost for landfill in the general 30-minute vicinity of Mammoth Lake would be $5,000 per acre for a 50-acre parcel for a new 40 acre landfill. This $250,000 is

amortized over 20 years in the comparison, although the landfill would service longer (on the order of 70 years is speculated). This figure is speculative as it is note even clear if such suitable land is available and a siting study would need to be undertaken to determine this.

- Capital costs for the new landfill are compared based on construction of the first module cell of 4 acres, which it is assumed would serve up to 5 years. Site development costs and cost for this cell are estimated at $2.2M. This is amortized over 20 years at an annual cost of $180,000. The current COP payments that continue at $238,000 (to TS and LF projects) are included. In addition $8.14/ton estimated for a liner and LFG system to an ongoing fund over the life of the landfill is included times the 29,515 annual disposal tonnages. This results in an annual comparative cost for landfill capital construction projects of approximately $660,000 per year, an increase of about $440,000 per year over use of the current BCLF.
- An increase of $50,000 per year is included for permitting or other costs due to operation of liner and leachate management systems.
- Closure liability for the new landfill is assumed to increase by $4/ton over the current levels; and other operating line items increase by 20 percent.

The comparative cost for Alternative 3 is $780,000 higher than the base case. This is mainly from the higher cost to develop and operate a new lined landfill.

3.2.2.4 Alternative 4 – MD LHTS

The economics for this alterative would see an increase in transfer system costs for expanding the MD TS/MRF to serve as a LHTS and the associated landfill tip fees at Lockwood. Similar to Alternative 2, these would be offset primarily by closure of the operations at the BCLF. Major cost assumptions and differences would mainly result from:

- Assumes a $1.5M cost for a one-acre parcel adjacent to the TS/MRF to allow construction of a LHTS. The Town expects to buy this parcel for approximately this amount by the end of 2010[16] to expand operational room in any event. This is amortized over 20 years for comparison at approximately $125,000. It should be noted that it is not clear who would pay this cost as the Town currently funds the TS/MRF facility outside of the SWEF System (See Section 4, findings and recommendations).
- The small TS system is assumed to retain all six of the current TS, the same as the base case.
- Transfer Station system operating costs would increase for the new LHTS, assuming roughly a $15/ton cost for pad operations only.

[16] Based on telephone conversation with Mr. Mike Grossblatt, Town of Mammoth Lakes; Matt Carter, Mono County Solid Waste Supervisor; and Mark Urquhart, HDR; August 3, 2010.

- Transport costs to Lockwood Landfill are estimated to be approximately $37.43 per ton, not including tipping fees at Lockwood.
- It is assumed that a LHTS could be constructed at the MD TS/MRF for approximately $800,000 using some of the existing facility improvements. This is amortized over 20-years in the annual comparison.
- The same as Alternative 2, comparative disposal tip fees are assumed to be $442,725 under an assumed $15/ton tip fee at Lockwood for a long term contract. This is speculative; however, the same tip fee was used for all LHTS alternatives.
- Landfill system costs are assumed zero except for the current $69,500 financial assurance fund the same as the base case and the other LHTS Alternatives. This was done as the County may wish to use the remaining life of the BCLF as it would transition to the MD LHTS over the next 13 years.

The comparative System cost for Alternative 4 is $170,000 higher than the base case (5 percent) or about equal given the accuracy of this study. It was also analyzed that this location would create a shorter hauling distances for the Town that would reduce off-route hauling costs for the Town, which when take into consideration would make the Alternative 4 comparative cost even closer to the Base Case (2 percent as shown in Table 3-4; See section 3.2.3.2).

3.2.2.5 Alternative 5 – D&S Disposal LHTS

Similar to Alternatives 2 and 4, the economics for this alterative would see an increase in transfer system costs for constructing a LHTS at the D&S site on Highway 167 that is currently used as a shop and collection truck yard. Similar to Alternatives 2 and 4, these LHTS costs would be offset primarily by closure of the operations at the BCLF. Major cost assumptions and differences would mainly result from:

- This Alternative did not include a comparative annual cost for land because it is assumed that the D&S site is adequate size for a LHTS and that D&S Disposal would not require annual payments since it already operates collection services from the site, which may benefit from have a LHTS available for its collection services.
- The small TS system is assumed to retain all six current TS, as the base case.
- Transfer Station system operating costs would increase for the new LHTS, assuming roughly a $15/ton cost for pad operations only.
- Transport costs to Lockwood Landfill are estimated to be approximately $29.07 per ton, not including tipping fees at Lockwood.
- It is assumed that a LHTS could be constructed at the D&S site for approximately $1,200,000 using some of the existing site improvements. It is assumed that a fire prevention water tank and scale facility would need to be provided which increased the estimated cost for the LHTS somewhat over the other two alternative LHTS sites. This is amortized over 20-years in the annual comparison.

- The same as Alternative 2, comparative disposal tip fees are assumed to be $442,725 under an assumed $15/ton tip fee at Lockwood for a long term contract. This is speculative; however, the same tip fee was used for all LHTS alternatives.
- Landfill system costs are assumed zero except for the current $69,500 financial assurance fund the same as the base case and the other LHTS Alternatives. This was done as the County may wish to use the remaining life of the BCLF as it would transition to the MD LHTS over the next 13 years.

The comparative System cost for Alternative 5 is $190,000 lower than the base case (-6 percent). This is mainly due to a shorter distance form the D&S site to the Lockwood Landfill. However, this location would create longer hauling distances for the Town that would create an additional off-route hauling costs for the Town, which when take into consideration would make the Alternative 5 comparative cost even closer and equal to the Base Case (0 percent as shown in Table 3-4; See Section 3.2.3.2).

3.2.2.6 Alternative 6 – (Alternatives to Land Disposal) A: Composting; B: MRF/Alt Tech

Alternatives 6 involves various potential alternatives to land disposal systems; in the case of this study they are broken into two sub alternatives A and B as discussed above. Alternative 6A would involve adding a composting facility to the System assumed to be located at the BCLF site. Alternative 6B is assumed to include adding more sophisticated MRF facilities and conversion technologies co-located at the same facility.

In theory, a MRF and CT facility could be located at any of the TS facilities of the System, but it would make sense to have them located near the center of overall waste generation at the Mammoth Lakes TS or BCLF. As discussed above, the Town staff discussed with HDR that they have already studied installing MRF components at the MD TS and determined them to be too costly at the scale of operations involved. Likewise adding a CT facility is judged as too costly by the Town staff analysis. HDR does not disagree with that general assessment based on our experience. However, for sake of comparison the cost for Alternative 6B assumes that a MRF and CT facility would be sited at the BCLF; and thus includes the same transfer, landfill, and general administrative costs as Alternative 4.

In terms of the CT technology, our study assumes it would be an anaerobic digestion (AD) facility for organic waste as this technology is more proven than some of the other CT technologies and in addition AD process tonnage clearly would not count as disposal under current law, whereas other conversion technologies currently generally would count as disposal under the AB 1016 system (are not currently viewed as diversion). As such, the use of an AD facility is somewhat restrictive in terms of the types of materials that can be processed. An AD facility is restricted to treating the organic fraction of the waste and cannot process non-organic items. Consequently, the CT system reflected in the economic analysis requires the continued hauling and disposal of the non-organic fraction of the waste. In broad terms, we assumed the Municipal solid waste (MSW) contains roughly one third organic material that could be treated in the AD and the remainder would be disposed of using conventional methods.

3.2.2.7 Alternative 6A – Composting Facility

This alternative involves the addition of a composting facility to the solid waste system, which could be added to any of the prior alternatives. For purposes of economic comparison and in general we have assumed that a composting facility would be located at the BCLF site because it is centrally located, relatively close to the Town, currently is a solid waste facility, and has the space to include a composting facility at this time and when the BCLF would be closed. The County currently stockpiles and grinds wood and yard waste at the BCLF site and a composting operation would involve further processing of the material in windrows.

The primary goal of adding a composting system to the other solid waste functions is to increase diversion. Apart from providing elevated diversion, the purpose of employing an additional program in terms of economics would be to perform the compost activities at a lesser cost to that of long haul transport and disposal. However, insomuch approximately two thirds of the solid waste quantity will not be appropriate for compost feedstock, and will require transport and disposal, the implementation of a compost system will be additive to the other economic alternatives.

We have assumed the feedstock for composting will consist of yard waste that would be collected from self haul and commercial landscape contractors. The drop-off location would be the LHTS or the County TS. The materials would be consolidated in an open area until enough material accumulates to consist of a full load wherein the material would be transported to the compost facility. The wood and yard waste materials would be ground, placed in windrows, watered and turned periodically to allow composting.

Due to the small volume of material, likely sporadic watering and turning regime, and correspondingly unknown temperature/pathogen reduction times, it is likely the compost will not be commercially viable. This would be an additional challenge to a composting facility in Mono County in that there are probably limited markets in Mono County. Currently the County grinds wood and yard waste and uses it for erosion control as a beneficial reuse at the BCLF and other closed landfill sites or other public works projects. All of the ground material is currently beneficially reused and diverted from landfill disposal[17]. Should the County implement a composting facility it would involve additional cost to process the material further but it is unclear if all of the finer product could be sold to users for landscaping or other uses as is typically done in less rural areas.

For economic purposes, we have assumed the cost of developing a relatively small compost facility consisting of two acres. Operations would consist of using a front end loader or small farm type tractor equipped with a bucket. Staffing of the facility would be periodic and primarily dedicated to moisture conditioning, turning the windrows, etc. Major cost assumptions and differences would mainly result from:

[17] Based on telephone conversations between Matt Carter, Mono County Solid Waste Supervisor, and Mark Urquhart, HDR.

- Assumes a $750Kcost for developing a two-acre parcel adjacent to the BCLF (or could be at a LHTS) to provide all weather surfaces for the composting functions. This capital cost would include the purchase of grinding and screening equipment as well as a front end loader or similar equipment for turning of the compost. No provision was included to provide water to the compost facility, assuming provision for adequate water would already exist at the site.
- This Alternative did not include a comparative annual cost for land other than annual payments included in Alternative 4. This assumes that the LADWP would continue a lease at the BCLF site to allow a composting facility after the BCLF would close.
- Assumes an operational cost of $25 per ton of material to operate the compost facility. This operational cost is based generally on the operational cost of compost facilities in the northern California.
- Assumes no revenue from the sale of compost, based on the assumption the product is not commercially viable in Mono County.

The comparative annual System cost for Alternative 6A Composting is $220,000 higher than the base case (+7 percent). This is mainly due to the increased capital and operations cost of the compost facility, which are partially offset by a reduction in the transport and disposal cost for the additional diverted waste compared to the other alternatives. As noted above the other transfer and disposal elements of Alternative 2 are included in Alternative 6A because it is required to retain the TS and LF functions because of the MSW that cannot be treated in the compost activities and therefore would require disposal.

3.2.2.8 Alternative 6B – MRF and CT Facilities

This alternative involves the addition of a Conversion Technology facility to the solid waste system, which could also be added to any of the prior alternatives. As indicated in Section 3.2.1, it is assumed that a MRF and CT facility would be located at the BCLF, or in effect an additive element to Alternative 2.

The primary goal of adding a Conversion Technology (CT) facility to the other solid waste functions is to increase diversion. Unlike the Composting facility, the CT is assumed to generate power from the conversion of the feedstock into electrical power, steam, fuel or some other energy source. As a consequence, a CT facility has the positive feature of offering a revenue stream that exceeds or offsets some of its capital and operating cost.

CT's can be categorized into two grouping: thermal and biological. Thermal CT's convert feedstock material using a thermal process. Examples of thermal CT include gasification, pyrolysis, plasma-arc, incineration and a variety of other emerging technologies. Biological CT's convert the feedstock using a biological process. Examples of biological CT include anaerobic digestion, dry fermentation, etc. The California Code of Regulations (CCR) defines thermal CT in the category of 'transformation' and restricts the inclusion of diversion from transformation facilities to those facilities that existed prior to 1989. The CCR define

biological CT in as a 'compost technology' and include diversion from these facilities. Consequently, for planning purposes, we have assumed the use of an Anaerobic Digester as the preferred technology in terms of regulatory benefit. More specifically, we have assumed the use of a high solids AD system due to its relative lower cost, less water usage, and lower operations cost than other biological CT. Similar to Composting above, approximately two thirds of the waste stream not be appropriate for AD feedstock and would require transport and disposal. Consequently, the implementation of an AD system will be additive to the other economic parameters of Alternative 2 in the economic comparison.

We have assumed the feedstock for AD will consist of organics derived from municipal solid waste. These materials could be extracted from the solid waste stream by processing the stream through a MRF, or collected from self haul and commercial sources. However, due to the odorous and putrescible condition of the feedstock, the use of drop-off locations described in the Composting alternative above would not be acceptable. For planning purposes, we have assumed the materials would be extracted from the waste stream at the MRF. It is assumed that the AD facility would be located at the BCLF as in Alternative 2 (However, it could be located at a LHTS). The organic materials would be ground, injected into an anaerobic digester (high solids) where it would remain for between one to two months for the decomposition process. Due to the likelihood of contamination in the feedstock, it is likely the digestate from the AD will not be commercially viable.

For economic purposes, we have assumed the cost of developing an AD facility consisting of a series of anaerobic digestion tanks, a liquids circulation system, a gas extraction system, a gas clean-up and compression system, a small internal combustion power generator and a local power distribution connection system. Operations would consist of materials pre-screening, feedstock grinding, pumping and mixing as well chemical monitoring, gas cleanup, compression and electrical generation and digestate removal Staffing of the facility would be materials preparation, monitoring of the digesters, unloading of the digesters, as well as operating the gas collection and energy production systems. For comparison purposes , HDR used the data from a feasibility study of an AD facility for the University of California at Davis of similar throughput scale, which had an overall cost on the order of $150 to $200/ton. Major cost assumptions and differences would mainly result from:

- Assumes approximately $1.2M annually[18] for capital for developing the AD facility adjacent to the LHTS/MRF or BCLF. This capital cost would include the construction of the MRF facility and AD components including the cost of a composting facility as it is assumed it would be needed for processing digestate.
- This Alternative did not include a comparative annual cost for land because it is assumed that the BCLF site could continue to be leased for a CT/MRF and LHTS for residual waste.

[18] Amortized over 10 years at 5.5%.

- Assumes an operational cost of $360K per year to operate the AD facility, in addition to 250K for composting of digestate and MRF components. This operational cost is based on similar basic operational cost to a compost facility increased to also include routine maintenance of the gas treatment and power generating facilities.
- Assumes no revenue from the sale of AD digestate based on the assumption the product is not commercially viable. Power and MRF commodity sales providing $100,000 in revenue annually are assumed.

The comparative System cost for Alternative 6B Conversion Technology $1.6M higher than the base case (approximately +50 percent). This is mainly due to the increased capital and operations cost of a CT facility, MRF and composting of digestate. Also, similar to the compost system above, the AD treats only the organics from the system but is required to retain the TS and LF functions because of the residuals that cannot be treated in the compost activities and therefore require disposal.

3.2.3 Summary of Economics Comparison

The economic comparison in this study sums the System costs for alternatives (estimated in 2010 dollars) relative to the "Base Case" representing the current System. After this comparison, the differential "hauling" costs is included as the configuration of facilities will affect costs to collection hauler and self-haul users.

3.2.3.1 County System Costs

Alternatives 1 though 5 are discuss first because alternative 6 is viewed as an additive item, which could be added to the most viable transfer and disposal system alternative. In addition, there are siting and other technology complicated issues relative to adding composting, MRF and alternative technology systems.

As shown in Table 3-4 the System costs for alternatives 1,2,4, and 5 are within 10 percent of the base case, which should be considered within the accuracy of this conceptual level study which approaches +/-20 percent given the many variables and details involved in an overall solid waste system.

Regarding Alternative 1, it is noted that given the relatively large closure costs that would have to be funded for closure of the TS/LF in the short term, it does not appear to be the best economic option using the application of closure costs spread over three years in the analysis shown in Table 3-4. However, it should be noted that if the closure value that would be needed is considered over 20 years for a long term plan (assuming some fund loan made to solid waste) the $1.7M liability included in Table 3-4 analysis is reduced to around $85,000 on an annual basis rather than $575,000. This spreading of closure costs over 20 years (even if they would need to be funded sooner) to compare to other alternatives would make the System costs for Alternative 1 about 10 percent *cheaper* than the base case. However, given the significant service reduction this should not be considered without discussion of Non-system or user haul costs discussed in Section 3.2.3.2, below.

Alternative 3, developing a new LF, appears less economical than the long haul options as development and operation of a new lined landfill yielded approximately a 24 percent higher cost. This also has the complication that it is not clear if there would be land available, the land cost assumed may be speculative, and the opposition to siting a new landfill given transfer alternatives available may make the project even more costly than estimated or not viable given all considerations. It is also judged that this alternative may become comparatively even more costly than transfer alternatives because LF regulations have historically become stricter and increased more over time in compliance costs compared to TS.

The estimated comparative System costs for Options 2, 4, and 5 appear to be competitive and are within the accuracy of this study. Looking closer at the differences (Appendix D) indicates that the MD LHTS alternative is only be slightly more costly (by $170k) than one located at the BCLF site mainly because the expansion of the MD site requires purchase of a 1 acre parcel at a cost of $1.5M ($125k annualized basis); whereas it is assumed that the very low $2,700 lease portion allocated to the BCLF could be continued for a LHTS, which would need to be actuated at the same level with LADWP. However, it should be noted that a LHTS at the BCLF would also have higher off-route hauler costs to City haulers due to the 20 minute haul to the BCLF compared to the advantage of a LHTS being located in the Town at the MD TS/MRF. This concept also applies to waste from Town self-haul users of the MD TS/MRF in that it would not need an additional transfer to the BCLF if the LHTS were located at the MD TS/MRF.

Alternative 5 is comparatively lower cost than the base case Alternative 2 (by $190,000) mainly because the transport cost to Lockwood would be less. However, the location of the D&S facility would increase the direct haul cost for collection haulers to the Town a significant amount. This is a reason that consideration is given further to non-system user haul costs in the Section below.

Both the composting and MRF/CT technologies included in Alternatives 6A and 6B are higher in cost than the other alternatives because the basic system would have to be retained for transfer and disposal of residual waste. They are generally additive items for the other alternatives, in this case Alternative 2, because it is assumed that a composting facility and CT/MRF would be located at the BCLF site if implemented before and after closure of the LF. The composting facility alone (6A) is estimated to be approximately 7 percent higher than the other LHTS options (and the base case) and the CT/MRF alternative (6B) much more costly at about 50 percent higher. Given the financial concerns and shortfall described elsewhere in this report, implementing of Alternative 6 does not appear warranted based on economics and lack of a regulatory mandate given the County is currently in compliance with AB 939.

3.2.3.2 Incremental Hauling Costs

As noted above, some of the various alternative configurations may impact the travel distance and time to collection haulers and self-haul users compared to the current System configuration. These incremental costs are not a direct expense to the SWEF but affect hauling

costs borne by users. An analysis of incremental hauling costs is added and integrated in the comparative alternative costs at the bottom of Table 3-4.

3.2.3.3 Self-Haul Users

In summary, the incremental hauling cost to self haul users is expected to be similar to the base case for all the alternatives except for Alternative 1, which would force longer haul distances to transfer station sites with the closure of four of the County transfer stations. This analysis is shown in Table 3-5.

Table 3-5: Alternative Incremental Self-Haul User Haul Value

Transfer Station Users	Trips [1]	Miles [2]	Value [3]	Trips [4]	Miles [5]	Value [3]	Difference
Walker (closed LF/permitted inert disposal)	4,614	69,210	$ 34,605	*3,461*	276,840	$ 138,420	$ 103,815
Bridgeport (closed LF)	5,639	56,390	$ 28,195	5,639	56,390	$ 28,195	$ -
Pumice (closed LF/permitted inert disposa	863	12,945	$ 6,473	*647*	51,780	$ 25,890	$ 19,418
Chalfant (closed LF)	2,096	20,960	$ 10,480	*1,572*	78,600	$ 39,300	$ 28,820
Benton (closed LF)	977	9,770	$ 4,885	977	9,770	$ 4,885	$ -
Paradise	1,693	16,930	$ 8,465	*1,693*	118,510	$ 59,255	$ 50,790
TOTALS	**15,882**	**186,205**	**$ 93,103**	**13,989**	**591,890**	**$ 295,945**	**$ 202,843**

1 Taken from 2009 Waste Disposal Mass Balance sheet (attachment 1; County RFP) - See Appendix A.

2 Average vehicles miles assumes following for user round trip:

Walker (closed LF/permitted inert disposal)	*15*
Bridgeport (closed LF)	*10*
Pumice (closed LF/permitted inert disposal)	*15*
Chalfant (closed LF)	*10*
Benton (closed LF)	*10*
Paradise	*10*

3 Value based on approximate IRS mileage rate $ 0.50

4 Assumed users of closed stations reduces number of trips to following: 75%

5 Average vehicles miles assumes following for user round trip:

Walker (closed LF/permitted inert disposal)	*80*	*Further than base case to use Bridgeport TS*
Bridgeport (closed LF)	*10*	
Pumice (closed LF/permitted inert disposal)	*80*	*Further than base case to use Bridgeport TS*
Chalfant (closed LF)	*50*	*Further than base case to use Benton TS*
Benton (closed LF)	*10*	
Paradise	*70*	*Further than base case to use Mammoth Disposal Station (if allowed)*

The analysis assumes that the user trips for each TS in 2009 would be redistributed as noted in the table. Given the much longer haul distances for users of TS that would close it is assumed that trips by these users on average would be consolidated or possibly dropped for subscription to collection service and thus reduced to 75 percent of 2009 levels. The analysis indicates that there would be an increase in user costs of approximately $200,000 based solely on an assigned value of $0.50/mile (approximate IRS mileage rate) and the average assumptions of additional miles travelled. We realize that assigning this value is very subjective as to the value a user places on loss of convenience, time and driving costs. Some users may consider that mileage value high compared to their overall cost to operate a vehicle and others may also consider their time spent in driving as a monetary value which would drive the increased cost value even

higher than shown. With consideration of this assigned cost/value of self-haul user additional driving, Alternative 1 rises to approximately $430,000 higher than the base case or 13 percent higher.

It should be noted that if the closure cost for the two TS/LF is spread over 20 years for economic planning comparison rather than three years as closure would be completed, Alternative 1 changes to being $60,000 less than the base case (-2 percent), and from an economic point a view similar to the base case and other LHTS alternatives.

3.2.3.4 Incremental Collection Hauler Cost

Regarding hauling costs for collection vehicles, currently haulers must use the BCLF other than routes north of Bridgeport, which are allowed to use disposal sites in Nevada (although they must pay a $37.50/ton fee for waste exported from the County). Therefore changes in the System for Alternatives 1, 2, 3 would not affect collection costs significantly from the base case as they involve a LF or LHTS located at or near the BCLF.

3.2.3.5 Alternative 4

Alternative 4, a LHTS in Mammoth Lakes, would reduce the off-route haul time for Town collection vehicles by approximately 23 minutes one-way compared to the Base Case or a total of 46 minutes per load if they were to use a LHTS located in the Town at a MD LHTS compared to the BCLF (or new landfill in same vicinity). This is expected to result in a saving to Town collections costs of approximately $120,000 per year[19] based on an assumed $70/hour fully loaded collection truck operating cost. Collection hauling costs from the unincorporated area involve a much smaller amount of waste[20] and would not expect to result in a significant difference in incremental off-route hauling costs because use of a facility at Mammoth Lakes or the BCLF vicinity are similar considering the unincorporated County service area.

3.2.3.6 Alternative 5

Alternative 5, a LHTS at the D&S property on Highway 167, would increase the off-route haul time for Town collection vehicles compared to the Base Case by approximately 37 minutes one-way or a total of 75 minutes per load if they were to use a LHTS located at the D&S site compared to the BCLF (base case or new landfill in same vicinity). This is expected to result in an additional cost to the Town collections of approximately $200,000 per year[21] based on an assumed $70/hour fully loaded collection truck operating cost. It is also noted that the difference in hauling cost to the Town collection system (comparing Alternative 4 and 5) is

[19] Based on 2,285 trips per year by MD to BCLF in 2009 assuming 75% of MD trips at BCLF from Town. Assumes a 23 minute one-way trip time savings in off-route travel time using MD LHTS compared to BCLF.
[20] Only 72 Trips in 2009 from D&S and 762 from MD assuming 25% of total MD transactions are from unincorporated County area.
[21] Based on 2,285 trips per year by MD to BCLF in 2009 assuming 75% of MD trips at BCLF from Town. Assumes a 37 minute one-way additional off-route travel time from the Town comparing using a D&S LHTS to the BCLF (Base case).

comparatively $320,000 annually[22] given approximately a 60 minute longer trip to a D&S LHTS compared to a LHTS in the Town at the MD TS/MRF.

Collection hauling costs from the overall unincorporated area involve a much smaller amount of waste[23] and would not expect to result in a significant difference in incremental off-route hauling costs from the central and southern areas of the county (south of Bridgeport) because use of a facility at the D&S site or the BCLF vicinity are similar considering this portion of the unincorporated County service area. A LHTS at the D&S facility may provide a more efficient location for hauling from the County unincorporated area in the north County.

3.2.4 Service Levels

The main reduction in service levels would occur for Alternative 1, which assumes that four TS would be closed. Self-haul users of these stations would have to travel further which has an economic cost considered to some degree in Section 3.2.2.2 and would have the inconvenience of additional expense of time. It is unclear if this would result in an increase in illegal dumping but this would be a possibility. The level of increase in illegal dumping is difficult to predict but it would have both a cost increase for cleanup and an environmental impact relative to aesthetics as Mono County benefits from some of the best scenery in the nation which benefits it residents as well as tourists. HDR observed in travelling to all of the solid waste facilities that the County appears to now have very low observation of illegal dumping compared to many other Counties or had little illegal dumping and litter on roads to sites because of a combination of care by users, readily available transfer stations, and an effective cleanup program.

Service levels for other alternatives would be expected to be similar to current conditions, except for service to the Town under Alternative 4. Transfer stations would remain at current locations; however, as previously noted in the economic section haul times for collection haulers from the Town would decrease for Alternative 4.

3.2.5 Landfill Diversion

Table 3-6 shows the diversion overall 36 percent facility diversion rate for the County transfer station system based on data in a 2009 waste disposal balance sheet provided by the County (Appendix A). This appears to be an effective program as many automated MRF facilities do not achieve that high of a rate as the County focuses on providing bins and areas for users to self-drop organic, inert and other recyclable materials for off-site recycling or processing. Given that the County occasionally grinds material and landfills inert material on a quarterly

[22] This is based on assuming a 60 minutes each way for the travel time between the MDTS and D&S site, times $70/hour for a fully loaded truck cost, times 2,285 loads from the Town based on review of monthly BCLF data for Town users provided by the County for 2009.

[23] Only 72 Trips in 2009 from D&S and 762 from MD in 2009 assuming 25% of total MD transactions are from unincorporated County area. However, D&S trips to Nevada would be routed through a D&S LHTS which could save off-route collection costs to D&S northern Mono County customers currently being direct hauled/exported to Nevada.

basis this appears to be a cost effective approach to diversion and landfilling of inert materials and the TS/LF sites. In addition to the above TS diversion, information for the BCLF indicated 5,365 tons diverted and 21,133 tons landfilled for a facility diversion rate of approximately 20 percent.

Table 3-6: County 2009 Transfer Station Diversion

Transfer Station	Tons Diverted	Total tons	Diversion %
Walker (closed LF/permitted inert disposal)	62	649	10%
Bridgeport (closed LF)	301	811	37%
Pumice (closed LF/permitted inert disposal)	47	118	40%
Chalfant (closed LF)	218	329	66%
Benton (closed LF)	160	232	69%
Paradise	15	102	15%
TOTALS	803	2,241	36%

The main diversion programs at County facilities are inert (C&D) and wood and yard waste. Based on discussion with County staff, inert materials are stockpiled and occasionally ground for beneficial reuse on-site or off-site to the extent possible and the excess generally larger material is buried. The organic wood and yard waste is charged a lower rate to incentivize site users to segregate it at the transfer stations and disposal sites. This material is stockpiled and periodically ground and mainly reused at the facilities for mulch.

Based on discussions with County staff, the County level for compliance with state diversion mandates (AB 393 and more recently AB 1016) is that the County is well in compliance. The County has a target disposal rate, based on population, of 11.4 lbs./person/day and the currently compliance figure is 6.2 lbs/person per day[24]. The County is also in compliance based on an employment basis (25.6 Vs 17.2 lbs./person/day). A copy of the annual report summary for 2009, dated July 21, 2010 for the County unincorporated area is in Appendix E.

Similarly, the Town is in compliance with state diversion mandates. The Town has a target disposal rate of 17.6 lbs./person/day based on population and the 2009 annual report disposal rate is 11.9 lbs/person per day[25]. The Town is also in compliance based on an employment basis (32.9 Vs 18.3 lbs./person/day). A copy of the first page of the annual report summary for 2009, dated July 27, 2010 for the Town, is in Appendix F.

[24] Based on telephone information from Matt Carter, County Solid Waste Superintendant, August 11, 2010.
[25] Based on information taken from CalRecycle website as provided by CWA.

Differences in diversion would be expected mainly under Alternatives 1 and 6. Alternative 1 would reduce diversion by reducing the number of TS's and inert landfills. Eliminating one or both TS/LF would reduce the current cost effecting system of disposal of relatively heavy inert materials at these facilities, which would increase the System cost by transporting these materials from the remaining transfer stations to the BCLF for beneficial reuse. This could reduce diversion somewhat in that opportunities for beneficial reuse would be more limited at just the BCLF than the case where it also can occur at the small TS/LF. It is difficult to predict but closure of TS may also cause users to use subscription to hauling services and it is not clear if some organic or inert materials in that system may not get recovered in the same amount if curbside diversion programs are not available.

Alternative 6 would have the main purpose of increasing diversion. Alternative 6A, adding a composting facility, would potentially allow for diversion of additional organic materials to the program if additional organic material could be separated and included in the program. However, it should be noted that markets for compost may be limited and beneficial reuse may have to heavily rely on mulch programs at disposal sites or other public works projects. Given that the County already applies a significant discount[26] to clean organic and wood waste it may not be likely that more of this material would be available than current conditions for a composting program. Therefore, it is unclear if the extra cost of implementing processing equipment and facilities for a composting operation would warrant a significant enough benefit in diversion to warrant the additional cost.

Alternative 6B would increase diversion significantly if it is assumed that a MRF/CT could process most of the organic waste stream (assumed 1/3 of waste stream processed). However, similar to Alternative 6A it is more expensive on a unit cost basis than other options given it is an additive item, particularly at the small scale involved.

3.2.6 Environmental Impact Issues

Environmental considerations in considering alternatives for solid waste facility configuration and programs can include illegal dumping and potential impacts to air and water, and other siting issues for specific facilities such as noise, odors, and traffic. Comparison of environmental impacts of the alternatives would need to be quantified and compared in a CEQA document prior to consideration, which is beyond the scope of this study. However, general environmental implications of the alternatives are discussed below.

A main concern with reduction of TS's under Alternative 1 would involve the potential for illegal dumping as discussed above. Also, additional user hauling travel would occur as noted in the economics section above. This would have to be assessed in more detail but probably result overall in more air quality, noise and traffic impacts compared to current base case conditions.

[26] Clean wood waste is assessed 25% of the MSW gate fee.

The various transfer station alternative locations do not appear to have large differences in potential environmental impacts as they would serve the same transfer system. As pointed out in the economics section there would be a measurable difference in additional hauler miles travelled from the Town to a D&S LHTS site, which would increase air quality impacts compared to the other two LHTS alternative locations. Because this would involve a majority of hauler waste in the System it could be a significant additional impact.

The Alternative 3 for a new landfill, compared to the various transfer station alternatives has the potential to impact groundwater and air within the County at the new location; however, this is judged to be mitigated to great degree for groundwater because it would be equipped with a liner system (groundwater or LFG issues at the current unlined BCLF would still remain as a liability to the County. The overall environmental implications of a new landfill would have to undergo more detailed assessment because there would be additional hauling impacts to air quality from a LHTS to the Lockwood Landfill that would have to be compared the alternative for a new landfill versus the Lockwood Landfill. Based on the comparative economics in Appendix D, which uses haul time transport analysis, the annual transport time for transferring waste from the County TS's is about 10 times greater than the base case which is similar to the new landfill alternative (this takes into consideration the payloads involved).

Based on the above concepts it is not clear which alternative would be the environmentally preferred alternative under a CEQA analysis as cumulative environmental impacts to air quality and other impacts related to the long haul operation would have to compared considering in and out of County landfill systems and system hauling differences.

3.3 Efficiency of Current Operations

HDR's scope of services included providing an assessment of the efficiency of the County system. The efficiency of a solid waste system depends on the configuration of the system as well as the efficiency of the operations at the facilities. In general the efficiency of the overall System facility configuration is addressed within this report by the comparison of alterative facility configurations to assess the lowest cost alternative in consideration of service, regulatory and other issues. Evaluating the efficiency of current facility operations mainly involves a review of whether sites are operated in an efficient and cost effective manner. The labor and equipment costs are the major portion of operational costs and the focus of HDR's efficiency review in this report.

HDR's visual observation of sites was limited to two days of field visits and travel to all the County sites and the Town MD TS/MRF, and discussions mainly with the County site superintendent and Town manager of solid waste. In addition HDR discussed operations procedures and budgets with the County superintendant and reviewed and discussed detailed County staffing schedules provided by the County (Appendix G).

The County operations are comprised of contracted private TS operations and the operations of the BCLF by County staff. HDR's opinion regarding both of these operations is that they are

generally operated in an efficient manner. This is based on limited operations observations as noted above.

3.3.1 Transfer Station Operations

The County TS system is privately operated under contract with the County. The sites are not open all days of the week to save operating costs. HDR's review of these sites indicated that they are staffed by a single person at the gate. This is minimal staffing that we believe could not be reduced to unmanned conditions because there would be the risk of illegal disposal of waste, vandalism, and increased liability for safety of users.

HDR understands that during the period of this study that the County renegotiated the TS operations contract with the Contractor to reduce costs. This renegotiation procedure was allowed under the contract conditions. In addition, the County superintendant indicated that the County is considering re-bidding the contract when it comes to term. HDR agrees with this approach as rebidding of a contract can result in savings provided that there is competition available from interested bidders. We understand that a private party other than the current contractor is interesting in bidding for the transfer station operations. In addition, HDR feels that the County could also consider submitting a bid under this process or indicate in the bid procedures that the County reserves the right to discard all bids if the County can demonstrate it is in the best interest of that County because County staff could perform the services in-house for less than the private bids received.

County staff also performs periodic landfilling of inert material at two of the transfer station sites (generally quarterly), which is currently performed by County road crews. The County also contracts for grinding of wood and yard waste that is separated at all the transfer stations and generally reused for erosion control at these sites or the BCLF. This is generally done by a private contractor on a less frequent basis and at least annually. During performance of this study County staff discussed with HDR that it intended to use solid waste staff instead of County road crew staff to perform the inert disposal as they believed they could perform it in a shorter time period, thus saving costs. HDR agrees with this approach to continually assess ways to minimize labor and operations cost. In addition, the County could also consider including this element in the transfer station bid process as an optional bid item to check bid costs against the County's internal cost for inert disposal.

3.3.2 Benton Crossing Landfill Operations

County staff operates the BCLF. The operations include Class III landfill disposal, disposal of C&D waste at a separate working face, and sludge disposal. In addition there are other ancillary operations that include accepting and loading CRTs into shipping containers, processing of HHW, wood chipping and chip placement for erosion control, snow removal from the landfill meant to reduce leachate production, limited site diversion operations , scale house operations, and litter collection.

HDR review staffing schedules for the BCLF and generally found that the staffing appears efficient to cover duties. This included the reduction of one maintenance worker from an in-house County efficiency review recently conducted during HDR's writing of this report; and consideration of cutting operations on Sunday. Staffing information provided to HDR, and notes of discussions with the County by HDR are included in Appendix G.

Given that the scope of our operations review, HDR's assessment focuses on staffing as it is the major operating cost factor for landfills, and it was noted that the BCLF equipment assignment appears to be the amount typically used for small landfill operations. Following are two findings:

- Sunday operations could be eliminated given that County staff indicates this day does not receive much traffic and those users could use the site on Saturday. We recognize this is a policy decision as the savings would be compared to the drop in user convenience on weekends. The County uses only two staff to operate the site on Sunday, which is minimal staffing given operations and safety considerations. Therefore, this would not be significant savings given overall staff rescheduling and the fact that the current level of equipment would still be needed to service the site.
- Overall staffing appears appropriate given the operational needs of two working faces (MSW and C&D disposal areas), ancillary activities, and the plan that the Solid Waste Superintendant discussed with HDR that the County would take over sludge disposal operations from the current contractor using the BCLF operations staff. The scheduling chart provided to HDR covering August/September 2010 indicated an average daily staffing level of 4.3 over the current seven day per week operations; prior to consideration of dropping the vacant maintenance worker position. The staffing shown on the schedule includes one facility supervisor (also cross-trained as equipment operator), three equipment operators, and two solid waste maintenance workers; assuming that the vacant solid waste maintenance worker position would not be filled. Given the fact that scale, two working face areas, and other operations are services this appears to be an appropriate level.

3.3.3 Opinion on Privatization

HDR was asked to provide an opinion on privatization of the County operations. At this point, the County short-haul TS operations are already privatized. The County plans to rebid this contract when it expires and HDR agrees with this approach provided the County feels that there is adequate competition from interested parties. If this is done the County should reserve the right to refuse all bids if it feels it is in the best interest of the County.

3.3.3.1 BCLF Facility Operations

As indicated previously the County's public operations of the BCLF do not appear to be excessively staffed, and therefore privatization does not need to be recommended. The potential that the County could save a nominal amount through private lower wage scales may not be worth the additional risk over the limited maximum landfill life expected to 2023 that a

private operator's methods could create compliance problems that the County and Town to a large extent would be ultimately responsible for as the owner, generator, and operator of the landfill to date. HDR has also observed at some other operations that private operators tend to put less effort into diversion operations at landfills has they are generally more costly than disposal. Therefore there is the possibility that under private operations of the BCLF diversion efforts could suffer. In addition, County staff operating the various programs at the BCLF also provides flexibility for County staff to shift efforts as needed over time to the various mandated or new programs without having to use change order amends to contracts, which is not always the most cost effective process to revise operations.

3.3.3.2 Future LHTS Operations

This report describes a long term strategy to transition to LHTS operations. HDR's experience is that the private sector bidding of transfer station operations may be the most cost effective approach. Long haul trucking is a competitive market and private trucking companies can sometimes take advantage of backhauling and combination of trips that County staff operations for such a limited long haul trucking operation would not have available.

3.4 System Fee Analysis

As part of completion of this report, HDR was authorized under an additional work authorization to prepare financial analysis of a recommended strategy primarily for solving the SWEF shortfall identified for the current fiscal year 2009/10. Given the economic downturn the significant drop in waste quantities described in Section 2.1.2 has lead to a depletion of the fund requiring the need to increase tip fees and possibly consider other funding remedies.

HDR used the following methodology for this task:

- FY 09/10 expense and revenue information provided by the County was reviewed and compiled. It indicated a shortfall of approximately $907,500 for FY 09/10 excluding consideration of closure expenses and revenues received from the financial assurance closure fund[27].
- A tip fee model was compiled to assess revenues for various cases of raising the trash tip fee and other waste types currently charged a reduced or no tip fees. The model used input of waste quantities for FY 09/10 by major fee generating materials types.
- A general financial model over a period including to the year 2024 was developed. This included projecting potential implementation of a LHTS facility in 10 years (2021).
- Given the shortfall of approximately $907,500 for FY 09/10 a cash infusion was considered and combined with tip fee sensitivity cases in a chart to describe SWEF

[27] Closure revenues and expenses were excluded from developing a funding plan because the variance between expenses and revenues were approximately $638,954 ($909,346 in revenues and $264,392 in expenses for FY 09/10) higher in revenues, and were therefore interpreted as more of a scheduling and cash flow issue between payments for closure services and approved accrual of financial assurance funds to the SWEF. Review of previous years also indicated large variations in closure activities and funding from year to year.

conditions and provide projections as the basis for a recommended tip fee and funding approach. Approximately $100,000 is added to expenses in the model to account for accelerated closure of the BCLF.

Table 3-7 shows a tip fee model developed around the FY09/10 waste quantities representing the current tip fee schedule and various levels of increased tip fees. Trash fees are the main source of revenue and show cases from the current $50/Ton up to $100/Ton. The rates for C&D and wood waste are also increased over the four cases.

Tip fee revenues for FY09/10 were approximately $1M. The increased tip fee revenues resulting from Cases 3 and 4, representing $96 and $100/ton, show cases generating additional fees over the FY 09/10 level on the order of $1M.

Table 3-7: Tip Fee Model

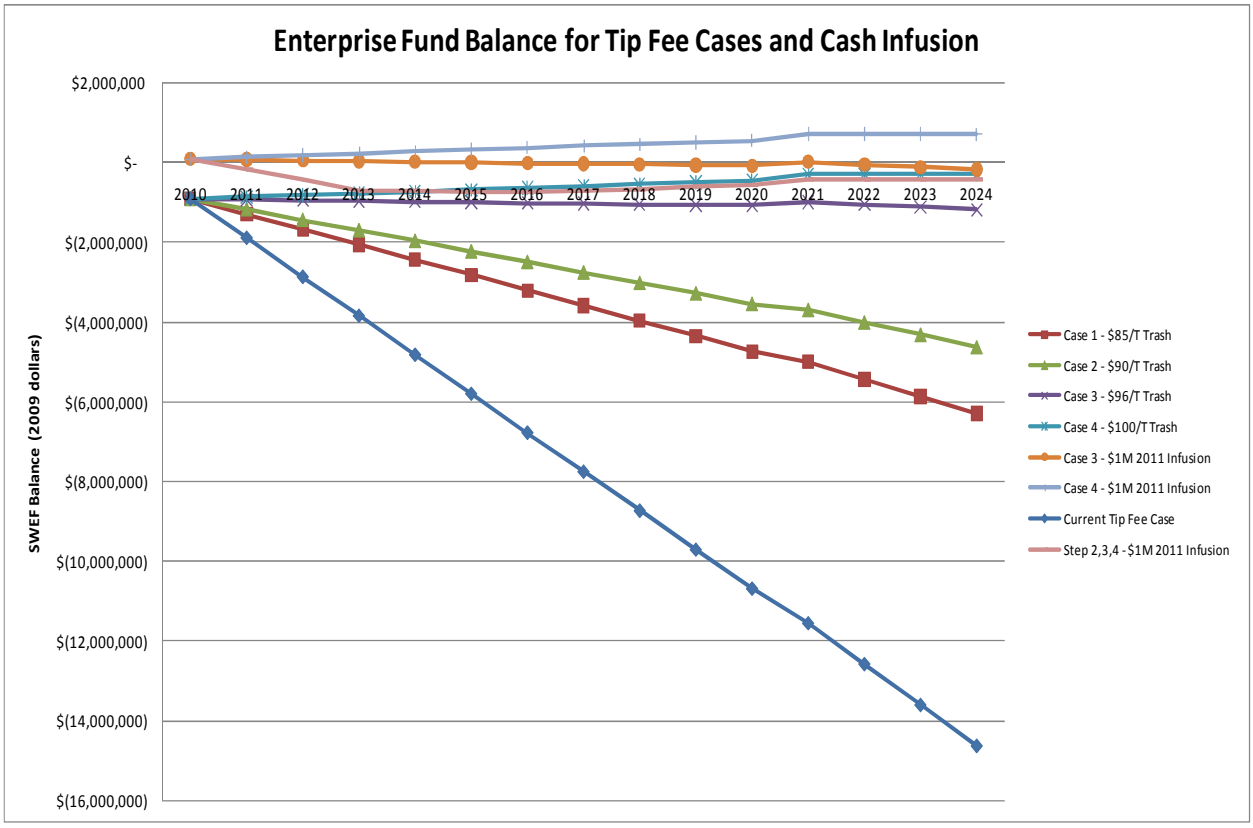
WASTE TYPE	Tons	%	Current			1		2		3		4
Trash	15,869	59%	$ 50.00	$ 793,444	$ 85.00	$ 1,348,854	$ 90.00	$ 1,428,198	$ 96.00	$ 1,523,412	$ 100.00	$ 1,586,887
Inerts	792	3%	$ 8.00	$ 6,339	$ 15.00	$ 11,886	$ 16.00	$ 12,679	$ 20.00	$ 15,848	$ 20.00	$ 15,848
Mixed	2,711	10%	$ 16.00	$ 43,376	$ 20.00	$ 54,219	$ 30.00	$ 81,329	$ 32.00	$ 86,751	$ 32.00	$ 86,751
Bldg.	2,903	11%	$ 50.00	$ 145,159	$ 50.00	$ 145,159	$ 50.00	$ 145,159	$ 60.00	$ 174,191	$ 60.00	$ 174,191
Org.	2,343	9%	$ -	$ -	$ 10.00	$ 23,428	$ 10.00	$ 23,428	$ 15.00	$ 35,142	$ 15.00	$ 35,142
Clean	1,563	6%	$ 12.50	$ 19,540	$ 12.50	$ 19,540	$ 20.00	$ 31,264	$ 20.00	$ 31,264	$ 20.00	$ 31,264
Sludge	2,042	N/A							$ 50.00	$ 102,082	$ 50.00	$ 102,082
Other	% revenue	3%	Varies	$ 30,236	Varies	$ 30,236	Varies	$ 30,236	Varies	$ 30,236	Varies	$ 30,236
	28,223	100%		**$ 1,038,093**		**$ 1,633,322**		**$ 1,752,293**		**$ 1,998,925**		**$ 2,062,401**
Additional Revenues Above Current FY 09/10						**$ 595,229**		**$ 714,200**		**$ 960,832**		**$ 1,024,308**

Chart 1 shows the SWEF balance all in 2009 dollars (no inflation increases) projecting the current waste stream for various cases of the tip fee model shown in Table 3-7, as well as a one-time cash infusion of $1M in 2010. A case for a stepped approach of cases 2, 3 and 4[28] including a $1M cash infusion in 2010 is also included.

Closure costs, either expenses or revenues involving the current closure fund, are excluded from the model except for an assumed annual expense of $110,188 starting from FY 2011/12 to FY 2019/20 to fund the additional amount needed for accelerated closure of the BCLF assuming transition to a LHTS alternative in FY 2020/21. Based on discussions with County staff there has been a recent slight increase in waste quantities the past few months; however, it is speculative as to whether this trend represents a start of a recovery or the level of recovery.

[28] Case 2 ($90/ton) assumed in 2011; Case 3 ($96/ton) assumed in 2014 Case 4 ($100/ton) assumed in 2017.

Chart 1: Solid Waste Enterprise Fund Model



As can been seen from the chart, the current tip fee schedule as well as cases 1 and 2 are clearly unsustainable because if the current $1M annual shortfall is not completely removed these do not represent enough revenue to remove the shortfall and the deficit continues to grow. Cases 3 and 4 represent scenarios that would roughly keep the SWEF on a generally stable trend; however, they do not remove the current $1M shortfall and therefore a cash infusion would be required immediately. The stepped approach using Cases 2 through 4 on three year increments starting in 2011 is also not a viable approach even with the same $1M infusion in 2010 because the negative deficit that grows under the $90/ton and $96/ton tip fee three year increments is modeled to result in a $750,000 deficit in 2016 that decreases to a level of approximately $560,000 in 2020.

Other funding strategies that are sometimes considered or implemented other than only a tip fee increase include raising parcel fees, increasing the franchise fees, or sales taxes. However, it should be noted that increased taxes or fees often face stiff opposition from the public or policy makers and may not be advisable considering this dynamic and the fact that user fees on those directly receiving services is a more straightforward approach. Although HDR is not a legal firm and cannot render legal opinions; there are also legal issues surrounding raising fees for solid waste funding that are unclear related to recently passed (November 2010) Proposition 26.

HDR must defer to the County or its counsel to obtain legal opinions regarding the requirements or viability of raising fees using some of the methods noted above. Raising parcel fees would require a 2/3 majority of voters under Proposition 218 guidelines as well as would consideration of a sales tax. From discussions with County staff and general observations in other counties, raising parcel fees would likely be very unpopular.

There could be legal issues surrounding the current export fee, or raising that fee, that would require a legal opinion. It is also noted that the amount generated from the export fee is modest compared to the $1M shortfall involved (about 3 percent). Therefore, raising the export fee does not appear to be a viable approach to solve the shortfall.

Increasing the franchise fee would only generate minor funds compared to the $1M shortfall. The current franchise fee (2.5 percent of gross receipts) is currently roughly the same magnitude as the export fee. The current franchise fee percentage rate is relatively low compared to many other jurisdictions and it is directly related to solid waste management; however, obtaining a legal opinion regarding Proposition 26 applicability is recommended before this would even be pursued.

Therefore, a general SWEF infusion on the order of $1M to solve the current shortfall combined with raising the tip fee to on the order of $100/ton, with other waste type tip fee increases shown in Table 3-7 as Case 4, appears warranted and the most viable approach considering the political, legal, and other implications of raising other types of fees. We understand from County staff that the bond covenants do not relay solely on positive ratios within the SWEF and without specific bond fund ratio obligations Case 4 appear to provide minimally sustainable plan at this time.

It should be noted that the $100/ton tip fee level with a $1M infusion is approximate only, given there are variables that will affect whether the balance in a given year is positive. The actual tonnage and associated tip fees is the major variable and the $100/ton case in the tip fee model represents only approximately a modest $47,000 (1.6%) annual positive balance starting in FY10/11. Therefore, the model indicates this would only repay about 55% of a $1M cash infusion over the ensuing 10 years to 2020. It a $96/T tip fee (Case 3-$1M infusion) as shown in the model indicates a negative annual balance of approximately -$17,000; predicting a deficit of $440,000 by 2020 even with the $1M cash infusion in 2011. This indicates that a $100/T tip fee is warranted and prudent based on the model assumptions and current conditions.

The actual amount of the cash infusion must also be checked with closure requirements over the next few years. We understand that expenses for closure for FY10/11 are not planned. It should be noted that an additional reserve may be needed during particular fiscal years if the balance or cash flow of closure expenses and accruals from the closure fund as approved by regulatory agencies will present an imbalance or problem.

The above analysis in Chart 1 did not include closure funding although it is funded through the SWEF[29]. Given the positive closure imbalance in FY 09/10 the total fund balance year does not represent the SWEF needs in the long term. Therefore closure funding was removed from the analysis given that it is assumed closure expenses and SWEF receipts from the dedicated closure fund should balance over the long term if the closure cost estimate and resulting closure fund deposits are accurate and adequate. Given that the annual balance of closure expenses and receipts shown in SWEF ledgers provided by the County to HDR covering the past few years appear to fluctuate significantly based on cash flow; closure planning should be undertaken to make sure that a large annual; deficit would not occur.

Although it is not clear when waste quantities and tip revenues would rebound to historical levels, if this were to occur any surplus should be used to pay back the County general fund and also compile a cash reserve for unexpected events and to provide a rate stabilization fund within the SWEF if the rebound is adequate. Given that the County's facility throughputs and staffing are minimal the current facility costs should not rise directly with the waste stream (i.e. the landfill staffing and equipment can operate at the same level even if tonnages were 3 or 4 times larger). If the waste stream rebounds at a greater level than wage and economy inflation (the CPI) then the tip fee schedule could remain the same and accrue a modest reserve fund.

3.5 SWEF Funding of MD TS/MRF

3.5.1 Background

The Town staff raised the issue the SWEF funding portions of MD TS/MRF property, improvements and operations based on the premise that the SWEF currently funds the contract operations and bond infrastructure for the County TS system used exclusively by the County and thus similar consideration should be given to the Town.

Regarding funding of the current transfer stations for the Town and County, the 2001A COP included $1,658,585 in capital improvements for the County TS system funded by the SWEF. Those TS transfer approximately 1,200 tons per year annually to the BCLF. Contract operations for the County TS system funded by the SWEF are approximately $500,000 per year. County transfer stations use a tip fee schedule that accrues to the SWEF.

The Town residents currently pay an additional separate parcel fee to the Town and then can use the facility to deposit waste free of charge. This represents about 1,500[30] tons per year that MD transfers to the BCLF.

HDR's understanding of the current MD TS/MRF facility is that the Town contracts with MD for providing the existing TS/MRF facilities and operations. MD owns the current two parcels

[29] For the FY09/10 actual expense report the closure funding positive balance of about $0.6M as a result of cash flow from the previous year. This results in a reduced more modest overall SWEF deficit viewed on the bottom line on the order of $0.3M.
[30] Based on approximation received from Michelle Irwin, General Manger, Mammoth Disposal.

comprising the MD TS/MRF, which includes a MD collection yard, MD offices, and a small TS/MRF that serves self-haul users in the Town. The diversion efforts that are coordinated between the Town and County include that MD processes recyclable cardboard and beverage containers at the facility for both the Town and County programs while the County consolidates efforts to recycle or dispose of appliances, CRT's, HHW and universal waste in conjunction with the County's operation of the BCLF.

The Town has plans to facilitate purchase a third adjacent parcel next the MD TS/MRF to allow MD enlarge the TS/MRF facility. MD owns the two parcels comprising the current facility. Conceptual level only plans shared by the Town staff with HDR show the expansion would generally include the addition of maintenance, office, and processing and storage areas for collections, continued small transfer station operations, and more space for diversion activities. The improvements on these plans appeared to be mainly for enhancing traffic flow and facilities for continued collection and transfer services and related operations of MD as collection and transfer service provider. They did not show a LHTS component although HDR believes that addition of an acre would allow adding that component and the Town indicated that MD also believes that a LHTS component could be added if the TS were expanded into the one-acre parcel to provide a total site area of 3 acres.

Following is a discussion of the issues related to SWEF funding of the MD TS/MRF expansion and operations planned by the Town involving the current operations including "Short haul' transfer from the MD TS/MRF and a potential LHTS at the MD TS/MRF representing Alternative 4 as evaluated in this report.

3.5.2 Short haul transfer from MD TS/MRF

Regarding the current System involving the Towns transfer of waste to the BCLF, assuming appropriate ownership is worked out it would appear appropriate that the SWEF could fund a portion of the expansion of the MD TS/MRF in recognition that these items serve Town waste that is transferred to the BCLF within the System funded by the SWEF. SWEF funding of current MD TS/MRF property and improvements would likely require public ownership of the properties. In addition since the SWEF is a part of the County fund appropriate agreements ownership title, leases and other items would have to be worked out between the County, Town and the operator in accordance with legal requirements. HDR is not a legal firm and cannot give an opinion on whether title to the land would have to be held by the County since it administers the SWEF or whether the Town could hold title and have appropriate agreements since it is not clear whether the infrastructure and land would be financed or paid directly from the County fund.

For consistency, the level of funding should be worked out between the County and Town based on costs directly attributed to serve transfer operations for self-haul users (portion of capital, land, operations costs); as the SWEF currently does not provide funding for collection services, transfer of private company hauler waste, or related private collection facilities. Much of the improvements plans shared with HDR by the Town for the site did not appear to be

directly related to transfer operations and appear to related to MD hauling or administrative services. However, a portion of station is currently used for transfer operations for self-haul users from the Town similar to the County TS system.

3.5.3 Potential LHTS at MD TS/MRF

For consideration of a LHTS at the MD TS/MRF, a LHTS facility project component at the MD TS/MRF to represent Alternative 4 was based on an estimated cost for an expansion property and a LHTS component, together totaling $2,300,000[31]. This does not include other much larger improvements being contemplated by MD related to other administrative and collection services dedicated to the Town, for which a previous preliminary site plan was shared by the Town with HDR during this study. It also does not include the purchase cost for the existing MD TS/MRF and collection yard and offices[32].

The Town staff roughly estimated that improvements proposed by MD to the facility in the past were on the order of $5M[33], including $1.5M planned for purchase of the third parcel. Based on review of the plan, most improvements appear to be for operations other than a LHTS component. Again, HDR's assessment of the alterative comparison economics for the "System" of use of a LHTS at the MD TS/MRF site only included costs for adding a LHTS component. Economic annualized "System" modeling of these costs shown in Table 3-4 include the purchase of the 1 acre parcel ($1.5M over 20 years for $125k annually), incremental capital costs for construction of the LHTS component only ($800k over 20 years for $67k annually), and the transfer operations costs ($15/ton for tipping floor operations and $37/ton for transport to Lockwood).

Regarding funding a LHTS at the MD TS/MRF site (implement Alternative 4) using the SWEF it is assumed that public ownership would be required consistent with applicable legal requirements. If the Town or County owned the property it is assumed that the services could be bid to a private operator. We recommend that a tip fee would be established based that would be offered to the Town and County to fund operations through the SWEF. We estimate that tip fee would be on the order of $75/ton ($2009) including assumed transport and disposal of waste at the Lockwood Landfill.

HDR believes that the most straightforward and equitable approach for a LHTS at the MD TS/MRF would be for facility costs directly related to the LHTS include repayment of capital costs for the land and LHTS operations components in a operating tip fee charged to all users. This would provide a cost share to the both the County and Town related to the LHTS services used and remaining improvements that solely or primarily benefit the Town would be excluded from the tip fee charged to the County.

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[31] Town staff (Mike Grossblatt) roughly recalled that improvements for the plans provided were on the order of $5M including $1.5M planned for purchase of the third parcel.

[32] The cost for these is unknown and are assumed would require appraisal of the property improvements and business.

[33] Based on email received by Mark Urquhart, HDR, from Mike Grossblatt, August 18, 2010.

Table 3-8 includes an assessment that shows such a speculated tip fee for use of a MD LHTS would be on the order of $75/ton. This does not include any other System costs such as administrative costs by either the Town or County, landfill closure costs, or operating costs for the County TS system. Is does however, include an estimated unit cost covering facility capital costs, speculated tipping operations costs, expansion parcel cost, and assumed LHTS component construction at the MD TS/MRF expanded site amortized over 20 years similar to the alternatives analysis presented previously in Table 3-4.

Table 3-8: Conceptual MD LHTS Unit Cost/Ton

LHTS Item	Annual $	Basis
Land Cost	$126,000	$1.5M over 20 years
TS O&M	$443,000	Assumed $15/Ton
TS/MRF Transport	$1,105,000	Transport MD LHTS to Lockwood LF
Facility Capital	$67,000	LHTS Component $800k over 20 yrs
Permitting or other costs	$25,000	Half of assumed System Alternatives
Assumed Disposal Tip Fees	$443,000	Assumed $15/Ton at Lockwood LF
Total	$2,210,000	Total LHTS comparative Cost
MD LHTS Component $/Ton	$75	

4.0 Summary of Findings and Recommendations

4.1 Findings

4.1.1 Fee Equity Issues

Based on the conceptual level analysis performed by HDR in Technical Memoranda in Appendices A and B in June 2010, we conclude the following:

- Review of the issue of equity of fees paid by the Town and County to the System in FY 08/09 found that the Town paid approximately 56 percent of the System fees compared to an "allocation" of 31 percent of the System cost calculated by the HDR Team for services attributed to use at the BCLF. This is noted in the context that the County hosts the BCLF in proximity to the Town, which provides a reasonable direct haul distance for Town collection vehicles.
- The HDR team's assessment of 31 percent of the FY 08/09 costs allocated to the Town was similar to previous analysis performed by the County staff of 33 percent. (if one-time extraordinarily large closure costs in FY 09/10 are removed to represented normal conditions the HDR allocation is adjusted to 40 percent; see discussion, below)
- The HDR Team assessment of a 4-year average was similar and slightly higher at 35 percent.
- Review of financial information for FY 08/09 found a shortfall of $2.6M; which included a large one-time cost for landfill closure. When this one-time closure cost is removed from the line item and replaced with a four-year average the annual shortfall is on the order of $1.7M.

  It should be noted that the 31 percent allocation above for FY 09/10 in the TM included extraordinarily large one-time closure costs at County TS/LF sites allocated exclusively to the County. For a more representative general allocation the large one-time closure costs could be removed from the equation given that regular annual financial assurances closure deposits are allocated and intended to fully fund closure of remaining landfill sites at the currently planned future closure dates. *If this more representative adjustment is used the cost allocation to the Town is adjusted from 31 percent to 40 percent.*

  The above comparison was based on review of FY 08/09 ledgers provided by the County prior to June 2010. Section 4.1.7 discusses a review of the SWEF performed in November 2010 based on newer FY 09/10 information that included more detailed review of account line items and more current SWEF shortfall information.

4.1.2 Comparison to other Counties

The HDR Team prepared a TM, dated July 28, 2010 (Appendix C) that compared the fees of the County system to other Counties. Information on demographics of California Counties was

compiled and analyzed to develop a comparison list of eight other rural counties similar to Mono County for comparison.

Comparing the counties to Mono County found that Mono County's solid waste budget was somewhat higher than other counties. However, when considering the budget on a unit basis regarding number of facilities and population density the Mono County budget size may be a reflection of the level of service and diversion provided in the large service area. In addition it is noted that the high rate of seasonal recreational visitors to the County put demands on the system that affect system costs and rates to users and judgments regarding the comparative cost efficiency of the system require more detailed analysis of the system costs based on the County's specific conditions and needs.

Regarding use of parcel fees, four of seven counties responding did not use a parcel fee to fund the solid waste program. The remaining three all reported using parcel fees to fund a greater degree of the solid waste program than Mono County (based on comparison to 24 percent used by Mono County based on 4-year average).

4.1.3 System Fee Analysis

The FY 09/10 expense and revenue information provided by the County indicated a shortfall of approximately $907,500 for FY 09/10 excluding consideration of closure expenses and revenues received from the financial assurance closure fund[34]. Given the reduction in waste stream revenues from the economic downturn, the current tip fee schedule is unsustainable. Cases 3 and 4 in Table 3-7 represent scenarios that would roughly keep the SWEF on a generally stable trend; however, they do not remove the current $1M shortfall and therefore a cash infusion would be required immediately.

Therefore a general fund infusion on the order of $1M to solve the current shortfall combined with raising the tip fee to on the order of $100/ton, with other waste type tip fee increases appears warranted and the most viable approach considering the political, legal, and other implications of raising other types of fees. We understand from County staff that the bond covenants do not rely solely on specified positive ratios within the SWEF and rely on obligations within other more general funds. Without specific bond SWEF ratio obligations this appears to provide minimally sustainable plan at this time.

[34] Closure revenues and expenses were excluded from developing a funding plan because the variance between expenses and revenues were approximately $638,954 ($909,346 in revenues and $264,392 in expenses for FY 09/10) higher in revenues, and were therefore interpreted as more of a scheduling and cash flow issue between payments for closure services and approved accrual of financial assurance funds to the SWEF. Review of previous years also indicated large variations in closure activities and funding from year to year.

4.1.4 Comparison of Alternatives

4.1.4.1 Economics

Economic comparison of alternatives discussed in this report find that Alternatives (2, 4, and 5) for implementing a LHTS using the Lockwood Landfill in Nevada are more economical than other Alternatives; and comparable to the base case in cost, well within the accuracy of this study. The following list summarizes the economic comparison of the other options to the LHTS options (See Table 3-4).

- *Alternative 1* involved evaluating a major reduction of four TS; but due to closure costs that would occur in the near term and consideration of increased user hauling costs this Alternative is not significantly more economical that other Alternatives; and has the negative aspect of reducing services significantly. In consideration of the accelerated closure of the inert landfills Alternative 1 is 7 percent higher cost than the base case. When a value for the additional costs for self haul users with the closure of four stations is considered the cost increases to 13 percent higher than the base case. Closure of four TS could also increase illegal dumping significantly. In addition, the two TS/LF's operated by the County provide relatively inexpensive diversion compared to other alternatives, which provides another reason to keep them operational.
- *Alternative 3*, involving developing a new LF, appears approximately 24 percent higher than the base case and relatively higher in cost than the LHTS alternatives. This higher cost would primarily be caused by the cost to develop and operate a new lined LF at the small volume scale of the solid waste System. It is also noted that landfill regulations and compliance costs have historically risen much more than transfer station compliance costs and therefore the LF economics are more uncertain and risky (higher cost) in the future compared to the LHTS options.
- *Alternative 6*, implementing other non-disposal alternatives, is not economical compared to the current diversion system that provides relatively low cost diversion considering the very small scale of the solid waste system serving a very large remote service area. It is not clear that composting would yield a significant amount of diversion over and above the current program and would have challenging economics (estimated 7 percent higher than the base case) given the small scale involved and lack of markets for compost material in the County.

  A MRF combined with alternative technologies such as Anaerobic Digestion would be even more expensive (approximately 50 percent higher than the base case assuming the total system Town and County waste stream) and do not appeared warranted unless the State raises diversion mandates and the County would then have compliance issues. The Town has already evaluated the economics of a MRF and CT facilities and believes that the economics are not viable at the small scale involved. Given that the Town possesses a majority of the waste stream and is not interested, the economics of a MRF or CT facility would be similar or worse for the County to implement for the System alone; which make this option unviable. There are also risks associated with CT

facilities that do not existing with the more traditional disposal and diversion methods used by the County.

In comparing the LHTS alternatives to the Base Case, incremental hauling cost estimates by HDR indicate that Alternative 4 (LHTS at MD TS/MRF site) would cost the Town $120,000 less per year than current conditions using the BCLF, and conversely Alternative 5 (LHTS at D&S site) would cost the Town $200,000 more than the base case per year.

Comparing alternatives, Alternative 5 would incrementally cost the Town on the order of $320,000 annually more than Alternative 4 due to increased collection truck off-route mileage (this is roughly $21/ton using 2009 disposal figures of 15,235 tons and 2,285 trips. These are based on conceptual level estimates by HDR using 110 percent of Google Earth travel durations times 110 percent.

It is not clear if this difference would be similar or less than a typical short-haul transfer station operation considering full property, capital and operating costs and the cost to MD collections compared to MD integrate this transfer component at its site is difficult to estimate. However, MD has indicated that it would not use a LHTS at the D&S site because they would be forced to transfer rather than direct haul and if MD implemented a transfer operation it would develop a LHTS on-site and transfer directly out of the County[35]. Although system costs compared to the base case are similar for these Alternatives (within 3 percent of each other [2 percent versus -1 percent], which is within the accuracy of this study; the Town would bear this incremental higher cost under Alternative 5 given these logistics and may not consider use of a LHTS given the MD position described above.

HDR also performed sensitivity analysis with the economic model developed I Table 4-1 to assess how the LHTS and new landfill alternatives compare to the base system cost at higher than the assumed long term contract disposal tip fee $15/ton with the Lockwood landfill. This was done to assess the level of risk that in the long term the LHTS might ultimately rise in cost above a new landfill cost.

Table 4-1: Lockwood Tip Fee Compared to the Base Case

Lockwood Tip Fee	Alternative 2 - BCLF Longhaul TS		Alternative 4 - Mammoth Longhaul TS		Alternative 5 - D&S Longhaul TS		Alternative 3 - New Landfill
Tip Fee Assumed	$15	0%	$15	2%	$15	-1%	24%
Lower Possible	$12	-3%	$12	-1%	$12	-4%	24%
Higher Tip Fee	$25	10%	$25	11%	$25	8%	24%
Tip Fee Equals New LF Alt.	**$41**	**24%**	**$39**	**24%**	**$42**	**24%**	**24%**
At $50/Ton Tip Fee	$50	33%	$50	34%	$50	31%	24%

[35] Based on conversations between Michelle Irwin, MD, and Mark Urquhart, HDR, November 12, 2010.

The results indicate that the tip fee at Lockwood would have to be on the order of $40/ton under current day comparison dollars for the projected cost for a new Mono County landfill (Alternative 3) to complete with the LHTS alternatives. Long term contracts vary at the Lockwood site and would depend on negotiations but based on the speculation that a competitive $15/ton contract would be available it would seem unlikely that the market rate at Lockwood would rise to above the $40/ton level given the size of the Lockwood operation. A $40/ton tip fee may be found at many landfills in California above medium size (say 400 tpd). But given that Lockwood is much larger and has consistently provided low tip fees for waste exported from California as part of a long term strategy it is unlikely that tip fees would climb above that level unless there are market forces broadly on the landfill side that drive the cost of landfilling to much higher than those assumed or envision and compared in this report. These same forces would also likely drive up the cost of landfilling in general and the comparative cost of a new landfill.

4.1.4.2 Service Levels

Service level reduction for Alternative 1 would be significant to TS users. Other Alternatives as configured in this report should have similar service levels other than the incremental additional collection direct haul time for Town collection vehicles under Alternative 5.

4.1.4.3 Landfill Diversion

Landfill diversion for the County unincorporated area is currently well within compliance levels as measured under AB 1016 disposal methodology (population basis 11.4 Vs 6.2 lbs./person/day). The Diversion from the County transfer station system based on the 2009 mass balance report provided to HDR is 36 percent on an overall facility basis. Diversion levels for the Town (17.6 Vs 11.9 lbs./person/day) are also in compliance based on the 2009 annual report filed. It is noted that the target levels for both the County and Town are higher than most other jurisdictions primarily because of the large number of recreational users than dispose of in the system but are not counted as residents.

Diversion under all Alternatives except Alternative 6 should provide similar to current compliance levels assuming continuation of current programs.

Even though Alternative 6 theoretically provides the potential for additional diversion; increased diversion from composting may be limited to not significantly higher than current program levels due to lack of markets and what appear to be limited potential for augmentation given the current user participation incentivized by reduced fees at the TS's and BCLF. The 36 percent diversion rate at the transfer stations includes a portion of organics grinding and reuse and a significant amount of inert material. It is not clear if implementing a composting program of itself would provide enough incentive to users to divert a significant additional amount of the organic material to composting above current levels diverted in the current grinding program.

4.1.4.4 Environmental Impact Issues

Findings regarding environmental impacts compared in concept in this study include:

- Closure of a significant portion of County transfer stations is expected to increase the risk of illegal dumping. It is unclear the amount, but closure of four stations which is similar economically with the base case and LHTS options, would likely increase it a noticeable amount, which would also impact the economics negatively (not considered in economic model).
- A new lined landfill may comparatively increase the risk of groundwater impacts in the County compared to a LHTS. However, it should be noted that a new lined landfill will mitigate these to a very low level, much lower risk than the current unlined BCLF. The County must deal with future landfill gas and potential groundwater issues for the unlined BCLF in any event; and a new landfill would have some but a much smaller risk to groundwater.
- Even though the LHTS operations may be the most economical more detailed analysis would have to be undertaken to determine potential environmental impacts and mitigations measure during a full CEQA review. Given the long transfer truck distances involved, air and other transport related impacts could be found to be greater than the new landfill option. If the County decided to pursue a LHTS alternative and it were found to be less environmentally preferred than a new landfill; a statement of overriding considerations would have to be adopted by the CEQA process.

4.1.5 Efficiency of Current Operations

HDR's scope of services included providing an assessment of the efficiency of the County system. Based on this review HDR found that staffing at the BCLF generally appears efficient given the operations performed. HDR understands that County staff had proposed reduction of one staff and discontinuing Sunday operations. We concur with these efficiency measures given that the site has limited usage on Sunday. HDR is aware of other operations that receive much more traffic than the BCLF that have discontinued operations on Sundays as a way to reduce costs.

HDR was also asked to provide an opinion on privatization of County operations. At this point, the County short-haul TS operations are already privatized. We understand the County intends to rebid this contract when it expires. HDR agrees with this approach provided the County feels that there is adequate competition from interested parties. We recommend the County reserve the right to refuse all bids and renegotiate or take over operations based on the bid received if it feels it is in the best interest of the County.

The County's public operations of the BCLF do not appear to be excessively staffed, and therefore privatization does not appear warranted. Also, there is always the potential that privatization would create some additional liability risk over the limited landfill life. The County and Town to a large extent would be ultimately responsible for as the owner, generator,

and operator of the landfill to date. Additionally, depending upon the contract terms, there is also a risk that private operations could result in lower diversion levels. If so, lower diversion levels could be problematic for both the County and Town.

4.1.6 Related System Funding Issues Raised

During preparation of this report two issues not directly included in the scope of work related to the structure and funding of the County system were raised by Town and County staff. The issue of whether or not the SWEF should fund a portion of the MD TS/MRF was raised and the issue of the comparative economics should the County implement separate LHTS was raised. Analysis and opinions by HDR regarding these issues is provided in the following sections.

4.1.6.1 County funding of the MD Transfer Station/MRF

- Short haul MD TS/MRF

  Regarding the current System involving the Towns transfer of waste to the BCLF, assuming appropriate ownership is worked out the SWEF could fund a portion of the expansion of the MD TS/MRF in recognition that these items serve Town waste that is transferred to the BCLF within the System funded by the SWEF. SWEF funding of current MD TS/MRF property and improvements would likely require public ownership of the properties. In addition since the SWEF is a part of the County fund appropriate agreements ownership title, leases and other items would have to be worked out between the County, Town and the operator in accordance with legal requirements. HDR is not a legal firm and cannot give an opinion on whether title to the land would have to be held by the County since it administers the SWEF or whether the Town could hold title and have appropriate agreements since it is not clear whether the infrastructure and land would be financed or paid directly from the County fund.

  For consistency, the level of funding should be worked out between the County and Town based on costs directly attributed to serve transfer operations for self-haul users (portion of capital, land, operations costs); as the SWEF currently does not provide funding for collection services, transfer of private company hauler waste, or related private collection facilities. Much of the improvements plans shared with HDR by the Town for the site did not appear to be directly related to transfer operations and appear to related to MD hauling or administrative services. However, a portion of station is currently used for transfer operations for self-haul users from the Town similar to the County TS system.

- Potential LHTS at MD TS/MRF

  For consideration of a LHTS at the MD TS/MRF, a LHTS facility project component at the MD TS/MRF to represent Alternative 4 was based on an estimated cost for an

expansion property and a LHTS component, together totaling $2,300,000[36]. This does not include other much larger improvements being contemplated by MD related to other administrative and collection services dedicated to the Town, for which a previous preliminary site plan was shared by the Town with HDR during this study. It also does not include the purchase cost for the existing MD TS/MRF and collection yard and offices[37].

Regarding funding a LHTS at the MD TS/MRF site (implement Alternative 4) using the SWEF it is assumed that public ownership would be required consistent with applicable legal requirements. If the Town or County owned the property it is assumed that the services could be bid to a private operator. An equitable approach would be that a tip fee would be established based that would be offered to the Town and County to fund operations through the SWEF. We estimate that a LHTS tip fee would be on the order of $75/ton ($2009) including assumed transport and disposal of waste at the Lockwood Landfill.

4.1.6.2 Comparative Costs for Separate Town and County Long haul Transfer Station Facilities

The main element of scope of HDR's study as defined in the RFP was to analyze the alternatives to assess the most effective solid waste System program involving management of both the Town and County waste stream as is the current arrangement. HDR assessed that the Town is paying a majority of the system costs for use of somewhat less than a majority of the service costs. The System alternatives analysis also included the relative advantages in off-route hauling economics comparing the County and Town use of LHTS at the MD or D&S sites, respectively. These items raised discussions with staff regarding the additional issue of the economics if the Town and County were to operate separate LHTS systems. As noted previously, it is more expensive on a unit cost basis to service the County than the Town due to the large distances and small waste stream involved in the unincorporated area.

Table 4-3 includes analysis of the comparative economics for separate LHTS for the County and Town. The left portion is the same as Table 3-4, which analyzed System costs for the alternatives; but Table 4-3 also contains Alternatives 4A and 5A in the right hand columns, which compares the annual cost if the County and Town were to use separate LHTS. The analysis indicates a comparative unit cost of $84/ton for the Town using a LHTS facility at the MD TS/MRF and a cost of $198/ton for the County to use a LHTS located at the D&S site. It should be noted that the comparative costs are analyzed on a conceptual level similar to the System analysis six alternatives, except for the following:

- The incremental collection cost are not considered as in the comparison to the base case because Alternatives 4A and 5A are for the closest site given separate Town and County LHTS systems

[36] Town staff (Mike Grossblatt) roughly recalled that improvements for the plans provided were on the order of $5M including $1.5M planned for purchase of the third parcel.

[37] The cost for these is unknown and are assumed would require appraisal of the property improvements and business.

- It should be noted that it was assumed that the D&S LHTS operating for the County would only need to process and long haul approximately 6,200 tons per year after landfilling and diversion at the County small volume transfer stations. Therefore, it was assumed that the D&S facility would not be open to the public and would not need significant diversion operations; and therefore would not need to be staffed constantly during the day[38].
- The *general and administrative costs* included in the comparative alternatives for the County ($280,000 or *$32/ton* for the County System 8, 855 overall tons per year) is included in the County $198/ton unit cost but not included in the unit cost derived for the Town because the Town's administrative costs for adding a LHTS to its system are not known. Although there would be some general and administrative costs required that which are hard to estimate given they could be blended with existing administrative functions of the Town and MD for the overall Town solid waste system. It should be noted that for a more direct comparison between Alternative 4A and 5A, if the County general administrative cost line item is also not included, the County comparative unit cost would be $166/Ton (assuming a non-pubic LHTS as described above).
- Closure Costs for the County include continuation of annual financial assurance payments for the Pumice Valley and Walker landfills at current levels[39] and a share of closure costs for the BCLF accelerated and amortized over the next 10 years. The share is based on an assumed 30 percent according to the portion of waste disposed by the County.
- Closure Costs for the Town include a share of closure costs for the BCLF accelerated and amortized over the next 10 years. The share is based on an assumed 70 percent according to the portion of waste disposed by the Town.

[38] If public operations were require cost may be higher.
[39] HDR used financial assurance sheets provided by the County to apply the annual closure payment in the analysis. In checking future payments in the spreadsheet HDR noted that future payments may need to be increased because the closure cost estimate inflation growth outpaces the growth of the fund.

Table 4-2: Summary of Estimated Annual Cost Comparison of Alternatives Including Separate County and Town LHTS Alternatives

Cost Element	Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.	County only at D&S LHTS	Town only MD LHTS
Alternative	**BASE**	**1**	**2**	**3**	**4**	**5**	**6A**	**6B**	**5A**	**4A**
Transfer Station	$840,000	$680,000	$2,860,000	$840,000	$3,020,000	$2,660,000	$2,600,000	$2,430,000	$1,400,000	$1,610,000
Landfill	$2,080,000	$2,470,000	$70,000	$2,860,000	$70,000	$70,000	$60,000	$60,000	$70,000	$130,000
General and Administration	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$0
Added Diversion and Alt Tech	$0	$0	$0	$0	$0	$0	$480,000	$2,010,000	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL SYSTEM COST	**$3,200,000**	**$3,430,000**	**$3,210,000**	**$3,980,000**	**$3,370,000**	**$3,010,000**	**$3,420,000**	**$4,780,000**	**$1,750,000**	**$1,740,000**
Difference from Base Case $	$0	$230,000	$10,000	$780,000	$170,000	($190,000)	$220,000	$1,580,000		
System Tonnage	29,515	29,515	29,515	29,515	29,515	29,515	29,515	29,515	8,855	20,661
Comparative $/Ton	**$ 108**	**$ 116**	**$ 109**	**$ 135**	**$ 114**	**$ 102**	**$ 116**	**$ 162**	**$ 198**	**$ 84**
Difference from Base Case %	**0%**	**7%**	**0%**	**24%**	**5%**	**-6%**	**7%**	**49%**	**82%**	**-22%**
Incremental Hauling Value										
Commercial Hauling Co.	$0	$0	$0	$0	-$120,000	$200,000	$0	$0	$0	$0
Self Haul Customers	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL COMPARATIVE VALUE	**$3,200,000**	**$3,630,000**	**$3,210,000**	**$3,980,000**	**$3,250,000**	**$3,210,000**	**$3,420,000**	**$4,780,000**	**$1,750,000**	**$1,740,000**
Comparative $/Ton	**$ 108**	**$ 123**	**$ 109**	**$ 135**	**$ 110**	**$ 109**	**$ 116**	**$ 162**	**$ 198**	**$ 84**
Difference from Base Case %	**0%**	**13%**	**0%**	**24%**	**2%**	**0%**	**7%**	**49%**	**82%**	**-22%**

4.2 Recommendations

4.2.1 Immediate Cost Control

HDR recommends the County implement cost cutting measures to reduce the shortfall found in FY09/10. During preparing this report HDR conferred with County staff and concurs with some of the cost cutting measures proposed to the Board of Supervisors by staff including labor reduction and self-performing some diversion activities formerly performed by the road crews. In addition consideration should be given to contracting out some of these functions if an additional staff reduction could also be considered because some are performed quarterly or annually at the transfer station sites[40].

4.2.2 County Transfer Station Operations

HDR concurs with County staff plans to bid out the County small volume TS operations contract next year. There appears to be interest in competition from local firms. Based on the analysis performed for Alternative 1, we do not recommend closing any of the County transfer stations.

4.2.3 System Fee Analysis

A general fund infusion on the order of $1M to solve the current shortfall combined with raising the tip fee for trash to on the order of $100/ton, with other waste type tip fee increases appears warranted and the most viable approach considering the political, legal, and other implications of raising other types of fees. The actual amount of the cash infusion over $1M, if needed for closure requirements over the next few years must be checked.

Although it is not clear when waste quantities and tip revenues would rebound to historical levels, if this were to occur any surplus should be used to pay back the general fund over time and also compile a cash reserve for unexpected events and to provide a rate stabilization fund if the rebound is adequate. If the waste stream rebounds at a greater level than wage and economy inflation (greater than the CPI) then it is expected that the rate system could remain the same and accrue a modest reserve fund within the SWEF.

4.2.4 Disposal/Transfer System

4.2.4.1 Recommended Alternative

The findings of the comparison of alternatives in this report indicate that the three LHTS alternatives (2, 4, and 5) provide approximately the same System cost well within the accuracy of the conceptual level comparison. The costs are similar to the current System used as the base case and below the cost of developing a new landfill as well as below the cost of the other alternatives involving composting, MRF and other alternative technologies. The risk of the Lockwood Landfill tip fees rising in the future to a relative level that would make the LHTS alternatives more costly than developing a new landfill appears very low.

[40] Based on conversations with County staff HDR understands that grinding of organic and inert material occurs up to annually at County transfer stations and disposal of inert material quarterly.

Based on this finding HDR would typically recommend that the County pursue the LHTS alternative, ultimately assessing the viability of the three candidate sites further to set up a potential bidding of LHTS services. This approach is typically recommended based on the main principal that providing services under competitive bidding provides the most efficient system to users. All the sites conceptually appear to be viable from a programmatic point in that all three appear permit able, large enough to have a LHTS facility constructed and potentially available from the owners for this purpose (would have to be verified with LADWP regarding a long-term lease for a LHTS).

However, as discussed in Section 4.1.4.1 there are other considerations raised by the Town relative to the Town implementing Alternative 5 that appear to make it less viable. Alternative 5 would incrementally cost the Town on the order of $320,000 annually more than Alternative 4 due to increased collection truck off-route mileage (this is roughly $21/ton using 2009 disposal figures of 15,235 tons and 2,285 trips). Based on discussions with MD and Town staff HDR was informed that the additional off-route collection costs for use of a LHTS at the D&S site would force them to install a TS component for collection trucks, and in this case they would include a LHTS component rather than transfer the shorter distance to the D&S site as an interim transfer point. The Town plans to purchase and expand the MD TS/MRF and would not entertain use of a LHTS facility at the D&S site. Given that the Town waste stream makes up roughly 70 percent of the System waste stream this appears to make Alternative 5 unviable.

There for HDR recommends the County pursue Alternative 4 with the Town based on the following reasoning and conditions:

- The LHTS alternatives are similar in economics and more economical that other alternatives
- HDR estimates that Alternative 5 would theoretically cost the Town on the order of $320,000 more annually in collection costs. MD and the Town have asserted that the collection conditions for Alterative 5 would force the Town into short-haul transfer of all their waste and therefore would otherwise implement a separate LHTS and bypass Alternative 5 in any case. If the County and Town has split systems there would be negative economic impacts on the County (See Section 4.1.6.2)
- The LHTS services should be bid out to a private company as LHTS operations lend advantages to private companies for competition on the open hauling market and bundling of hauling with other hauling operations that the County or Town would not possess.

As a contingency if appropriate conditions for implementing a LHTS at the MD TS/MRF cannot be realized, the lease potential regarding Alternative 2 could be further investigated as the BCLF could also serve as a potential site for the LHTS, but only viable if potential long term LHTS lease use could be confirmed with the LADWP. If the BCLF site were viable this would also give the County flexibility to bundle contract LHTS operations with private contract operations of the County six small volume TS's.

If for some reason a LHTS at the MD TS/MRF for the System serving both the Town and County waste stream could not be implemented both Alternatives 2 and 5 are economically competitive for the County only waste stream. Both are similar in economics within the accuracy of this study (0 percent and -6 percent, respectively compared to the base case).

4.2.4.2 Implementation

Implementation of a LHTS alternative will require closure of the BCLF while phased implementation of a LHTS system is undertaken. Implementing a TS project typically requires at least three years from the start of preliminary design and an additional two years should be reserved prior to that for procurement of a private operator through bidding and contingency.

Expending of the capacity and closure of the BCLF is currently depicted to occur in 2033 according to the financial assurance fund annual payment schedule although the lease with LADWP will run out in 2023; requiring closure at that time at the latest. Based on the economics of continued use of the BCLF (Base Case) comparing equally to the LHTS options there is no economic reason to implement the LHTS project sooner than 2023. In addition, accelerated closure of a landfill requires that lesser final grades be constructed that will still assure proper drainage of the site after expected differential settlement. The landfilling to implement this grading plan will take at least a number of years, and will depend upon the fill rate and configuration of current landfill grades compared to the revised final fill configuration. This revised final grading plan would have to be approved by regulatory agencies for implementation of early closure and the schedule for closure fund payments increased accordingly.

Based on these factors, HDR recommends that the County plan to implement final filling for accelerated closure, including starting with approval of the revised final grading plan in the next two years. After approval operations can be configured to build to the new final grading plan for closure of the BCLF in 2020 and transition to LHTS operations in 2021. This should allow time for filling operations to provide additional waste lifts over the site to provide a final grading configuration approvable by regulatory agencies that will provide sound engineering for drainage. The project for implementation of a LHTS for the system should be started beginning in 2015 at the latest to provide a year for bidding for a contract for a LHTS provider and then four years for the contractor to implement the project to include design, permitting, and construction of a LHTS facility.

5.0 Limitations

The services described in this report were performed consistent with generally accepted professional consulting principles and practices consistent with our agreement with the County. No other warranty, express or implied, is made. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

This report contains a conceptual planning level analysis of alternatives and should therefore not be used for project budgeting purposes. Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and parameters indicated. HDR is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

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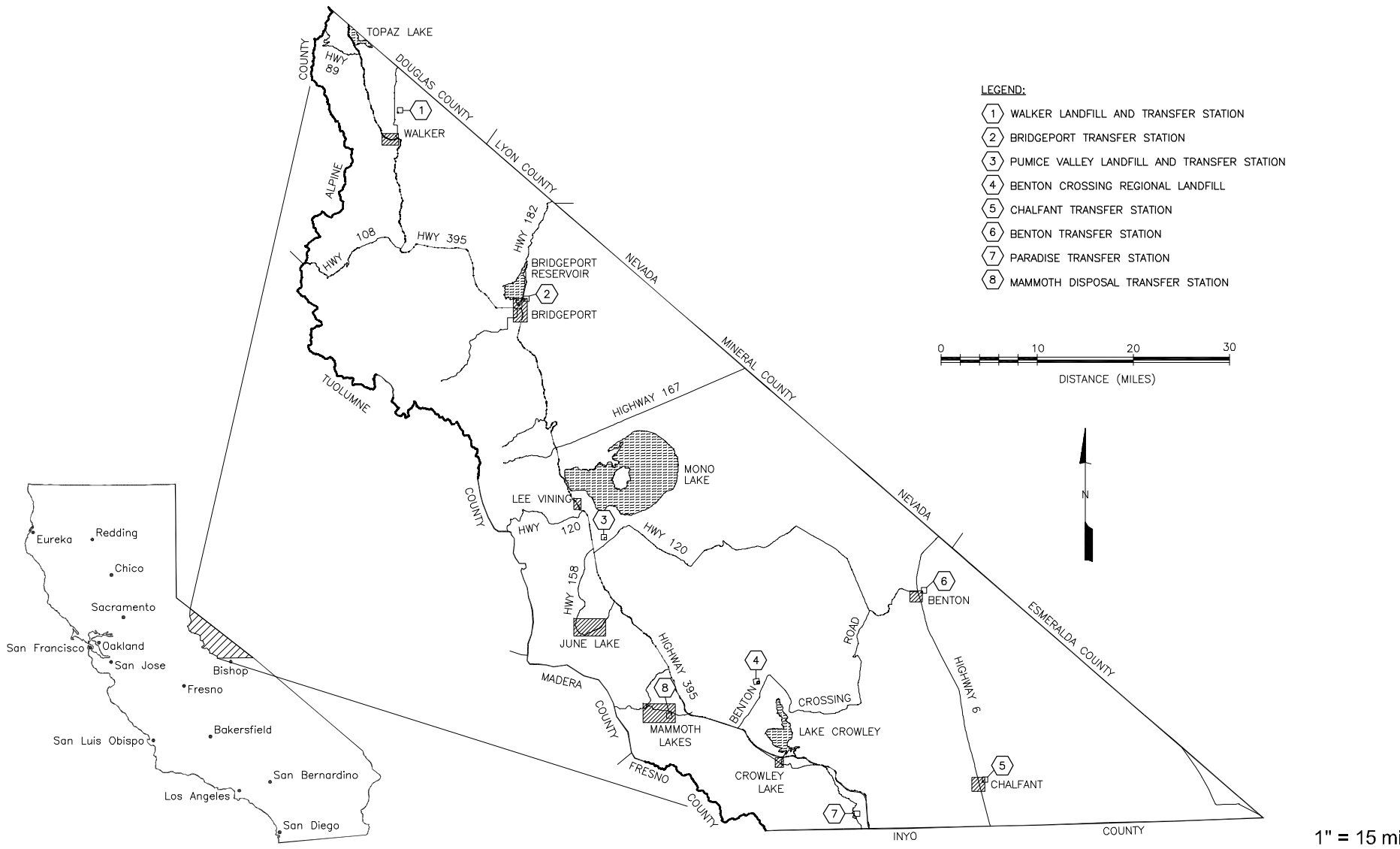

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HDR Engineering, Inc.

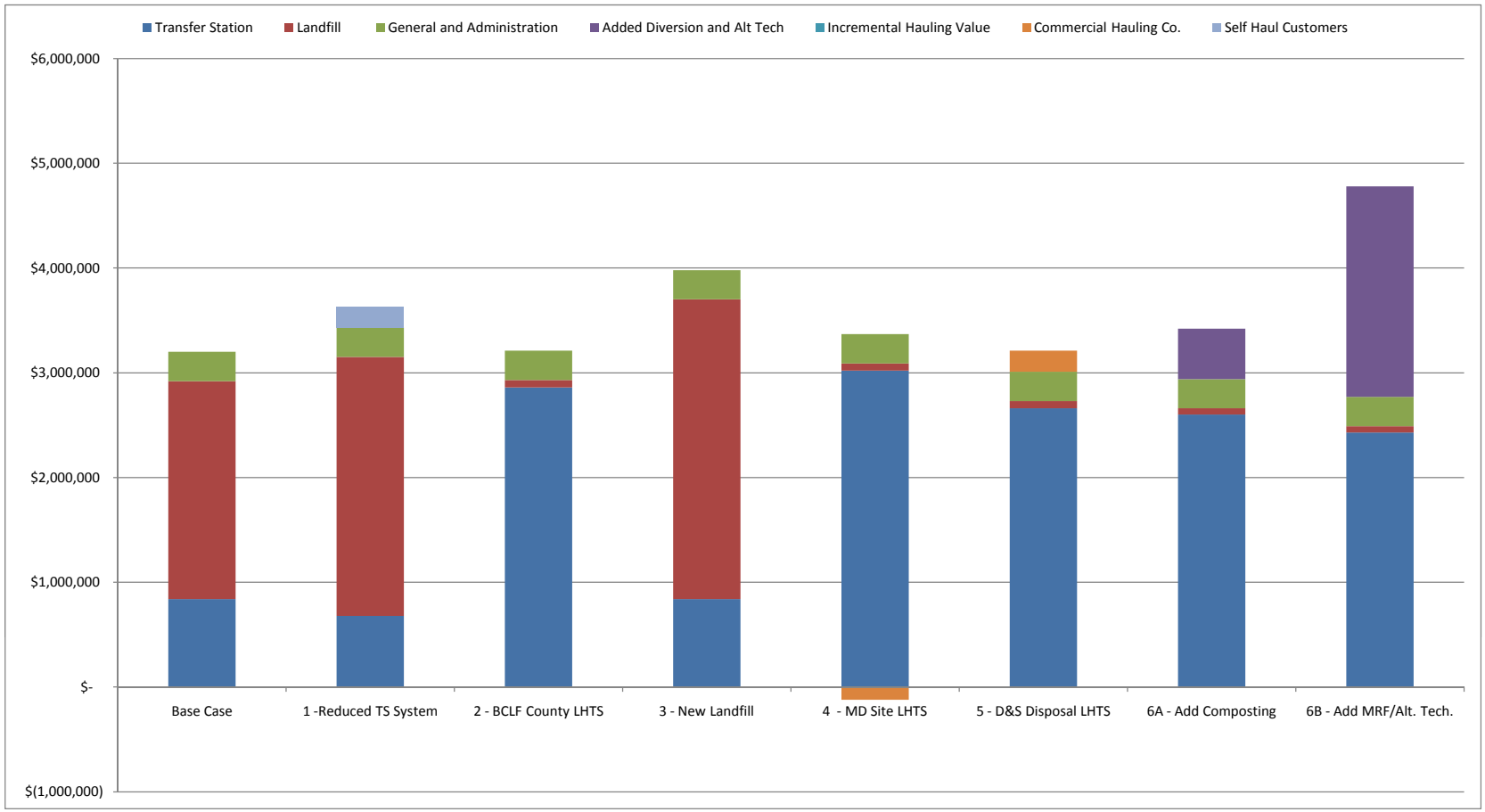
BASE CASE FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

Sheet
FIGURE 1

FIGURE 2 - ESTIMATED ANNUAL COST COMPARISON OF ALTERNATIVES INCLUDING SEPARATE COUNTY AND TOWN LHTS ALTERNATIVES



	Base Case	1 -Reduced TS System	2 - BCLF County LHTS	3 - New Landfill	4 - MD Site LHTS	5 - D&S Disposal LHTS	6A - Add Composting	6B - Add MRF/Alt. Tech.	*5A - County only D&S LHTS*	*5B - Town only MD LHTS*	*5B.1 Town only MD LHTS (with G&A)*
Transfer Station	$ 840,000	$ 680,000	$ 2,860,000	$ 840,000	$ 3,020,000	$ 2,660,000	$ 2,600,000	$ 2,430,000	*$ 1,400,000*	*$ 1,610,000*	*$ 1,610,000*
Landfill	$ 2,080,000	$ 2,470,000	$ 70,000	$ 2,860,000	$ 70,000	$ 70,000	$ 60,000	$ 60,000	*$ 70,000*	*$ 130,000*	*$ 130,000*
General and Administration	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	*$ 280,000*	*$ -*	*$ 280,000*
Added Diversion and Alt Tech	$ -	$ -	$ -	$ -	$ -	$ -	$ 480,000	$ 2,010,000	*$ -*	*$ -*	*$/T on 33% WS*
Incremental Hauling Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	*$ -*	*$ -*	*$ -*
Commercial Hauling Co.	$ -	$ -	$ -	$ -	$ (120,000)	$ 200,000	$ -	$ -	*$ -*	*$ -*	*$ -*
Self Haul Customers	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	*$ -*	*$ -*	*$ -*
TOTAL COMPARATIVE VALUE	$ 3,200,000	$ 3,630,000	$ 3,210,000	$ 3,980,000	$ 3,250,000	$ 3,210,000	$ 3,420,000	$ 4,780,000	*$ 1,750,000*	*$ 1,740,000*	*$ 2,020,000*
Comparative $/Ton	$ 108	$ 123	$ 109	$ 135	$ 110	$ 109	$ 116	$ 162	*$ 198*	*$ 84*	*$ 98*
Difference from Base Case %	0%	13%	0%	24%	2%	0%	7%	49%	*82%*	*-22%*	*-10%*

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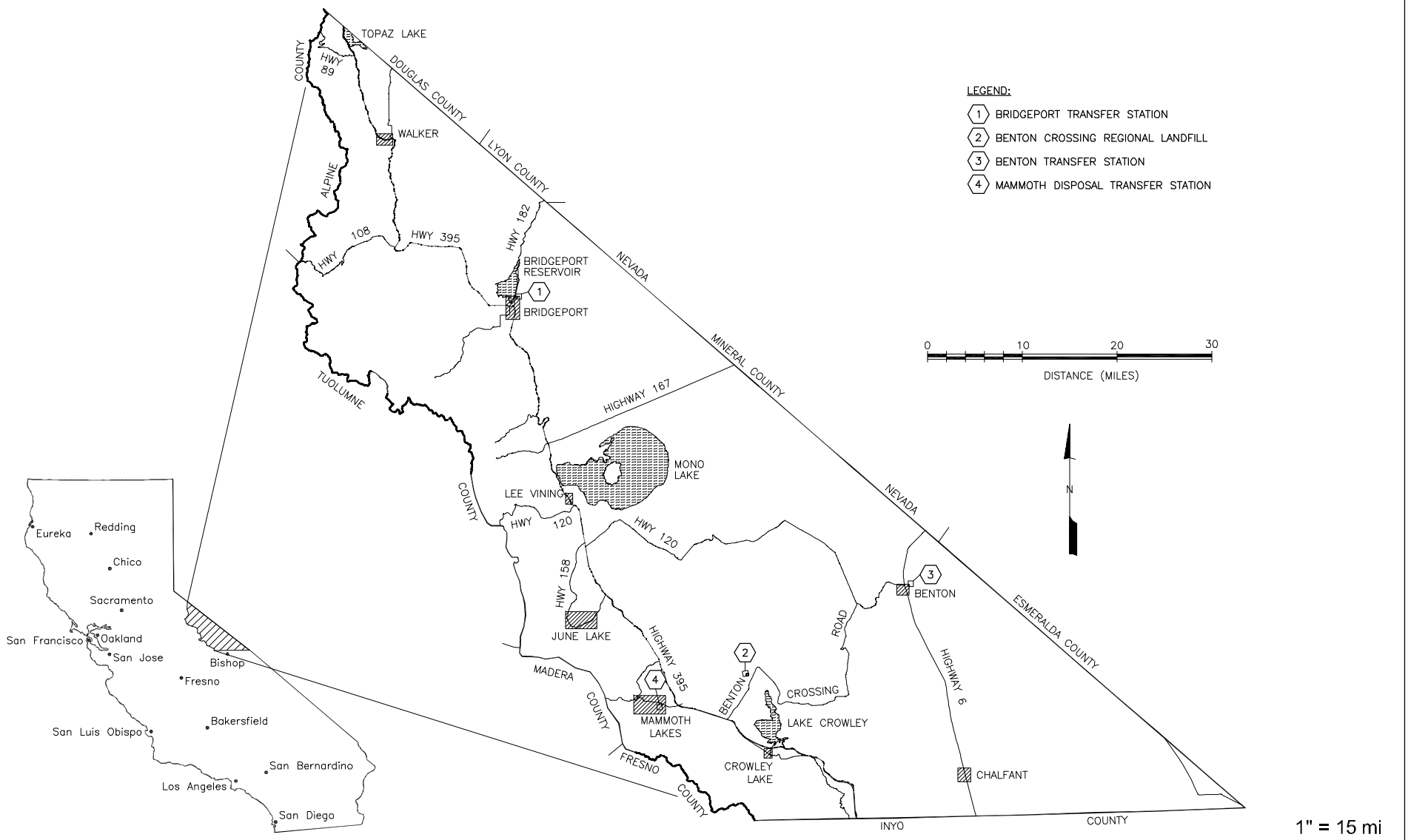

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HDR Engineering, Inc.

ALTERNATIVE 1 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

Sheet
FIGURE 3

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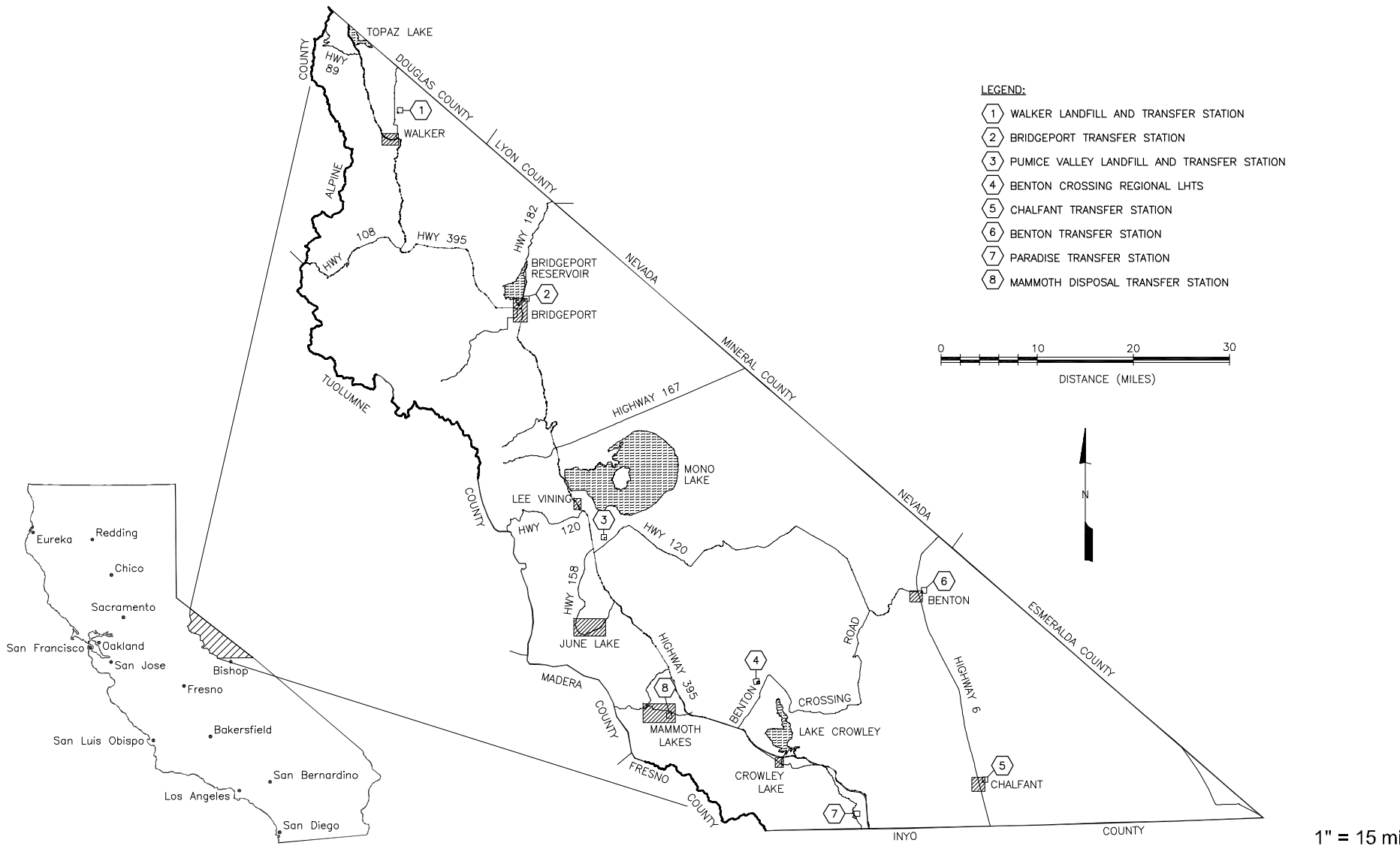

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HDR Engineering, Inc.

ALTERNATIVE 2 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

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FIGURE 4

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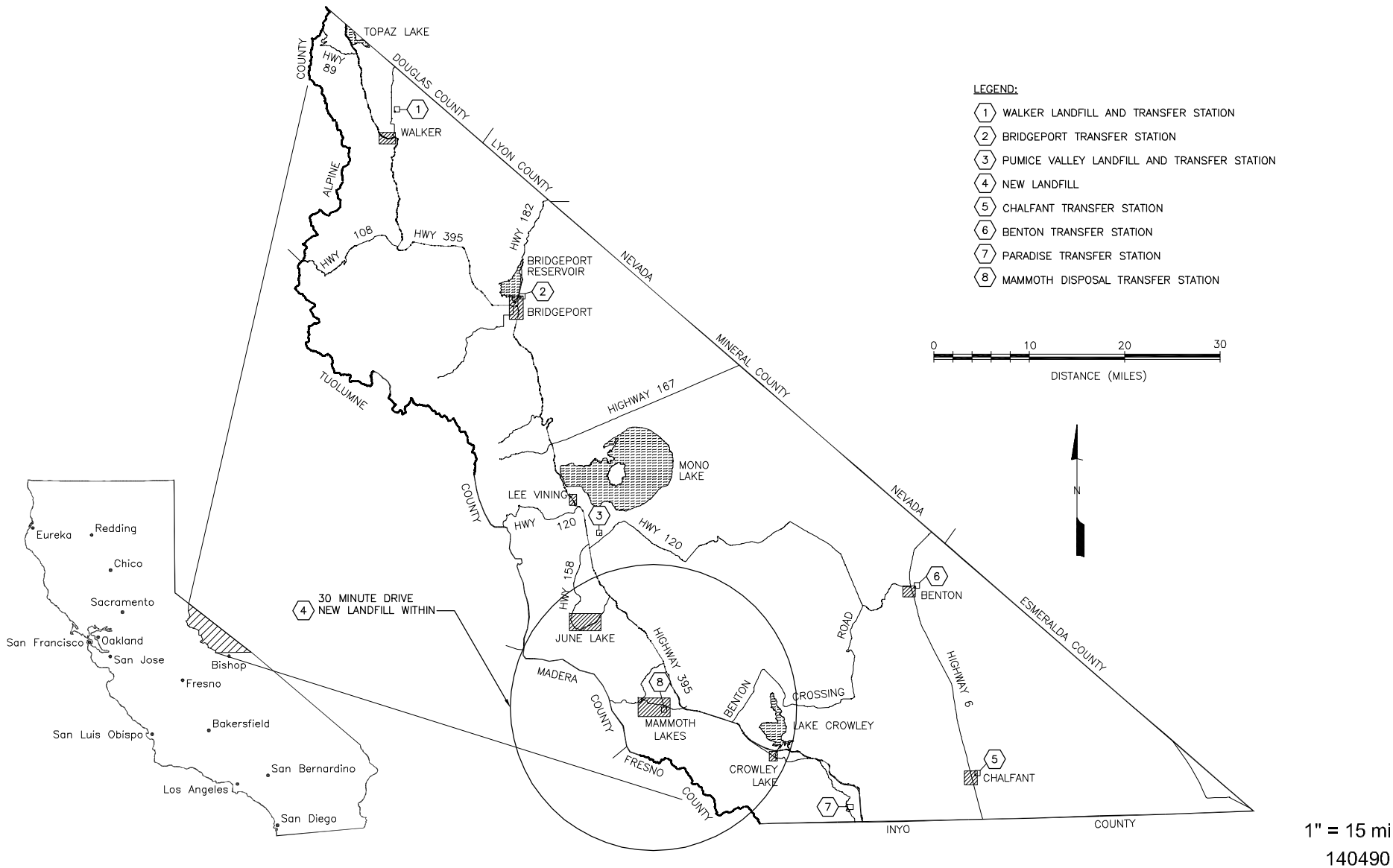

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HDR Engineering, Inc.

ALTERNATIVE 3 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

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FIGURE 5

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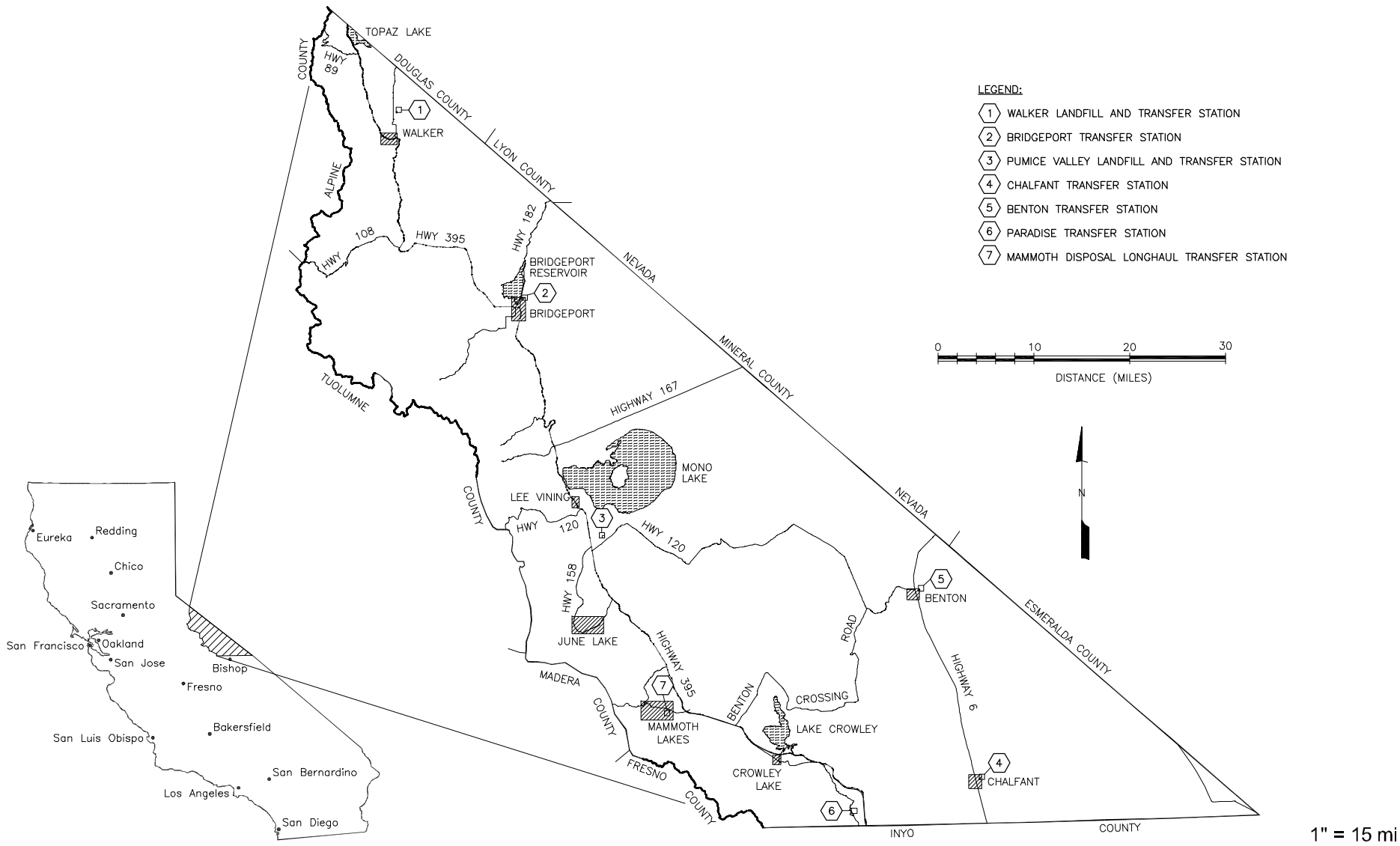

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HDR Engineering, Inc.

ALTERNATIVE 4 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

Sheet
FIGURE 6

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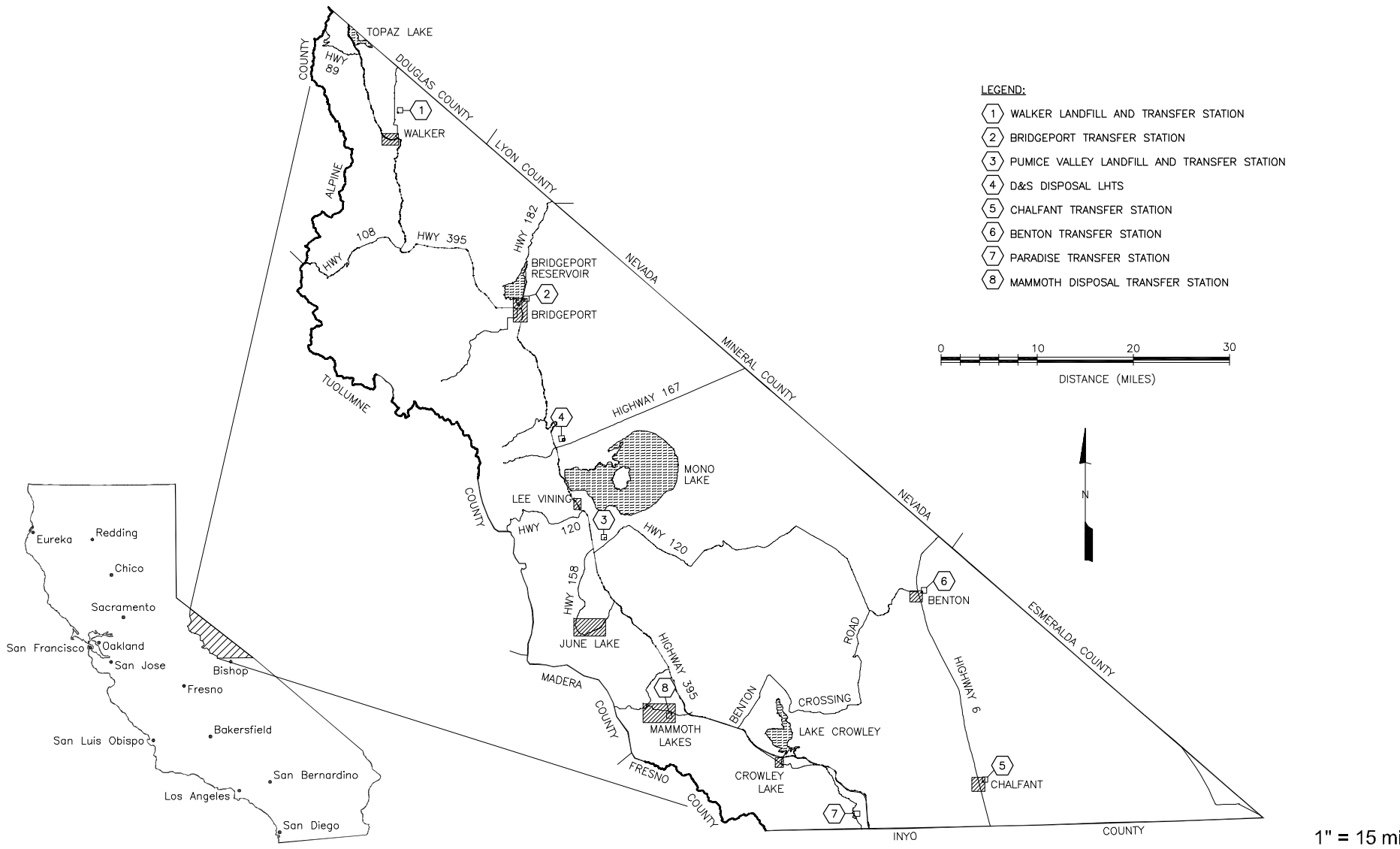

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HDR Engineering, Inc.

ALTERNATIVE 5 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

Sheet
FIGURE 7

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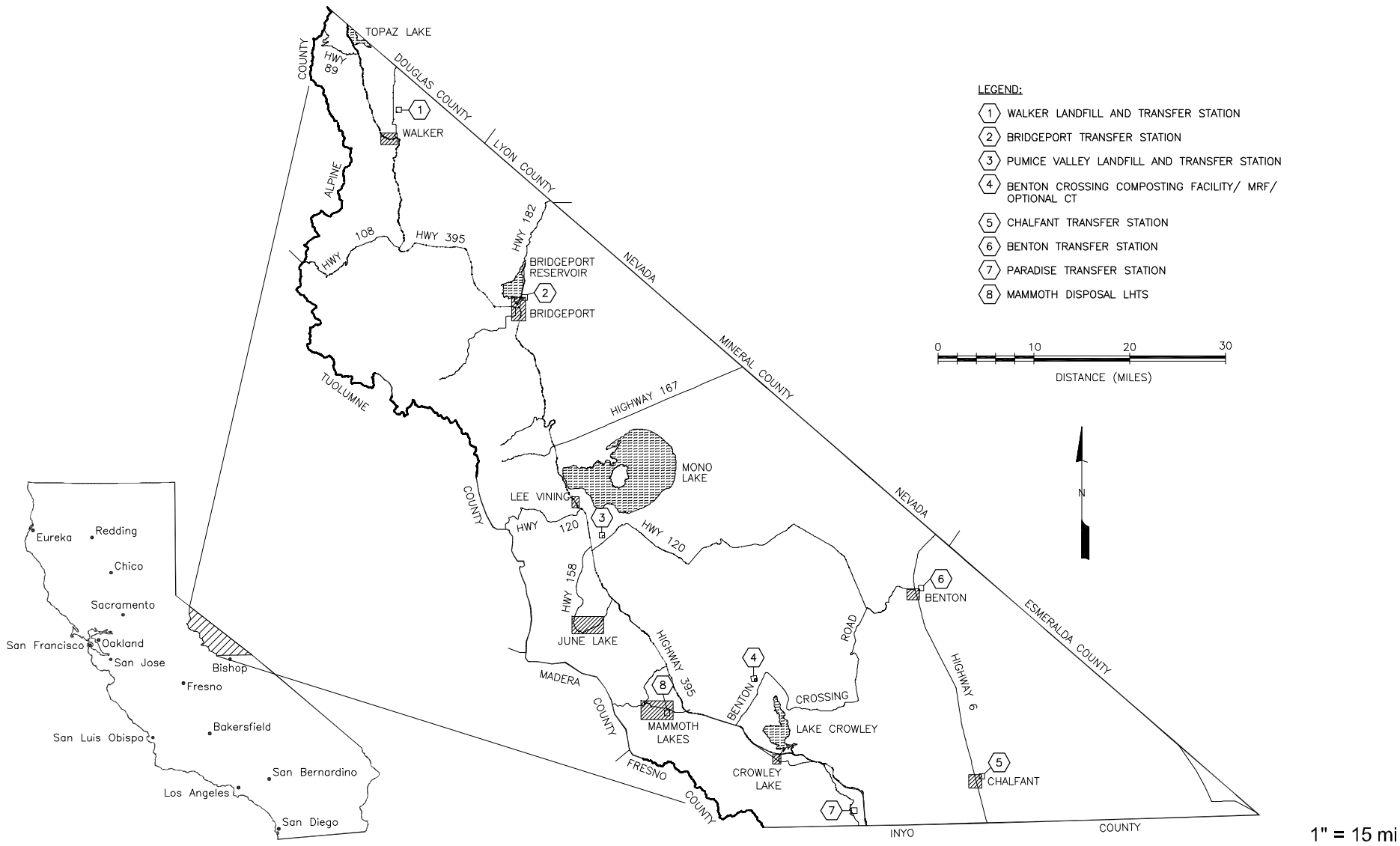

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HDR Engineering, Inc.

ALTERNATIVE 6 FACILITY MAP
SOLID WASTE PROGRAM EVALUATION

MONO COUNTY PUBLIC WORKS DEPARTMENT

Date
8/20/2010

Sheet
FIGURE 8

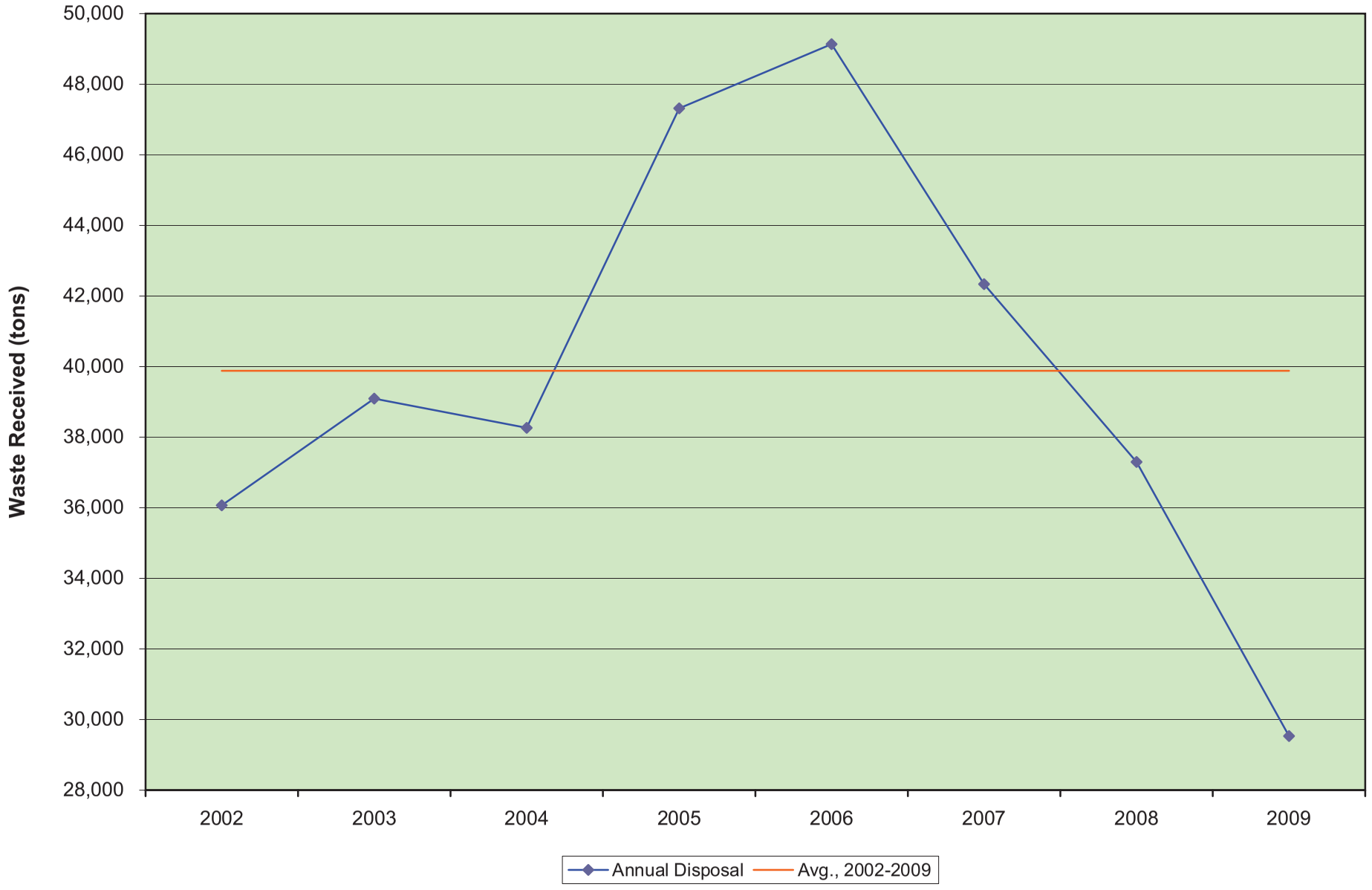
APPENDIX A

ATTACHMENT 1
2009 WASTE DISPOSAL MASS BALANCE
Mono County Solid Waste Program

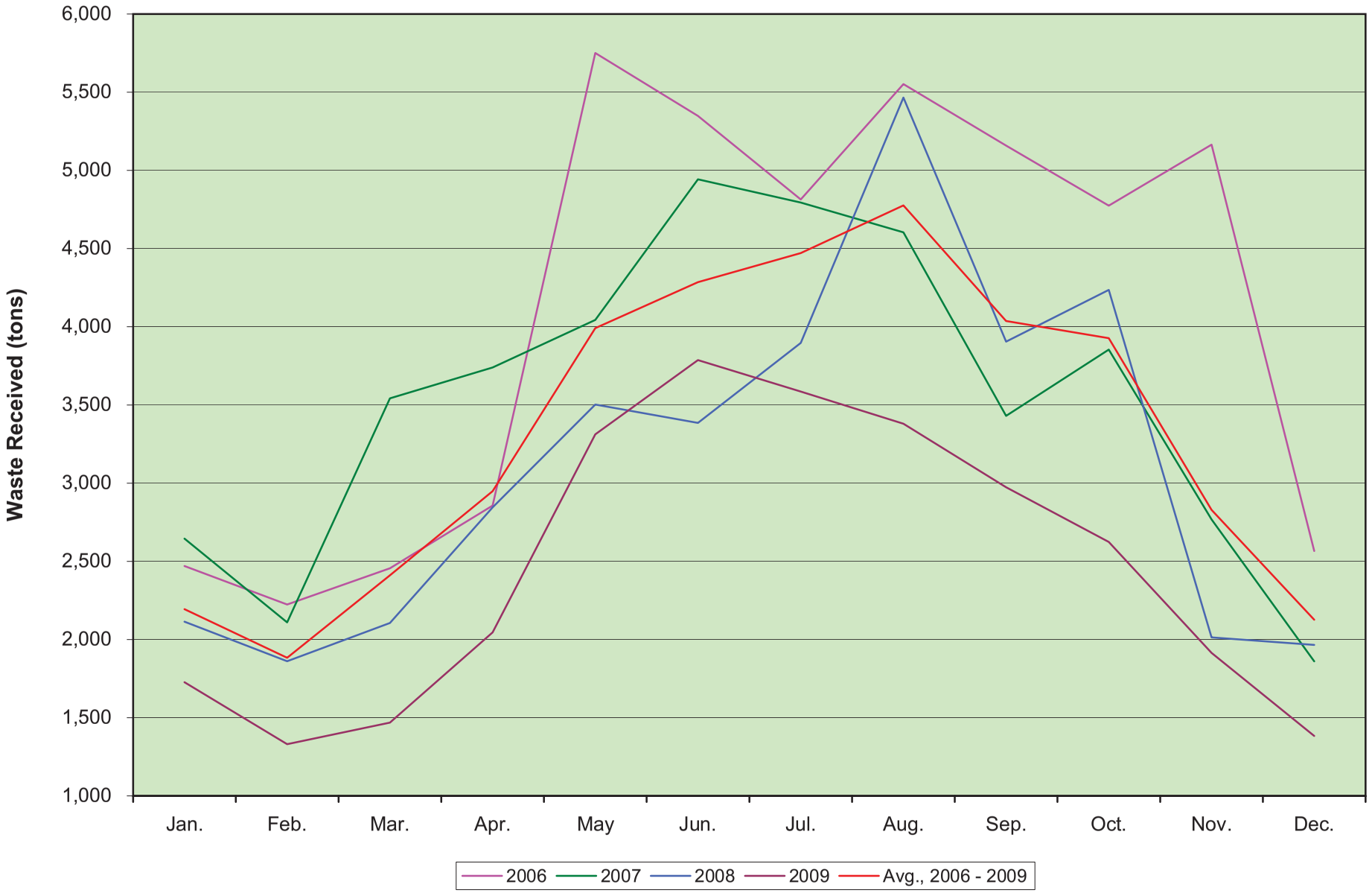
Landfill	12 Months to Date Total	Total	Avg.	Peak	Days
Benton Tra. Sta. - Received (tons)					102
Transferred Off-Site (tons)	72.24	232.17	2.28	7.63	
Transfer Station - Diversion (tons)	159.93				
Transfer Station - Traffic (vehicles)		977	9.6	23	
Benton Crossing LF - Received (tons)	25,312.88	26,497.73	72.60	331.25	365
Transferred In (tons)	1,184.85				
Diverted - Total (tons)		5,364.73	14.70		
Diverted - Mono County	587.41				
Diverted - Mammoth Lakes	4,775.65				
Diverted - Inyo County	0.00				
Diverted - Madera County	1.67				
Landfilled - Total (tons)		21,133.00	57.90		
Landfilled - Mono County	5,138.65				
Landfilled - Mammoth Lakes	15,802.99				
Landfilled - Inyo County	58.64				
Landfilled - Madera County	114.65				
Landfilled - Nevada Imports	18.07				
C&D Landfilled - Included Above (tons)	6,668.67				
Landfill - Traffic (vehicles)		9,116	25.0	63	
Bridgeport Tra. Sta. - Received (tons)					155
Transferred Off-Site (tons)	509.76	810.80	5.23	27.04	
Transfer Station - Diversion (tons)	301.04				
Transfer Station - Traffic (vehicles)		5,639	36.4	84	
Chalfant Tra. Sta. - Received (tons)					103
Transferred Off-Site (tons)	110.59	328.52	3.19	24.97	
Transfer Station - Diversion (tons)	217.93				
Transfer Station - Traffic (vehicles)		2,096	20.3	53	
Paradise Tra. Sta. - Received (tons)					103
Transferred Off-Site (tons)	87.41	102.70	1.00	2.64	
Transfer Station - Diversion (tons)	15.29				
Transfer Station - Traffic (vehicles)		1,693	16.4	43	
Pumice Valley LF / TS - Received (tons)		1,945.08			206
Transferred Off-Site (tons)	71.04	118.48	0.58	2.85	
Transfer Station - Diversion (tons)	47.44				
Transfer Station - Traffic (vehicles)		981	4.8	14	
Landfill - Diversion (tons)	731.51	1,826.60	8.87	144.64	
Landfill - Buried (tons)	1,095.09				
Landfill - Traffic (vehicles)		863	4.2	19	
Walker LF / Tra. Sta. - Received (tons)		797.20			154
Transferred Off-Site (tons)	302.54				
Transfer Out - Mono County	284.47				
Transfer Out - Nevada Imports	18.07	364.01	2.36	6.14	
Transfer Station - Diversion (tons)	61.47				
TS Diversion - Mono County	59.59				
TS Diversion - Nevada Imports	1.88				
Transfer Station - Traffic (vehicles)		4,614	30.0	59	
Landfill - Diversion (tons)	305.95				
LF Diversion - Mono County	283.01				
LF Diversion - Nevada Imports	22.94	433.19	2.81	73.18	
Landfill - Buried (tons)	127.24				
Landfilled - Mono County	125.32				
Landfilled - Nevada Imports	1.92				
Landfill - Traffic (vehicles)		1,179	7.7	26	
TOTAL WASTE LANDFILLED	**22,355.33**	BURIED			
Waste Landfilled - Mono County	6,359.06	28.45%			
Waste Landfilled - Mammoth Lakes	15,802.99	70.69%			
Waste Landfilled - Inyo County	58.64	0.26%			
Waste Landfilled - Madera County	114.65	0.51%			
Waste Landfilled - Nevada Imports	19.99	0.09%			
TOTAL WASTE DIVERTED	**7,205.29**	DIVERT			
Waste Diverted - Mono County	2,403.15	33.35%			
Waste Diverted - Mammoth Lakes	4,775.65	66.28%			
Waste Diverted - Inyo County	0.00	0.00%			
Waste Diverted - Madera County	1.67	0.02%			
Waste Diverted - Nevada Imports	24.82	0.34%			
TOTAL WASTE GENERATED	**29,560.62**	GEN.			
Waste Generated - Mono County	8,762.21	29.64%			
Waste Generated - Mammoth Lakes	20,578.64	69.62%			
Waste Generated - Inyo County	58.64	0.20%			
Waste Generated - Madera County	116.32	0.39%			
Waste Generated - Nevada Imports	44.81	0.15%			

Note: Monthly disposal quantities based on gate receipts.

ATTACHMENT 2
Annual Waste Received Countywide, 2002-2009



ATTACHMENT 3
Monthly Waste Received Countywide, 2006-2009



APPENDIX B

TECHNICAL MEMORANDUM

MEMO TO : Matt Carter

FROM : Mark Urquhart

RE : Mono County Solid Waste Program Evaluation
Phase 1 Task 2A.1 – Evaluate Equity of Current Gate Fees
Technical Memorandum

DATE : June 22, 2010

BACKGROUND

This Technical Memorandum (TM) was prepared by the HDR Team under an agreement between HDR Engineering, Inc. (HDR) and the County of Mono dated May 7, 2010 for solid waste consulting services (Agreement). The TM was prepared collaboratively by HDR and Jim Greco of California waste Associates (CWA) acting as a subconsultant to HDR (Hereinafter "HDR team"). The overall Agreement includes work to provide solid waste system analysis scheduled in two phases. This TM was prepared to complete the scope of services for Task 2.A.1, an evaluation of equity of current gate fees.

As part of preparation of this TM and for the overall agreement project, the HDR project manager toured all the solid waste facilities in the County and met with and interviewed Town of Mammoth Lakes (Town) and County staff regarding operations and funding of their respective solid waste systems[1].

This deliverable is a compilation of the analysis in the form of a TM, provided in electronic format in Phase 1, and will also be included as an Appendix in the solid waste system evaluation report to be provided in future tasks of the HDR project. The Scope of Work for this task acknowledged that the HDR Team would perform an analysis of the equity of the current gate fee system, to include review of the following:

- Current gate fee system rates;
- Information provided by the County and Town of Mammoth Lakes regarding costs for providing services (contractor costs, fee information and Town and County solid waste program costs); and
- An assessment of whether the fees charged to various users of the system are distributed equitably in relation to the cost of the services provided for these fees.

[1] The site visits and meeting were conducted from May 12 through 14, 2010.

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www.hdrinc.com

The proposed level of effort for the subject task assumed that the performance of a conceptual level analysis using cost information provided by the County and Town and would not include detailed cost estimating or auditing by the HDR Team.

EXECUTIVE SUMMARY

This Memorandum contains the following findings and recommendations, discussed further in following sections:

1. Program costs for FY08 allocated to the Town by the County in a spreadsheet provided to HDR totaled approximately 33% of total expenses. (Table 2)
2. Independent allocation of the same FY08 costs by HDR resulted in a 31% allocation to the Town. (Table 3)
3. Independent similar allocation of a 4-year average by HDR resulted in a 35% allocation to the Town. (Table 4)
4. The allocations denoted in #1 to #3, above, are based strictly on a share of direct provision of services for the Town's allocated tonnage at the Benton Crossing Landfill and do not take into account any consideration of other costs or impacts to the County for hosting the landfill in its jurisdiction.
5. The Town paid approximately 56% percent of total Program costs for the system in FY08. (Table 6, Base Case, Row 32)
6. The costs ledgers for FY08 provided to HDR listed expenses of approximately $4.1M and revenues of $1.5M. This indicates a shortfall of $2.6M for FY08. If the expense item for Land and Improvements (#5201 - $1,407,756), which was primarily for completed closure work, is reduced in line with prior 4-year average levels ($525,889) the shortfall would be reduced to approximately $1.7M.
7. The total Solid Waste Program cost of service for FY08 of $4,098,664 when allocated to the Town at 31% as estimated by HDR strictly based on servicing tonnage at the Benton Crossing Landfill would result in $60/ton and $333/ton disposed allocated to the Town and County, respectively. These figures are reduced to approximately $37/ton and $246/ton when non-gate fees are removed (after parcel fee and other revenues are removed). This remainder is generally the amount that would be funded by gate fees. The large difference in unit service costs is from the much smaller economy of scale and larger distances to the landfill to provide service for the County than for the Town.
8. Given that $246/ton is potentially an impractical gate fee for County transfer stations due in part to concerns for illegal dumping and other issues and there is a shortfall in the budget with an apparent trend to become worse in the future (increasing budget and lower gate tonnage/fees); HDR performed sensitivity analysis using various levels of increasing parcel fees and gate fees to hypothetically present what gate fees would result. It should be noted that these cases assume an increased gate fee to the Town well over and above the 31% cost of service allocation performed by HDR for FY08 (not the current unitized gate fee system which was $44/ton in FY08). The Town paying more that the 31% allocation based solely on tonnage share at the landfill in part could in part be based on

the fact that the County hosts the landfill, which is not considered in the allocation of landfill operational costs.

9. Table ES-1 summarizes the sensitivity analysis (Table 6 provides more detail). As can be seen in the analysis only one case shown provides a gate fee to the County below $100/T (Case 2); which shows a 150% increase in parcel fees[2] and $25/ton gate fee[3] over and above the 31% cost of service share to the Town (to $51/Ton); and an $80/ton gate fee to the County. It should also be noted that this option also balances the FY08 revenues and expenses, which may be viewed at about $1M high due to the one time closure cost indicated in #6, above. This would indicate that some lower level of fees than shown may be possible as FY08 expenses may not represent future average years.

[2] The sensitivity model assumes that 80% of parcel fee increase would be allocated to the County fee structure.
[3] The sensitivity model assumes that 100% of Town gate fee assessment would be allocated to the County fee structure.

TABLE ES-1

SUMMARY OF FEE STRUCTURE SENSITIVITY ANALYSIS

	BASE CASE ALLOCATION FY 08			SCENARIO 1 Increases- +100% Parcel Fee and +$15/T Town Gate Fee			SCENARIO 2 Increases- +150% Parcel Fee and +$25/T Town Gate Fee			SCENARIO 3 Increases- +$25/T Town Gate Fee			SCENARIO 4 Increases- +$20/T Town AND COUNTY Gate Fee		
FY 08 COST ALLOCATION	Total	Town	County	Total	Town	County	Total	Town	County	Total	Town	County	Total	Town	County
Expenses	$ 4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512	$ 4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512
Disposal Tonnage	$ 29,515	$ 20,993	$ 8,522	$ 29,515	$ 20,993	$ 8,522	$ 29,515	$ 20,993	$ 8,522	$ 29,515	$ 20,993	$ 8,522	$ 29,515	$ 20,993	$ 8,522
$/Ton Disposed	$ 139	$ 60	$ 333	$ 139	$ 60	$ 333	$ 139	$ 60	$ 333	$ 139	$ 60	$ 333	$ 139	$ 60	$ 333
Expenses after Non-Gate Fees	$ 2,865,074	$ 771,326	$2,093,748	$2,865,074	$ 771,326	$2,093,748	$2,865,074	$ 771,326	$2,093,748	$ 2,865,074	$ 771,326	$2,093,748	$2,865,074	$ 771,326	$2,093,748
$/Ton Disposed	$ 97	$ 37	$ 246	$ 97	$ 37	$ 246	$ 97	$ 37	$ 246	$ 97	$ 37	$ 246	$ 97	$ 37	$ 246
Portion Based on Service Cost Allocation	100%	31%	69%	100%	31%	69%	100%	31%	69%	100%	31%	69%	100%	31%	69%
Gate Fee Scenario				$ 72	$ 44	$ 142	$ 59	$ 51	$ 80	$ 97	$ 62	$ 184	$ 97	$ 57	$ 196
Total Portion of Program Payments	$ 2,532,250	$1,414,518	$1,117,732	$3,566,152	$2,199,246	$1,366,906	$4,167,075	$2,675,582	$1,491,493	$ 3,057,075	$1,939,343	$1,117,732	$3,122,550	$1,834,378	$1,288,172
	100%	56%	44%	100%	62%	38%	100%	64%	36%	100%	63%	37%	100%	59%	41%
Balance in Total Revenues	$ (1,566,414)	-38%		$ (532,512)	-13%		$ 68,411	2%		$ (1,041,589)	-25%		$ (976,114)	-24%	

Recommendations in this memorandum include:

1. *Reporting and accounting practices* - "Actual" revenue figures provided to the HDR Team for FY08 appear to vary significantly compared previous and projected budgets and somewhat from previous "actual" figures. This may indicate the need for some level of audit and/or standardized accounting and budgeting practices.
2. *Equity of Fee System* - The unit cost of managing waste at the much smaller County facilities is far higher as would be expected based on much smaller facility size and locations of facilities given the lower population density. Rather than the current unitized gate fee system, some lower level of differential fee charged to the Town should be considered. Given that gate fees to the County system must be sustainable and not increase illegal dumping, some level above the Town allocated landfill service cost (31% of the total Program as analyzed in this TM) in consideration of compensating the County for hosting the landfill should be considered.
3. *Cost and Service Cutting* – Given the apparent program fund shortfall trend (rising expenses while falling tonnage/tip fees) and potential that raising the parcel and gate fees to the high example levels in the sensitivity analysis may be impractical, the County needs to also consider cost cutting measures to include reducing services (days of operation at the landfill or other) or assessing higher fees for non-disposal activities (managing waste that is recycled or diverted currently under no or a lower gate fee). In addition, assessing the most economical configuration of the system in Phase 2 of the HDR project appears very important to also assess if different system configurations would be more economical or needed to match funding conditions. Some level of cost cutting and reconfiguration is needed in the near term as well as potentially the long term.

CURRENT GATE FEE SYSTEM RATES

The HDR Team reviewed a summary (fee schedule) of the current gate fees in effect at:

- Benton Crossing, Bridgeport, Pumice Valley, and Walker; and
- Benton, Chalfant, and Paradise.

The gate fees for the 1st grouping of facilities are tonnage (weight) based, while the 2nd grouping of facilities are volume-based.

The Benton Crossing, Pumice Valley and Walker facilities are permitted solid waste disposal facilities. However, only the Benton Crossing Landfill still receives mixed municipal solid waste for disposal. Only inert materials are landfill disposed at the Pumice Valley and Walker facilities and both contain transfer station facilities. The Bridgeport site is a closing landfill that also has an operating transfer station. The Benton, Chalfant, and Paradise facilities are transfer stations that do not perform landfill disposal on-site.

Table 1 presents a comparison of the weight-based versus the volume-based rates.

ALLOCATION OF COSTS FOR PROVIDING SERVICES

An assessment of whether the fees charged to the various users of the countywide system are distributed equitably in relation to the cost of the services being provided was performed by the HDR Team. This is a major step in assessing the equity of the gate fees, although there are other issues discussed including consideration of the County hosting the Benton Crossing Landfill used by both Mammoth Lakes and the County.

The Town of Mammoth Lakes and the County Public Works Department are the main users of the system; with the town disposing of a majority of waste in the system. The Town used only the Benton Crossing Landfill for landfill disposal of mixed municipal waste and unprocessable mixed construction and demolition debris. Much of the waste taken by haulers servicing the Town is direct hauled to the landfill.

Diversion programs implemented at the landfill are accomplished similarly for both the town and County. These include diverting certain relatively clean, segregated materials (e.g., recyclables, inert construction and demolition debris, scrap metal, sludge, tires, white goods, wood, etc.). The Town also operates a transfer station that is funded separately from the County system primarily for self-haul users from the Town but some consolidation of recyclables from both the Town transfer station and County facilities is performed at the facility.

The County PWD has established and maintained a countywide solid waste management program. A Solid Waste Enterprise Fund was established for the system. The HDR Team was advised that the County uses an accounting system to track expenses by line item, however the County has not set-up a separate accounting system for reporting costs by facilities as cost centers or the Town's share of costs incurred.

Consequently, HDR's independent evaluation of the countywide "cost of service" attributed to the Town involved a number of steps including:

- Review of the County's budget and gate fee analysis spreadsheets
- Review of a County's "allocation" of costs to the Town within budget spreadsheets (accounting cost centers are not set up)
- HDR independent assessment of the percentage allocation to the Town by budget line items
- HDR's allocation of the Town's cost to FY08/09 actual costs from ledgers
- HDR's allocation of the Town's cost to a four year average FY05/06 to FY08/09 actual costs from ledgers

The following set of Tables presents the cost of service review and allocation method performed by the HDR Team.

Program Costs for FY 05 to FY08 (Table 2)

Program costs were tabulated from scans of "ledgers[4]" provided by the County. Items are tabularized in Table 2 by budget line item and summarized by fiscal year, showing the 4-year average in the right column. These figures are used in later tables to calculated and "allocated" cost of service to the Town based on the use of the Benton Crossing Landfill.

As can be seen from the Table system cost escalated significantly over the past four years. The use of a 4-year average accounting period provides a normalized costing in order to minimize significant data anomalies (e.g., yearly spikes or notable drops in data from year-to-year based on landfill closures or other large items). This was also included because discussions with the Town indicated that tonnage from the Town has fluctuated differently than the County and, therefore, the most recent year may not depict the trend in unit cost allocated to the town. However, based on available information (non-audited DPW actual FY08/09 "actual" cost and revenue ledgers) gate tonnages and revenues have dropped dramatically over this period creating what appear to be a significant annual shortfall so it is unclear if the previous four-year average would still be relevant to future fund balance conditions.

It was noted that even though costs have escalated significantly during this period, tonnages to the landfill have decreased. With increasing costs and decreasing tonnages, the net result is a large increase in the unit cost of service (dollars per ton). Although analyzing the reasons for that are beyond the scope of this TM, discussions with the County indicate that much of the increase has been from providing increased diversion and other services.

Program Cost Allocation to Town by County for FY 08 (Table 3)

Table 3 is an estimation of the *budget* allocated to the Town taken from line item budget figures as assigned by County staff in a spreadsheet provided to HDR. The HDR team back-calculated the percentage allocated to the Town by the County (shown in the second column from the right). Rather than using budget figures as in the County analysis HDR then applied those same County staff allocation percentages to the actual cost of service "ledger" items provided by the County to develop the $1,362,544 total expenses allocation to the Town shown in the right column. *This would equate to approximately 33% of the total system cost from County ledgers for FY 08 using the County assigned percentages.*

HDR was advised by County staff that the Town's share of parcel fee revenue for FY08 was $490,826 and does not change much year-to-year. Table 3 estimates the cost of service per ton based on both wastes received and wastes *disposed* after removal of parcel fees; which is most relevant to the cost to be covered by gate fees. Both were derived and shown because some waste streams entering the BX-LF do not pay the full gate rate because they are not disposed but are diverted from disposal. We understand these waste streams (e.g., clean wood, scrap metal, sludge, etc.) are not charged a fee (in order to encourage diversion) or pay a lower gate rate. The cost to divert and process those materials may be much higher than the gate fee or cost of landfill disposal. Consequently, the County's processing of these materials without the associated fees contributes to the County's financial challenge.

[4] These were provided in Adobe Acrobat pdf file form by email to HDR by Matt Carter, County DPW.

Program Cost Allocation to Town by HDR Team for FY 08 (Table 4)

Table 4 is similar to Table 3 except the HDR team independently reviewed line items and the percentages assigned by the county in Table 3 and made judgments to modify some of those percentages (See Notes to Table 4). In general the HDR team felt that the County percentage allocations were appropriate other than costs for salaries (2110), holiday pay (2141), benefits (2210), and communications (3028). The County has previously assigned these items using 81.1% based strictly on the Town's tonnage share at the Benton Crossing Landfill, which is appropriate for costs for the landfill only. The HDR team further adjusted that percentage down based on fact that County staff that are assigned generally to administer both the landfill and county transfer station system should have the portion used for the County system removed prior to allocating costs to the town based on landfill tonnage share. This was estimated by removing non landfill salaries from the total salaries, removing 50% of these costs prior to allocating costs to the Town based on the tonnage share at the landfill. A figure of 50% was used because it is speculated and was assumed that County staff involved in administering non-landfill elements (County transfer system) spend about ½ of their effort/cost related to the County transfer system, the program not related to the landfill. This reduced the allocation for these items from 81.1% to 64.6% allocated for the town from these line items compared to the County allocation method shown in Table 3 (See Note 1 items in Table 4).

The allocation adjustment made by the HDR Team reduced the overall allocation to the Town by the County slightly from 33% to 31%.

Estimated Cost Allocation to the Town for 2005-08 Average (Table 5)

Table 5 is similar to Table 4 and applies HDR independently reapplied line items as in Table 4 again for allocating the 4-year average line items and the percentages assigned to the Town share. These were applied to a four year average of ledger costs. This adjusted the allocation of line items to 69.0% allocated for the Town (compared to 82.8 based solely on tonnage split) for line items 2110, 2141, 2210, and 3028 compared to the County allocation method (See Note 1 of Table 5). A tonnage share of 82.8% for the Town for the four year average is applied to other items according to Note 2. The HDR allocation over the four year average indicated a 35% share allocated to the Town.

Table 6 - Summary Analysis of Allocation of Costs and Fee Structure Between the Town And County (Includes Sensitivity Analysis)

Based on the analysis in Tables 4 and 5 it would appear that the Town's allocation of costs is on the order of 1/3 of the program expenses based on allocation performed by HDR. It does not appear to vary significantly comparing the four-year average to the most recent FY08 data (35% and 31% respectively), nor with the County's FY 08 allocation (33%). Based on this, HDR decided to focus on the latest information from FY08 in the analysis included in Table 6 and apply the HDR cost allocation of 31% in further analysis in this memorandum.

It was also noted that there is a significant budget shortfall noted in "actual" cost information provided by the County. Based on ledgers provided to the HDR team expenses for FY08 were $4,098,664. Revenue information provided for "actual" figures in the ledger were compiled by the HDR team in a spreadsheet that for reference also displays fy05-fy08 Average and FY 09/10

budget information (Attachment 1). Comparing the "actual" revenue figures to the budget figures for FY08 showed a large discrepancy with the actual figures being much lower ($1,463,119 versus $3,178,099) and line items that may be incomplete for the "actual" figures in the ledger. Given this situation the basis for the figures was discussed with County staff[5] and some assumptions were made regarding revenues as noted in further analysis, below. In either event, significant budget shortfalls appear as noted in the balance at the bottom of Attachment 1. It was also noted that if the expense item for Land and Improvements (#5201 - $1,407,756), which was primarily used for completed closure work, is reduced in line with prior 4-year average levels ($525,889) the shortfall would be reduced from to approximately $2.6M to $1.7M.

Table 6 summarizes the 31% HDR allocation of FY08 costs between the Town and County described previously as well as providing sensitivity cases of adding varying degrees of additional parcel and gate fees to the program. This was done because of the apparent need to remedy the annual budget shortfall for FY08 as well as comparing the revenue share between the Town and County with a non-unitized gate fee.

The left column of Table 6 includes the "Base Case" using data supplied for FY08 and columns to the right have sensitivity cases of providing additional funds from the Town or County thought additional gate fees or parcel fees as noted. This is provided to give scenarios for comparison to show the effect of raising fees on solving the annual shortfall case and the allocation of fees between the Town and County. Following are conclusion regarding the allocation of costs and gate fees for FY08 as shown in Table 6

Base Case

The base case shown is based on actual FY08 expenses and parcel fees totaling $740,000 for FY08 and gate fees using $44/ton times the disposal (landfilled) tonnage. It is noted that the unit cost for the total system tonnage (including diverted tons) is lower but disposal tonnage is used for comparative purposes because it generated most of the system revenues under the fee structure, which is complex and lower for diverted items.

- Row 1 of Table 6 allocates the total program $4,098,664 of *expenses* to the Town and County. Based on the 31% split to the Town described previously (Table 4) this indicates a $60 per ton Cost to the Town and $333/ton cost to the County (row 3) to cover the annual expense for the Program (including revenues from all potential sources). The total program cost of service shown in $97/ton. This can be viewed as the unit cost of service to the Town and County based on the assumptions used in Table 4.
- Row 9 is a summary of allocated costs *after non-gate fees are removed; which is an indicator of the requirement for gate fees* using the Town cost allocation by HDR in Table 4. Again, for simplicity the analysis applies only the disposal tonnage of the waste stream because it is was charged the full gate fee ($44/ton in 2008) and provided most of the program revenues. This would indicate $37/ton to the Town and $246/ton disposed to the County required to fund expenses after non gate fee funds are removed from the expenses.

[5] Telephone and email correspondence and conferences between the HDR Team and Matt Carter, DPW.

- Row 32 shows the percentage of total fee payments (from all sources) paid by the Town compared to the County (based on parcel fees shown and $44/ton disposed) and indicates a split of 56% versus 44%, respectively. ***This would indicate that while the landfill cost allocation indicates 31% cost generated by the Town at the landfill, the Town provided on the order of 56% of the program revenues.*** This would appear to indicate that the Town is paying more than its allocation of costs based strictly on a budget service allocation compared to its share of system revenues.
- *It should be noted that the base case allocation shows an annual budget shortfall of about $1.6M (Revenue adjustments applied from actual FY08 figures provided). This indicates that the base case shown is not adequate with the current expenses and fees and fees or services must be cut (unless there was a dramatic rebound in disposal tonnages in fees in immediate future). That represents a 38% shortfall as shown in row 33.*

However, it should be noted that the cost allocation was done primarily on the basis of the Town cost being applied to the budgeted operations based only on its operational use of the landfill facility and does not take into consideration that the County provides siting of the landfill and by hosting the landfill may be subject to environmental, infrastructure and other impacts that involve the Town that are not quantified economically or not accounted for in the allocation of only the solid waste program budget. These would need more consideration and are not included in the 31%/69% split derived and applied.

Based on this concept it may be reasonable to assume that it may be appropriate that the Town pay some amount above the direct operational solid waste budget costs and that consideration must be given to the situation that the County can only reasonably raise get fees to a certain level before illegal dumping and other issues with funding and operating diversion programs may become a problem.

Given the significant apparent budget shortfall shown in FY08 it is imperative that the County obtain an audit of the expenses for the system (the irregularities/fluctuation in the revenues in ledgers may need investigation) and track the extent and trend of the increasing cost and declining tonnage and revenues to assess if both fees need to be raised and services and costs need to be cut in the immediately short term. This would be the case even if the system may also be changed significantly based on a review of facilities options planned in Phase 2 of this project. It is probable that raising fees may need to include raising gate fees, parcel fees or a combination of the two in addition to cost cutting. The equity of the fee allocation to the Town, and a differential lower fee, should also be considered in this process.

Table 6 - Sensitivity Analysis

Although auditing of the budget and solving the apparent budget shortfall trend is beyond the scope of this project, Table 6 includes four scenarios of increasing fees. The cases are only shown as concept examples only as to the effect on the budget shortfall and split of the Town and County fees if parcel fees or gate fees are raised in differing hypothetical combinations.

The cases chosen were based on acknowledgment that it may be impractical to raise the County fee as would be indicated only by charging the Town a fee based strictly on budget allocation

provided by HDR in Table 4 (in this case to above $200 per ton; $246/Ton County based on cost allocation shown in Row 10) without illegal dumping and many other impacts. Further, some level of fee charged to the Town is probably appropriate for other impacts or expenses related to the County hosting the landfill that is not accounted for in the program budget allocation.

Table 6 presents four sensitivity scenarios that increase fees to fund the FY08 shortfall noted and show gate fee cases lower than the $245/ton base case indicated using the cost of service allocation to the Town (the additional fee scenarios are presented below row 11). It is noted that these cases are presented without regard to whether assessment of additional parcel fees is even a viable option and without assessment of whether these level of gate fees are practical at County facilities. In addition, they do not include any cost cutting measures, which may be imperative and inevitable given the Program fund balance trend.

1. This assumes a case that would *double* the parcel fee and add a $14/ton fee to the Town cost allocation. The resulting gate fees would be about $45/ton for the Town and $140/ton at the County facilities. These are significant increases to the County but still indicate a 13% ($0.5M) expense/revenue shortfall. It should be noted that the Town overall system fee share in this and other cases below is actually slightly larger than base case conditions shown (62% versus 56%), which may not be equitable but result in cases that may or may not provide sustainable gate fees at County facilities.
2. This assumes a case that would raise the parcel fee by 150% and add a $25/ton fee above the 31% cost allocation to the Town. The gate fees would be $50/ton for the Town and $80/ton at the County facilities. These significant increases in the parcel fee indicate roughly a balanced budget.
3. This assumes a case that would leave the parcel fee at base case levels and add a $25/ton fee to the Town. The gate fees would be about $60/ton for the Town and $180/ton at the County facilities. These are significant increases but still indicate a 25% (About $1M) budget shortfall.
4. This assumes a case that would leave the parcel fee at base case levels and add a $20/ton fee to both the Town and County. The overall gate fees would be about $55/ton for the Town and $200/ton at the County facilities. These are significant fee increases but still indicate a 25% (About $1M) annual shortfall.

Recommendations

1. *Reporting and accounting practices* - It should be noted that the above assessment is based on "actual" revenue figures provided to the HDR Team for FY08 that appear to vary significantly compared previous and projected budgets and somewhat from previous actual figures. This may indicate the need for some level of audit and/or standardized accounting practices. Assessing the overall trend implications and auditing, beyond the limited scope of this task or project, is recommended (in conjunction with assessing the potential need for both significant reductions in services/cost and considering equity of reallocation of fees to the town discussed below).

2. *Equity of Fee System* - The unit cost of managing waste at the much smaller County facilities is far higher as would be expected based on size and locations of facilities given the lower population density. The higher cost of County service compared to servicing the Town at the landfill could be recognized by some level of differential fee charged to the Town that would not be based strictly based on the Town service cost (as analyzed in this TM) in consideration of compensating the County for hosting the landfill. This structure would need to provide a sustainable gate fee structure at County sites. (It must also competitive fees to both the Town and County when compared to potential system reconfiguration and that will be analyzed in Phase 2 of this project).

3. *Cost and Service Cutting* – Given the apparent program fund shortfall trend and potential that raising the parcel and gate fees to the example levels in the sensitivity analysis above may be impractical, the County needs to consider cost cutting measures to include reducing services (days of operation at the landfill or other), efficiency measures, or assessing higher fees for non-disposal activities (managing waste that is recycled or diverted under a lower gate fee). Assessing the most economical configuration of the system in Phase 2 of the HDR project appears very important to also assess what different system configurations would be more economical. Some level of cost cutting and reconfiguration is needed in the near term as well as potentially the long term.

TABLE 1 - MONO COUNTY SOLID WASTE FACILITY CURRENT GATE RATES

Type of Material	**Wt-Based** (per ton)	**Volume-Based** (per cubic yard)
Base Rate (for all municipal solid waste)	$50.00	
Minimum Gate Fee (per load)	$1.75	$1.75
Mixed Household and Commercial Waste	$50.00	
Garbage Can (up to 55 gallons)		$1.75
Mixed Waste, Generally		$6.25
Construction and Demolition (C&D) Waste		
Mixed C&D Debris (mixed lumber, drywall, shingles)	$50.00	$12.00
Clean Loads of Gravel, Soil, or asphalt grindings (< 6 “)	N/C	N/C
Clean Loads of Small Broken Asphalt or Concrete (< 12”)	$8.00	
Mixed Inert Debris or Loads of Large Concrete	$16.00	$14.50
Wood, Green Waste, and Similar Organics		
Clean Loads of Bark, Hay, Manure, Grass Clippings, etc.)	N/C	N/C
Wood (clean loads of scrap wood, lumber, brush, etc.)	$12.50	$1.75
Tree Trunks (diameter < 18”) and Stumps (at BXLF)	$50.00	Not Accepted
Recyclables (CRV, Cardboard), E-Waste, HHW, U-Waste	N/C	N/C
Cathode Ray Tubes	*	$4.25 each
Tires	**	***
Scrap Metal (clean loads)	$12.50	$1.75
Animal Carcasses (BXLF only)		
Small (< 50 lbs)	$5.00 each	Not Accepted
Medium (50-200 lbs)	$10.00 each	Not Accepted
Large (> 200 lbs)	$25.00 each	Not Accepted
Mobile Homes, House Trailers, Campers, and Boats	$50.00	Not Accepted

* *$4.00 each plus $12.50 per ton.*

** *$4.00 per passenger car tires plus $12.50 per ton; $48.00 per oversized plus $12.50/ton.*

*** *$4.25/passenger tire (< 42” diameter); $50.00/oversized tire (> 42” diameter).*

TABLE 2 - MONO COUNTY SOLID WASTE PROGRAM ACTUAL COSTS FOR FY05-FY08

Item	Account Name	FY05/06 Actual	FY06/07 Actual	FY07/08 Actual	FY08/09 Actual	4-yr Average Actual
3312	Bottle Bill Grant Expenses			$8,303	$6,145	$3,612
3312	HHW Grant Expenses			$18,790	$0	$4,698
3312	Oil Grant Expenses			$3,554	$1,737	$1,323
2110	Salaries	$274,081	$323,064	$438,516	$490,773	$381,609
2112	Overtime	$8,203	$7,350	$6,226	$7,793	$7,393
2141	Holiday Pay			$20,658	$21,440	$10,525
2210	Benefits	$131,117	$153,903	$220,336	$237,519	$185,719
3012	MOU Uniforms	$7,318	$8,843	$11,323	$10,902	$9,597
3027		$58,704	$53,285	$124,419	$129,894	$91,575
3028	Communications	$1,760	$1,331	$1,414	$1,884	$1,597
3035	Household Expense	$2,250	$2,091	$3,279	$1,744	$2,341
3050	Insurance - Workers Comp	$0	$4,700	$4,700	$0	$2,350
3051	Insurance - Liability	$0	$12,900	$43,900	$19,750	$19,138
3120	Maintenance - Equipment	$59,217	$80,715	$102,980	$119,253	$90,541
3140	Maintenance - Buildings	$122,113	$103,833	$92,497	$137,098	$113,885
3170	Membership and Dues	$6,490	$6,546	$6,518	$6,351	$6,476
3200	Office Expense	$11,104	$10,145	$10,826	$18,856	$12,733
3245	Contract Services (MD)	$514,087	$545,351	$524,084	$643,331	$556,713
3250	Other Professional Services	$71,456	$109,317	$119,627	$93,036	$98,359
3280	Publications	$2,127	$1,423	$940	$50	$1,135
3285	Rents/Leases - Equipment	$231	$4,436	$70	$0	$1,184
3295	Rents/Leases - Buildings	$1,720	$5,752	$4,569	$4,057	$4,025
3296	Cost Allocation Plan				$71,025	$17,756
3301	Small Tools	$8,571	$2,232	$2,805	$1,595	$3,801
3312	Special Departmental	$465,629	$238,235	$712,625	$536,417	$488,227
3335	Travel and Training	$80,715	$78,044	$94,878	$78,822	$83,115
3360	Propane Charges	$1,083	$955	$1,678	$1,436	$1,288
5201	Land & Improvements	$7,388	$197,875	$490,576	$1,407,756	$525,899
5301	Equipment - Vehicles	$0	$40,491	$58,290	$0	$24,695
5302	Equipment - Construction	$0	$27,845	$20,976	$0	$12,205
5303	Equipment Replacement	$5,779	$2,966	$61	$0	$2,202
6010	Closure Fund Deposits	$0	$0	$0	$50,000	$12,500
	Total Expenses	**$1,841,143**	**$2,023,630**	**$3,149,419**	**$4,098,664**	**$2,768,582**

TABLE 3 - ESTIMATION OF COSTS ALLOCATED TO THE TOWN FOR 2008 (Based on County PWD Staff Percentage Estimates by Line Item)

Item	Account Name	FY08 County SW Budget	FY08 Actual County Cost	% Town Allocated Cost (County Estimate)	FY08 Town Cost of Service (Actual Basis)
3312	Bottle Bill Grant Expenses	$0	$6,145		
3312	HHW Grant Expenses	$0	$0		
3312	Oil Grant Expenses	$0	$1,737		
2110	Salaries	$683,000	$490,773	78%	$382,803
2112	Overtime	$7,500	$7,793	81%	$6,312
2141	Holiday Pay	$23,000	$21,440	81%	$17,366
2210	Benefits	$499,900	$237,519	78%	$185,265
3012	MOU Uniforms	$11,000	$10,902	81%	$8,831
3027		$0	$129,894	50%	$64,947
3028	Communications	$1,600	$1,884	81%	$1,526
3035	Household Expense	$3,000	$1,744	81%	$1,413
3050	Insurance - Workers Comp	$4,700	$0	81%	$0
3051	Insurance - Liability	$29,100	$19,750	72%	$14,220
3120	Maintenance - Equipment	$205,000	$119,253	80%	$95,402
3140	Maintenance - Buildings	$71,000	$137,098	73%	$100,081
3170	Membership and Dues	$6,800	$6,351	72%	$4,573
3200	Office Expense	$17,800	$18,856	62%	$11,691
3245	Contract Services (MD)	$623,600	$643,331	3%	$19,300
3250	Other Professional Services	$134,500	$93,036	52%	$48,379
3280	Publications	$600	$50	72%	$36
3285	Rents/Leases - Equipment	$500	$0	81%	$0
3295	Rents/Leases - Buildings	$6,000	$4,057	27%	$1,096
3296	Cost Allocation Plan	$111,300	$71,025	72%	$51,138
3301	Small Tools	$1,000	$1,595	81%	$1,292
3312	Special Dept (Bond paymt)	$354,700	$385,600	25%	$96,400
3312	Special Departmental	$221,400	$150,817	54%	$81,441
3335	Travel and Training	$76,500	$78,822	78%	$61,481
3336	Motor Pool	$39,200	$0	72%	$0
3360	Utilities/Propane Charges	$2,000	$1,436	81%	$1,163
5201	Land & Improvements	$337,700	$1,407,756	5%	$70,388
5301	Equipment - Vehicles	$0	$0	0%	$0
5302	Equipment - Construction	$0	$0	0%	$0
5303	Equipment Replacement	$10,000	$0	81%	$0
6010	Closure Fund Deposits	$80,685	$50,000	72%	$36,000
	Total Expenses	**$3,563,085**	**$4,098,664**	**33%**	**$1,362,544**
	Less Parcel Fees in Jurisdiction				$490,826
	Remainder of Cost of Service to Town				**$871,718**
	Wastes Managed in 2008 (tons)				26,976
	Remaining Cost Allocation to Town Per Ton Received at BX-LF				$32.31
	Wastes Disposed in 2008 (tons)				20,993
	Remaining Coat Allocation to Town Per Ton Disposed at BX-LF				$41.52

TABLE 4 - ESTIMATION OF COSTS ALLOCATED TO THE TOWN FOR 2008 (Based on HDR Percentage Estimates by Line Item)

Item	Account Name	FY08 County SW Budget	FY08 Actual County Cost	% Town	Notes	FY08 Town Cost of Service
EXPENSES				(HDR)		
3312	Bottle Bill Grant Expenses	$0	$6,145			
3312	HHW Grant Expenses	$0	$0			
3312	Oil Grant Expenses	$0	$1,737			
2110	Salaries	$683,000	$490,773	65%	1	$316,836
2112	Overtime	$7,500	$7,793	81%	2	$6,320
2141	Holiday Pay	$23,000	$21,440	65%	1	$13,841
2210	Benefits	$499,900	$237,519	65%	1	$153,339
3012	MOU Uniforms	$11,000	$10,902	81%	2	$8,842
3027		$0	$129,894	50%	3	$64,947
3028	Communications	$1,600	$1,884	65%	1	$1,216
3035	Household Expense	$3,000	$1,744	81%	2	$1,415
3050	Insurance - Workers Comp	$4,700	$0	81%	2	$0
3051	Insurance - Liability	$29,100	$19,750	72%	3	$14,220
3120	Maintenance - Equipment	$205,000	$119,253	81%	2	$96,714
3140	Maintenance - Buildings	$71,000	$137,098	73%	3	$100,081
3170	Membership and Dues	$6,800	$6,351	72%	3	$4,573
3200	Office Expense	$17,800	$18,856	62%	3	$11,691
3245	Contract Services (MD)	$623,600	$643,331	3%	3	$19,300
3250	Other Professional Services	$134,500	$93,036	52%	3	$48,379
3280	Publications	$600	$50	72%	3	$36
3285	Rents/Leases - Equipment	$500	$0	81%	2	$0
3295	Rents/Leases - Buildings	$6,000	$4,057	27%	3	$1,096
3296	Cost Allocation Plan	$111,300	$71,025	72%	3	$51,138
3301	Small Tools	$1,000	$1,595	81%	2	$1,294
3312	Special Deptal (Bond payment)	$354,700	$385,600	25%	3	$96,400
3312	Special Departmental	$221,400	$150,817	54%	3	$81,441
3335	Travel and Training	$76,500	$78,822	78%	3	$61,481
3336	Motor Pool	$39,200	$0	72%	3	$0
3360	Utilities/Propane Charges	$2,000	$1,436	81%	2	$1,165
5201	Land & Improvements	$337,700	$1,407,756	5%	3	$70,388
5301	Equipment - Vehicles	$0	$0	0%	3	$0
5302	Equipment - Construction	$0	$0	0%	3	$0
5303	Equipment Replacement	$10,000	$0	81%	2	$0
6010	Closure Fund Deposits	$80,685	$50,000	72%	3	$36,000
	Total Expenses	**$3,563,085**	**$4,098,664**	**31%**	**< calc**	**$1,262,152**
	Less Parcel Fees in Jurisdiction					$490,826
	Remainder of Cost of Service to Town					**$771,326**
	Wastes Received in 2008					26,976
	Remaining Cost Allocation to Town Per Ton Received at BX-LF					$28.59
	WastesDisposed in 2008					20,993
	Remaining Cost Allocation to Town Per Ton Disposed at BX-LF					$36.74

NOTES

1 Allocation percentage to Town differs from County allocation in Table 2 with basis as follows

Salaries	$ 490,773		
Non-BX-LF Salaries	$ 132,831	(Matt, Megg)	
PW Admin	$ 128,200		
BX-LF Operations Salaries	$ 229,742		
Percentage Town Tonnage	81.1%		
BX-LF Salaries to Town	$186,321		
Non-Landfill Operations Salaries	$261,031		
Percentage Assumed for BX-LF	50%		
Allocation to Town	$130,516		
Total Salaries Allocation to Town	$316,836		
Share Salaries Allocation to Town	**64.6%**		

2 Allocation assumed based on FY08 Town share delivered to Landfill 81.1%

3 Allocation from deatailed spreadhseet County performed allocation provided to HDR.

TABLE 5 - ESTIMATED COSTS ALLOCATION TO THE TOWN FOR 2005-2008 AVERAGE (Based on HDR Staff Percentage Estimates by Line Item)

Item	Account Name	FY08-05 Actual System Cost	% Town	Notes	FY08 Town Cost of Service
EXPENSES			(HDR)		
3312	Bottle Bill Grant Expenses	$3,612			
3312	HHW Grant Expenses	$4,698			
3312	Oil Grant Expenses	$1,323			
2110	Salaries	$381,609	69%	1	$263,230
2112	Overtime	$7,393	83%	2	$6,121
2141	Holiday Pay	$10,525	69%	1	$7,260
2210	Benefits	$185,719	69%	1	$128,107
3012	MOU Uniforms	$9,597	83%	2	$7,946
3027		$91,575	50%	3	$45,788
3028	Communications	$1,597	69%	1	$1,102
3035	Household Expense	$2,341	83%	2	$1,938
3050	Insurance - Workers Comp	$2,350	83%	2	$1,946
3051	Insurance - Liability	$19,138	72%	3	$13,779
3120	Maintenance - Equipment	$90,541	80%	3	$72,433
3140	Maintenance - Buildings	$113,885	73%	3	$83,136
3170	Membership and Dues	$6,476	72%	3	$4,663
3200	Office Expense	$12,733	62%	3	$7,894
3245	Contract Services (MD)	$556,713	3%	3	$16,701
3250	Other Professional Services	$98,359	52%	3	$51,147
3280	Publications	$1,135	72%	3	$817
3285	Rents/Leases - Equipment	$1,184	83%	2	$980
3295	Rents/Leases - Buildings	$4,025	27%	3	$1,087
3296	Cost Allocation Plan	$17,756	72%	3	$12,784
3301	Small Tools	$3,801	83%	2	$3,147
3312	Special Deptal (Bond payment)	$400,000	25%	3	$100,000
3312	Special Departmental	$88,227	54%	3	$47,643
3335	Travel and Training	$83,115	78%	3	$64,830
3336	Motor Pool	$0	72%	3	$0
3360	Utilities/Propane Charges	$1,288	83%	3	$1,066
5201	Land & Improvements	$525,899	5%	3	$26,295
5301	Equipment - Vehicles	$24,695	0%	3	$0
5302	Equipment - Construction	$12,205	0%	3	$0
5303	Equipment Replacement	$2,202	83%	2	$1,823
6010	Closure Fund Deposits	$12,500	72%	3	$9,000
	Total Expenses	**$2,778,216**	**35%**	**< calc**	**$982,664**
	Less Parcel Fees in Jurisdiction				$490,826
	Remainder of Cost of Service to Town				**$491,838**
	Wastes Received - Avg 05 to 08				26,976
	Remaining Cost Allocation to Town Per Ton Received at BX-LF				$18.23
	Wastes Disposed - Avg 05 to 08				20,993
	Remaining Cost Allocation to Town Per Ton Disposed at BX-LF				$23.43

	NOTES		
1	Allocation percentage to Town basis as follows:		
	Salaries	$ 381,609	
	Non-BX-LF Salaries	$ 132,800	
	PW Admin	$ 28,000	
	BX-LF Operations Salaries	$ 220,809	
	Percentage Town Tonnage	82.8%	
	BX-LF Salaries to Town	$182,830	
	Non-Landfill Operations Salaries	$160,800	
	Percentage Assumed for BX-LF	50%	
	Allocation to Town	$80,400	
	Total Salaries Allocation to Town	$263,230	
	Share Salaries Allocation to Town	**69.0%**	
2	Allocation assumed based on 4-yr average Town share delivered to		82.8%
3	Allocation from deatailed spreadhseet County performed allocation provided to HDR.		

Table 6. SUMMARY ANALYSIS OF ALLOCATION OF COSTS AND FEE STRUCTURE BETWEEN THE TOWN AND COUNTY (Includes Sensitivity Analysis)

	Row	BASE CASE ALLOCATION FY 08			SCENARIO 1 Increases- +100% Parcel Fee and +$15/T Town Gate Fee			SCENARIO 2 Increases- +150% Parcel Fee and +$25/T Town Gate Fee			SCENARIO 3 Increases- +$25/T Town Gate Fee			SCENARIO 4 Increases- +150% Parcel Fee and +$25/T Town Gate Fee		
FY 08 COST ALLOCATION		Total	Town	County	Total	Town	County	Total	Town	County	Total	Town	County	Total	Town	County
Expenses	1	$4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512	$4,098,664	$1,262,152	$2,836,512
Disposal Tonnage	2	29,515	20993	8,522	29,515	20,993	8,522	29,515	20,993	8,522	29,515	20,993	8,522	29,515	20,993	8,522
$/Ton Disposed	3	**$ 139**	**$ 60**	**$ 333**	**$139**	**$60**	**$333**	**$139**	**$60**	**$333**	**$139**	**$60**	**$333**	**$139**	**$60**	**$333**
	4															
Parcel Fees	5	$ 740,000	$ 490,826	$ 249,174	$ 740,000	$ 490,826	$ 249,174	$ 740,000	$ 490,826	$ 249,174	$ 740,000	$ 490,826	$ 249,174	$ 740,000	$ 490,826	$ 249,174
Other Non-Gate Revenues*	6	$ 493,590	0	$ 493,590	$ 493,590	$ -	$ 493,590	$ 493,590	$ -	$ 493,590	$ 493,590	$ -	$ 493,590	$ 493,590	$ -	$ 493,590
Total Current Non-Gate Fees	7	$ 1,233,590	$ 490,826	$ 742,764	$ 1,233,590	$ 490,826	$ 742,764	$ 1,233,590	$ 490,826	$ 742,764	$ 1,233,590	$ 490,826	$ 742,764	$ 1,233,590	$ 490,826	$ 742,764
	8															
Expenses after Non-Gate Fees	9	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748
$/Ton Disposed	10	97.07	36.74	245.69	97.07	36.74	245.69	97.07	36.74	245.69	97.07	36.74	245.69	97.07	36.74	245.69
Assume $44/T * disposal	11	$ 1,298,660	$ 923,692	$ 374,968	$ 1,298,660	$ 923,692	$ 374,968	$ 1,298,660	$ 923,692	$ 374,968	$ 1,298,660	$ 923,692	$ 374,968	$ 1,298,660	$ 923,692	$ 374,968
ADDITIONAL FEE SCENARIOS																
Increase to Parcel Fee	12					100%	100%			150%	150%			0%	0%			0%	0%
Additional Parcel Fee Revenues	13				$ 740,000	$ 490,826	$ 249,174	$ 1,110,000	$ 736,239	$ 373,761	$ -	$ -	$ -	$ -	$ -	$ -
Increase Gate Fee $/Ton	14					**$ 14.00**	**$ -**		**$ 25.00**	**$ -**		**$ 25.00**	**$ -**		**$ 20.00**	**$ 20.00**
Additional Gate Fee Charges	15				$ 293,902	$ 293,902	$ -	$ 524,825	$ 524,825	$ -	$ 524,825	$ 524,825	$ -	$ 590,300	$ 419,860	$ 170,440
TOTAL Additional Fees	16				$ 1,033,902	$ 784,728	$ 249,174	$ 1,634,825	$ 1,261,064	$ 373,761	$ 524,825	$ 524,825	$ -	$ 590,300	$ 419,860	$ 170,440
Total Additional Parcel Fees	17				**$ 740,000**			**$ 1,110,000**			**$ -**			**$ -**		
Additional Parcel Fee Direction	18					20%	80%		20%	80%		20%	80%		20%	80%
Additional Parcel Revenue Allocation	19					**$ 148,000**	**$ 592,000**		**$ 222,000**	**$ 888,000**		**$ -**	**$ -**		**$ -**	**$ -**
Total Additional Gate Fees	20				**$ 293,902**			**$ 524,825**			**$ 524,825**			**$ 590,300**		
Additional Gate Revenue Direction	21					0%	100%		0%	100%		0%	100%		0%	100%
Additional Gate Revenues	22					**$ -**	**$ 293,902**		**$ -**	**$ 293,902**		**$ -**	**$ 293,902**		**$ -**	**$ 293,902**
GATE FEE SCENARIOS																
Expenses After 08 Non-Gate Fees	23	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748	$ 2,865,074	$ 771,326	$ 2,093,748
Re-Allocation of Added Gate Fee	24				$ -	$ 293,902	$ (293,902)	$ -	$ 524,825	$ (524,825)	$ -	$ 524,825	$ (524,825)	$ -	$ 419,860	$ (419,860)
Re-Allocation of Added Parcel Fee	25				$ (740,000)	$ (148,000)	$ (592,000)	$ (1,110,000)	$ (222,000)	$ (888,000)	$ -	$ -	$ -	$ -	$ -	$ -
	26				$ 2,125,074	$ 917,228	$ 1,207,846	$ 1,755,074	$ 1,074,151	$ 680,923	$ 2,865,074	$ 1,296,151	$ 1,568,923	$ 2,865,074	$ 1,191,186	$ 1,673,888
	27				$ 72	$ 44	**$ 142**	$ 59	$ 51	**$ 80**	$ 97	$ 62	**$ 184**	$ 97	$ 57	**$ 196**
	28															
	29															
Portion Based on Service Cost Allocation	30	100%	31%	69%	100%	31%	69%	100%	31%	69%	100%	31%	69%	100%	31%	69%
Total Portiion of Program Payments	31	$ 2,532,250	$ 1,414,518	$ 1,117,732	$ 3,566,152	$ 2,199,246	$ 1,366,906	$ 4,167,075	$ 2,675,582	$ 1,491,493	$ 3,057,075	$ 1,939,343	$ 1,117,732	$ 3,122,550	$ 1,834,378	$ 1,288,172
	32	100%	56%	44%	100%	62%	38%	100%	64%	36%	100%	63%	37%	100%	59%	41%
Balance in Total Revenues	33	$ (1,566,414)	-38%		$ (532,512)	-13%		$ 68,411	2%		$ (1,041,589)	-25%		$ (976,114)	-24%	

ATTACHMENT 1

Item	Account Name	FY05-FY08 Avg Actual	FY08/09 Actual	FY09/10 Budget
REVENUES				
1210	Solid Waste Bond	$330,137	$514,566	$0
1211	Non-Participant Fees	$3,593	$1,380	$8,200
1212	SW Gate Fees	$1,250,179	$859,889	$1,250,000
1213	SW Franchise Fees	$69,456	$61,045	$70,000
1214		$1,035	$2,501	
1401	SW Enterprise Interest	$15,758	$13,737	$10,500
1580	Bottle Bill Grant	$5,000	$10,000	$10,000
1581	Used Oil Block Grant	$2,500	$0	$10,000
1582	HHW Grant	$5,587	$0	$0
1602	SW Parcel Fees	$376,588	$0	
1701	Misc Revenue	$20,855	$0	$40,000
1702		$18,660	$0	
1810	Transfer In - Parcel Fees	$177,022	$0	$780,000
	Beginning Cash Balance			$275,035
1810	Transfer In - Closure Accounts			$724,364
	Total Revenue	**$2,276,370**	**$1,463,119**	**$3,178,099**
EXPENSES				
3312	Bottle Bill Grant Expenses	$3,612	$6,145	$0
3312	HHW Grant Expenses	$4,698	$0	$0
3312	Oil Grant Expenses	$1,323	$1,737	$0
2110	Salaries	$381,609	$490,773	$626,200
2112	Overtime	$7,393	$7,793	$7,500
2141	Holiday Pay	$10,525	$21,440	$23,000
2210	Benefits	$185,719	$237,519	$457,700
3012	MOU Uniforms	$9,597	$10,902	$11,000
3027		$91,575	$129,894	$0
3028	Communications	$1,597	$1,884	$1,600
3035	Household Expense	$2,341	$1,744	$3,000
3050	Insurance - Workers Comp	$2,350	$0	$4,700
3051	Insurance - Liability	$19,138	$19,750	$29,100
3120	Maintenance - Equipment	$90,541	$119,253	$205,000
3140	Maintenance - Buildings	$113,885	$137,098	$71,000
3170	Membership and Dues	$6,476	$6,351	$6,800
3200	Office Expense	$12,733	$18,856	$17,800
3245	Contract Services (MD)	$556,713	$643,331	$623,600
3250	Other Professional Services	$98,359	$93,036	$184,500
3280	Publications	$1,135	$50	$1,300
3285	Rents/Leases - Equipment	$1,184	$0	$500
3295	Rents/Leases - Buildings	$4,025	$4,057	$6,000
3296	Cost Allocation Plan	$17,756	$71,025	$111,300
3301	Small Tools	$3,801	$1,595	$1,000
3312	Special Departmental	$488,227	$536,417	$576,100
3335	Travel and Training	$83,115	$78,822	$76,500
3336	Motor Pool	$0		$20,000
3360	Utilities/Propane Charges	$1,288	$1,436	$2,000
5201	Land & Improvements	$525,899	$1,407,756	$362,700
5301	Equipment - Vehicles	$24,695	$0	$0
5302	Equipment - Construction	$12,205	$0	$0
5303	Equipment Replacement	$2,202	$0	$10,000
6010	Closure Fund Deposits	$12,500	$50,000	
	Total Expenses	**$2,756,083**	**$4,098,664**	**$3,439,900**
	Net Revenues less Expenses	**-$479,713**	**-$2,635,545**	**-$261,801**

APPENDIX C

TECHNICAL MEMORANDUM

MEMO TO : Matt Carter

FROM : Mark Urquhart

RE : Mono County Solid Waste Program Evaluation
Phase 1 Task 2A.2 – Comparison to Other Systems
Technical Memorandum

DATE : July 28, 2010

BACKGROUND

This Technical Memorandum (TM) was prepared by the HDR Team under an agreement between HDR Engineering, Inc. (HDR) and the County of Mono dated May 7, 2010 for solid waste consulting services (Agreement). The TM was prepared collaboratively by the HDR and Jim Greco of California waste Associates (CWA) acting as a subconsultant to HDR (Hereinafter "HDR team"). The overall Agreement includes work to provide solid waste system analysis scheduled in two phases. This TM was prepared to complete the scope of services for Task 2.A.2, a comparison of solid waste system fees to other similar rural counties in California.

Under Tasks 2.A.2, the HDR team would perform a comparison of the County's current solid waste fees to other jurisdictions in the state, particularly rural jurisdictions. The comparison is to be based on other studies performed by the HDR Team, information obtained from the County, other publicly available published studies, and a selective review of rates available at County websites or through calls to selected counties deemed most comparable where information is available. Based on discussions with County staff up to six jurisdictions would be contacted for the comparison after screening of counties based on comparison of demographic data. The rates were compared to Mono County rates in tabular form and analyzed based on available system information or demographic factors.

This deliverable is a compilation of the analysis in the form of a TM, provided in electronic format in Phase 1, and will also be included as an Appendix in the solid waste system evaluation report to be provided in future tasks.

RURAL COUNTIES

The CIWMB identified 28 counties in California, which qualify as rural for the 2008 report year, as defined in the California Public Resources Code. These counties are listed in Table 1. Table 1 also characterizes which counties are members of the Environmental Services Joint Powers Authority (ESJPA), utilize a JPA or regional agency to facilitate coordination on solid waste issues, and lists the size of each county by square miles, and derived population density.

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Table 1. Listing of Rural Counties in California (2008)

#	County	JPA/RA *	ESJPA **	Area (sq mi)	Population	Persons/sq mi
1	Alpine	No	Yes	727	1,189	1.64
2	Amador	Yes	Yes	601	38,022	63.26
3	Calaveras	Yes	Yes	1,036	45,870	44.28
4	Colusa	Yes	Yes	1,156	22,206	19.21
5	Del Norte	Yes	Yes	1,003	29,673	29.58
6	Glenn	Yes	Yes	1,319	29,434	22.32
7	Humboldt	Yes	No	3,600	133,400	37.06
8	Inyo	Yes	Yes	10,097	18,110	1.79
9	Kings	Yes	No	1,436	156,289	108.84
10	Lake	No	No	1,327	64,053	48.27
11	Lassen	Yes	Yes	4,690	35,889	7.65
12	Madera	No	Yes	2,147	153,655	71.57
13	Mariposa	No	Yes	1,461	18,192	12.45
14	Mendocino	No	No	3,510	90,289	25.72
15	Modoc	No	Yes	4,340	9,777	2.25
16	**Mono**	**No**	**Yes**	**3,130**	**13,617**	**4.35**
17	Napa	No	No	797	138,917	174.30
18	Nevada	No	Yes	992	98,680	99.48
19	Plumas	No	Yes	2,618	20,428	7.80
20	San Benito	Yes	No	1,397	58,388	41.80
21	Shasta	Yes	No	3,850	184,247	47.86
22	Sierra	Yes	Yes	959	3,303	3.44
23	Siskiyou	Yes	Yes	6,318	46,010	7.28
24	Sutter	Yes	No	607	99,154	163.35
25	Tehama	Yes	Yes	2,976	63,100	21.20
26	Trinity	No	Yes	3,223	13,898	4.31
27	Tuolumne	No	Yes	2,293	56,086	24.46
28	Yuba	Yes	No	639	73,380	114.84

* *County work with its cities addressing issues as a Joint Powers Authority or Regional Agency*

** *County a member of the ESJPA*

Sources (e.g., the Board's Countywide, Regionwide, and Statewide Jurisdiction Diversion Progress Report http://www.ciwmb.ca.gov/LGTools/MARS/jurdrsta.asp).

The list of 28 rural counties was reviewed and narrowed to rural counties with less than 10 people per square mile. Table 2 identifies this "Short List" subset of comparable jurisdictions. The counties of Inyo and Trinity appear to be the most comparable of the nine counties, based on population and density of population alone.

Table 2. Short List of Comparable Counties

#	County	JPA/RA *	ESJPA **	Area (sq mi)	Population	Persons/sq mi
1	Alpine	No	Yes	727	1,189	1.64
2	Inyo	Yes	Yes	10,097	18,110	1.79
3	Lassen	Yes	Yes	4,690	35,889	7.65
4	Modoc	No	Yes	4,340	9,777	2.25
5	**Mono**	**No**	**Yes**	**3,130**	**13,617**	**4.35**
6	Plumas	No	Yes	2,618	20,428	7.80
7	Sierra	Yes	Yes	959	3,303	3.44
8	Siskiyou	Yes	Yes	6,318	46,010	7.28
9	Trinity	No	Yes	3,223	13,898	4.31

The counties in Table 2 were contacted by e-mail then follow-up phone calls. Attachment 1 contains information thumbnails regarding these County systems. Responsible officials and their contact information are included in Table 3. From these inquiries Information was obtained from Inyo, Lassen, Siskiyou, and Trinity.

Table 3. Contact information for Short List of Comparable Counties

#	County	Contact	E-Mail Address	Phone
1	Alpine	Brian Peters	Brian@pd.alpinecountyca.gov	530-694-2140
2	Inyo	Chuck Hamilton	chamilton@inyocounty.us	760-873-5577
3	Lassen	Paula Wesch	pwesch@citlink.net	530-252-1273
4	Modoc	Rick Hironymous	rhironymous@modoccounty.us	530-233-6403
5	Mono	Matt Carter	mcarter@mono.ca.gov	760-932-5453
6	Plumas	Robert Perreault	bobperreault@countyofplumas.com	530-283-6494
7	Sierra	Tim Beals	tbeals@sierracounty.ws	530-289-3201
8	Siskiyou	Shannon Cash	scash@co.siskiyou.ca.us	530-842-8250
9	Trinity	Vivian Woolsey	vwoolsey@trinitycounty.org	530-623-1326

Table 4 lists municipalities in the short list of Counties. Two do not have municipalities within their boundaries, most have one, and Siskiyou has nine.

Table 4. Municipalities in Selected Counties

#	County	# of Cities	Municipality Names
1	Alpine	0	
2	Inyo	1	Bishop
3	Lassen	1	Susanville
4	Modoc	1	Alturas
5	Mono	1	Mammoth Lakes
6	Plumas	1	Portola
7	Sierra	1	Loyalton
8	Siskiyou	9	Dorris, Dunsmuir, Etna, Fort Jones, Montague, Mount Shasta, Tulelake, Weed, Yreka
9	Trinity	0	

Table 5 lists budget information, gate fees, and the number of landfills and transfer stations for the short list of comparative counties. The derived "cost per ton" is based on the annual budget shown divided by the annual tonnage. This "cost" is based on budget information provided and the provision of services covered under the County budgets varies between jurisdictions based on their systems. The gate fees shown were those made available to CWA during queries. and are mainly for the bulk of municipal solid waste disposal/processing at disposal sites. Differences between the county solid waste budget cost per ton and the gate fees vary, which appears to indicate that funding mechanisms including gate fees within County systems varies compared to overall budget unit cost per ton managed (See Table 6 regarding parcel fee funding).

Table 5. Infrastructure and Financial Data

County	**Annual Budget**	**Annual** (tons/yr)	**Cost/Ton** ($/ton)	**Gate Fee** [(1)]	**2008 Disposal** (tons/yr)	**TSs/LFs** (#)
Alpine	Significant private sector role			$21.00/ton [(2)]	2,635	1/0
Inyo	$2,097,000	43,300	$48.43	$12.00/cu yd [(3)]	16,793	4/9
Lassen	$1,500,000	22,000	$68.18	$59.40/ton [(4)]	22,597	9/2
Modoc	$1,053,000	6,400	$164.53		7,084	11/1
Mono	$2,613,000	37,300	$70.62	$50.00/ton	29,515	6/3
Plumas	$252,200	19,000	$13.27		20,542	6/1
Sierra	$700,000	3,500	$200.00		3,265	4/1
Siskiyou				$6.75/cu yd. [(5)]	34,300	4/0
Trinity	$2,476,825			$135.00/ton [(6)]	8,017	9/0

(1) For mixed municipal solid waste, loose, and/or compacted trash.

(2) Delivery of out-of-county wastes is charged $50.00/ton.

(3) Gate rate for wastes disposed out-of-county at the Pahrump Valley Disposal in Nevada is $6.50/cu yd.

(4) For Bass Hill Landfill; gate rate at Westwood Landfill is $7.50/cu yd.

(5) For loose waste; if waste is compacted gate fee is $23.00/cu yd.

(6) $13.50/cu yd charged when scales are not operational.

Table 6 shows parcel fees and minimum gate rates information compiled where available from CWA survey of target counties. Of the eight responding counties, four had no minimum gate fee established and the others had minimum fees ranging from $1.00 to $7.50 per load. This indicates that the Mono County minimum transfer station gate fee of $1.75 was similar to the $1.50 minimum fee at Lassen County transfer stations and is the comparatively low considering other minimum fees shown of $5.00 and $7.50 and about half with no minimum fee.

Of the seven responding[1], four counties did not assess a parcel fee toward solid waste services. The other three assessed parcel fees of $45, $63, and $100 per parcel, dwelling or improved lot. These amounts represent approximately 56%, 100%, and 35% of the solid waste operating budgets for those Counties. As noted in Table 6, based on the 4-year average figures, Mono County parcel fee revenues to the solid waste budget represented about ¼ of the budget. This is lower than the three counties surveyed that used parcel fees to fund solid waste programs; however, half of the counties surveyed did not use a parcel fee to fund solid waste programs.

[1] Information from Sierra County regarding parcel fee was not available during time of compilation by CWA.

Table 6. Parcel Fees and Minimum Gate Rates

County	Parcel Fee	% of Ops Budget	Min Gate Fee
Alpine	No	0%	None
Inyo	No (1)	0%	$2.00
Lassen	No	0%	$1 at landfill; $1.50 at transfer stations.
Modoc	Yes ($45/improved lot)	56%	No Minimum (3)
Mono	Yes	24%(4)	$1.75/load
Plumas	No (5)	0%	$7.50
Sierra	Yes/No (6)	?	No minimum for residential
Siskiyou	Yes ($63/yr/dwelling) (7)	100%	$5 (8)
Trinity	Yes ($100/yr/parcel)	35%	None

(1) *Program is funded primarily by gate fees and a transactional use tax (TUT), which is essentially a sales tax. For FY 06/07, the TUT raised $1,279,916 (71% of revenue budget); gate fees brought in $394,931 (22%); and franchise fees contributed $65,256 (4%).*

(2) *$13/unimproved lot*

(3) *No minimum; $20/cu yd; $6/32 gal can or 2 bags*

(4) *Based on FY05/06 through FY08/09 four-year average.*

(5) *Discontinued parcel fees years ago when transfer stations became operational.*

(6) *Tim Beals not available, left message; on two different days staff reported yes and no regarding existence of parcel fee. Thus uncertain.*

(7) *Solid Waste Assessment.*

(8) *Waived for seniors 55 and older on Wednesdays and Thursdays.*

The Table 7 disposal rate per person indicates that Mono County disposes of more than most of the other shortlist Counties based on CalRecycle data. However, it is unclear what the implications of that are given that Mono County is a high recreation area that experiences seasonal peaks in disposal related to recreational users that do not live in the County. Given the population swell it is expected that Mono County would have a high per capita disposal based on County residents.

As expected the per capita costs would also be relatively higher given servicing the recreational visitor's disposal needs.

Table 7. Per Capita Disposal and Per Capita Cost

County	**Budget Annual** (2008/2009)	**2008 Disposal *** (tons)	**Population** (as of 12/31/09)	**Per Capita Disposal** (lbs/person/day)	**Per Capita Cost** ($/person)
Alpine		2,635	1,189	12.14	
Inyo	$2,082,438	16,793	18,110	5.08	$114.99
Lassen	$1,500,000	22,597	35,889	3.45	$41.80
Modoc	$1,053,000	7,084	9,777	3.97	$107.70
Mono	$2,613,000	29,515	**13,617**	11.88	$191.89
Plumas	$252,200	20,542	20,428	5.51	$12.35
Sierra	$700,000	3,265	3,303	5.42	$211.93
Siskiyou		34,300	46,010	4.08	
Trinity		8,017	13,898	3.16	$178.21

***** *Source (CalRecycle DRS database: http://www.calrecycleca.gov/LGCentral/Reports/DRS/Origin/WFOriginAnnual.aspx).*

*Sources (e.g., the Board's Countywide, Regionwide, and Statewide Jurisdiction Diversion Progress Report **http://www.ciwmb.ca.gov/LGTools/MARS/jurdrsta.asp**).*

Table 8 contains data that compares county solid waste budgets presented in Table 7 in a normalized basis for comparison in Charts. The budget for the five other counties that provided information is compared in terms of cost per area, number of facilities and population density.

Table 8. Budget Compared to Area, Facilities, and Population Density

County	**Annual Budget**	**$/Area**		**$/Facilities**		**$/population density**	
		Sq Mi/1000	**$100/sq mi**	**Facilities**	**$100,000 /facility**	**Population/sq mi**	**$100,000/ person/sq mi**
1	2	3	4	5	6	7	8
Alpine		0.7		1		1.6	
Inyo	$2,082,438	10.1	$2.06	13	$1.60	1.8	$11.61
Lassen	$1,500,000	4.7	$3.20	11	$1.36	7.7	$1.96
Modoc	$1,053,000	4.3	$2.43	12	$0.88	2.3	$4.67
Mono	$2,613,000	3.1	$8.35	9	$2.90	4.4	$6.01
Plumas	$252,200	2.6	$0.96	7	$0.36	7.8	$0.32
Sierra	$700,000	1.0	$7.30	5	$1.40	3.4	$2.03
Siskiyou		6.3		4		7.3	
Trinity		3.2		9		4.3	

It should be noted that comparing budgets over varying county systems, depending on how fees are levied and extent of services included in the system; is not an exact procedure and should be viewed as a trend exercise only. As noted in Table 6, four of seven of the counties surveyed did not use a parcel fee funding mechanism while three used parcel fees to fund a higher portion of the solid waste programs compared to the approximately ¼ of the system funded by Mono County parcel fees. There also is the complication that budgets may have different proportions

of funding budgets allocated to various activities. Also, some counties may fund varying degrees of diversion programs. The fact that Mono County has a relatively high diversion rate (72% as listed in most recent data available at CalRecycle website, 2006) compared to the other Counties could not be accounted in the data provided.. For example, the $252,000 budget reported for Plumas County may not be comparable to other budgets and should be ignored in budget comparisons below because it is highly unlikely that it could fund the operating costs for the 7 facilities listed in that county (private services or other funding sources not available in information provided may fund parts of the system).

Chart 1 shows the budget comparison figures in columns 3 and 4 of Table 8. It would be expected that as County service area increases (back columns showing square miles/1000) that the budget per square mile would also increase. However the trend is that the budget per area for Mono County is higher than others that have larger area and on a par with Sierra County, which is much smaller. This indicates that Mono County's system is comparatively more costly relative to service area. This observation is made without knowledge of how the actual services provided may vary between Mono and these other counties (i.e. shorter distance between transfer stations).

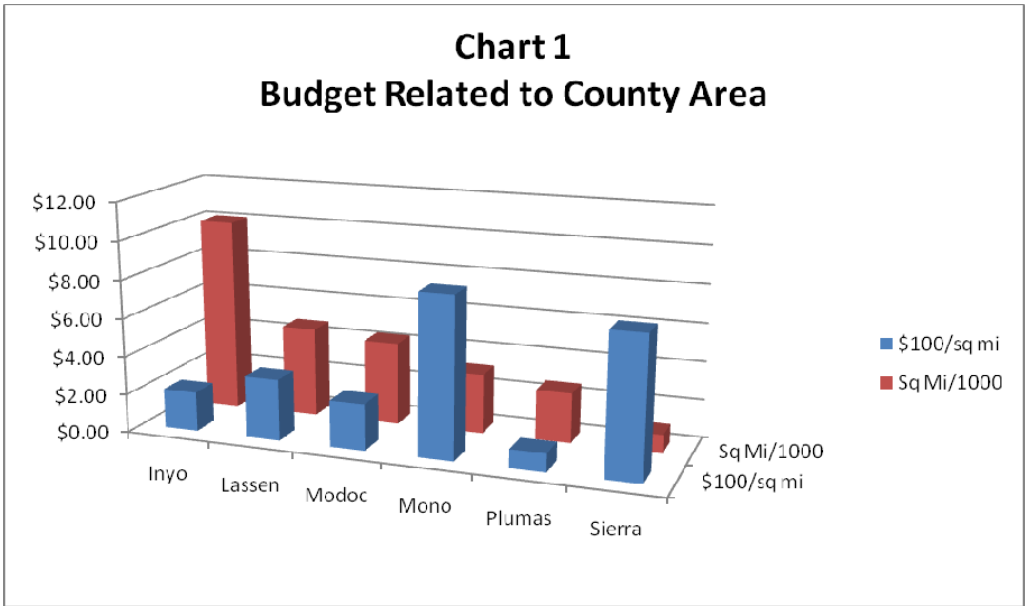


Chart 2 shows the budget comparison figures in columns 5 and 6 of Table 8. It indicates that budget per facility in the Mono County system is higher than the other Counties surveyed.

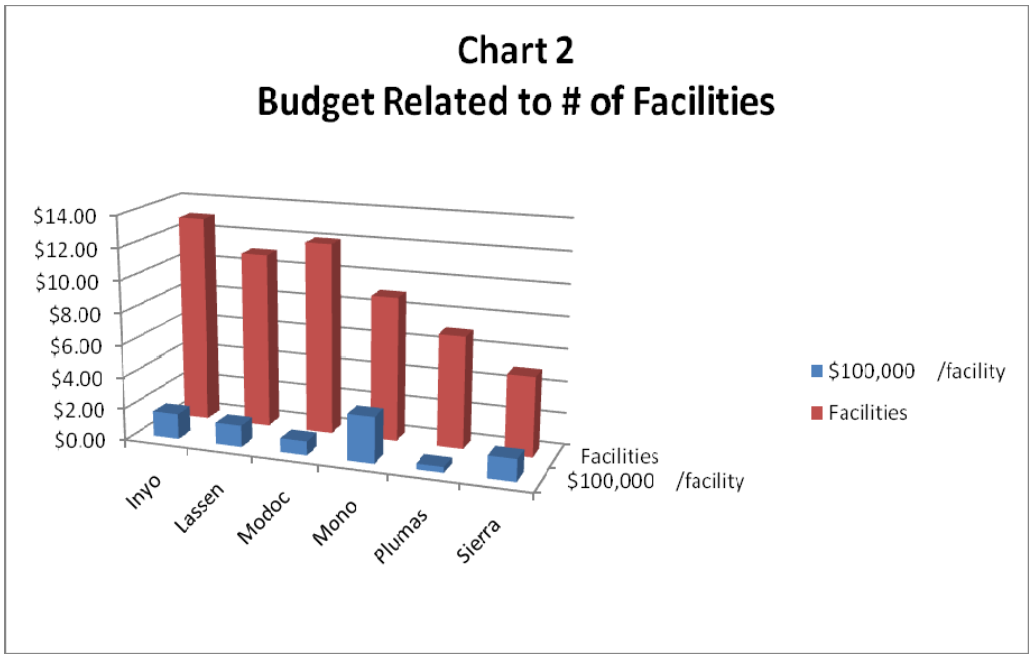
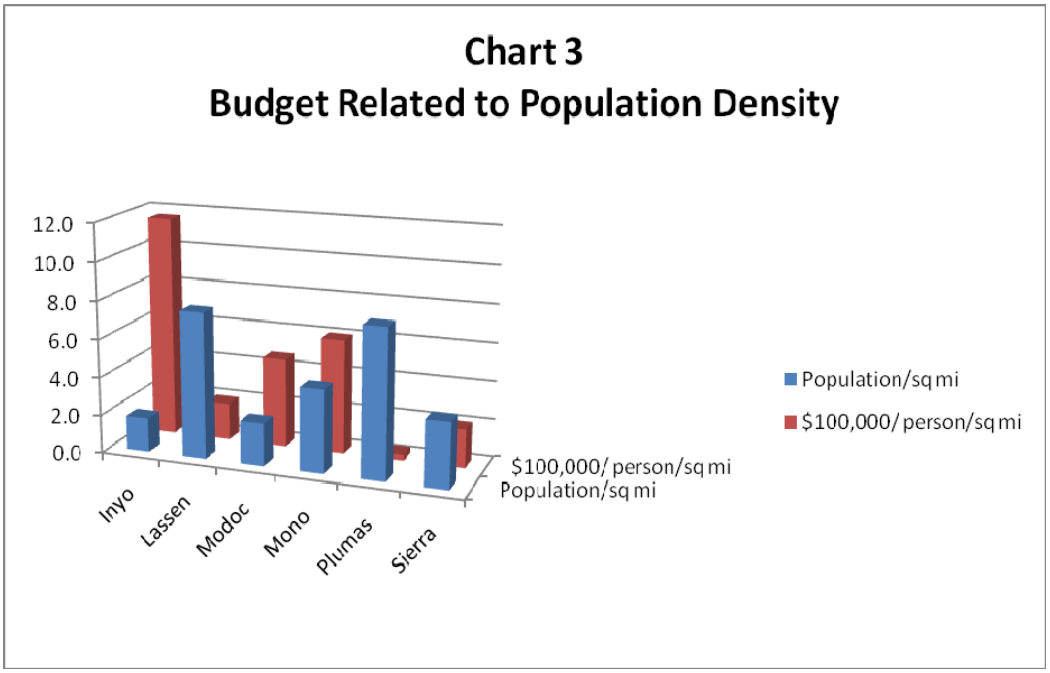


Chart 3 shows the budget comparison figures in columns 7 and 8 of Table 8. It is unclear but plausible that generally as County population density increases (front column shows population per square mile) that the budget per population density would be reduced. That trend appears to potentially be the case as Inyo County has a much less dense population than Mono County and budgets about double per population density compared to Mono County. However, other counties do not appear to correlate with this trend.



SUMMARY

It appears that the Mono County solid waste budget is somewhat higher on a facility basis than other rural Counties surveyed and compared to what might be expected for County service area and number of facilities. However, limiting the comparison to the solid waste budget totals per facility without considering the variance in levels of service, population fluctuation, diversion, and logistic of the service area may not be an appropriate comparison of efficiency.

For example, Mono County exhibits very high diversion compared to other rural County budget totals surveys for comparison (72% listed in most recent 2006 CalRecycle data available). The cost per ton for Mono County could be expected to be higher to provide the elevated level of diversion. If fact, it typically costs more to divert waste than dispose of it in a landfill and Mono County's higher diversion rate would expect to increase the unit cost compared for example to similarly sized Inyo County, which typically has a lower diversion rate. However, the data available from other counties does not allow this level of refinement in the comparison of solid waste budgets.

Mono County likely has higher fluctuation in the population in terms of the number and/or proportion of lodging by recreational visitors of the County's compared. This type of user drives up the amount of solid waste managed and the unit cost for processing this waste spread over the number of permanent residents as well as the disposal per capita reported on the state level. This type of user is also sporadic in use with 'high and low' seasons of use, which is challenging and therefore more costly to manage given the minimum and steady state of staffing a solid waste collection and management systems. Further, this type of user typically generates more waste per person in terms of use of take-out food, quantity of containers, etc.

The factors of Mono County's high diversion rate and high level of recreational visitor lodging drive up unit disposal cost figures per capita and potentially cost figures in general. Therefore, assessment of the competitiveness and efficiency of the Mono County solid waste system should not be based on the comparisons in the level of survey as was the scope of this TM but rather a more detailed assessment of cost effective system options as will be investigated in Phase 2 of the project.

ATTACHMENT 1
CONTACTED COUNTY OVERVIEW

ALPINE COUNTY

There is no permitted, active landfill in the County. CalRecycle reported the solid waste originating in the County was disposed in the Forward, Kiefer, and Rock Creek landfills in 2008. Douglas Disposal out of Gardnerville in the State of Nevada is the franchised hauler for the County. The Carson City Landfill may also receive waste generated in the County.

Douglas Disposal; www.douglasdisposal.com; (775) 782-5713
Carson City Landfill; www.carson-city.nv.us/Index.aspx?page=1977; (775) 887-2355

INYO COUNTY

The Inyo County integrated waste management system includes exclusive designated haulers serving defined zones. Three primary in-county, Class III permitted landfills used for much of the disposed waste stream are Bishop-Sunland, Independence, and Lone Pine disposal sites. Two additional small volume disposal sites are Shoshone and Tecopa landfills in the southeastern corner of the county. A handfill of rural small volume transfer facilities are established, most not staffed. Just across the state line in eastern Inyo County, the Pahrump Valley Disposal charges a gate fee of $6.50/cu yd. The integrated waste management system program budget provided in June of 2010 totaled $2,082,438 for FY08/09.

LASSEN COUNTY

The facility infrastructure in the county includes two landfills:

- Bass Hill Landfill; and
- Westwood Landfill.

Some waste originating in-county was disposed in 2008 at:

- Bakersfield Metropolitan (Bena);
- Hay Road Landfill;
- North County Landfill; and
- Recology Ostrom Road Landfill.

MODOC COUNTY

There is no permitted landfill in the county. In 2008 waste originating in Modoc County was reported to use the Hay Road Landfill.

PLUMAS LANDFILL

The only permitted landfill in the county, as reported in 2009, was the Chester Landfill, which received minimal waste. CalRecycle reported that a number of landfills received waste from Plumas County in 2008. In 2009 county waste was reportedly being disposed in the Lockwood Landfill.

SIERRA COUNTY

The Loyalton Landfill is the only permitted disposal facility in the county. According to CalRecycle, the Loyalton Landfill was used by Portola and Sierra County.

SISKIYOU COUNTY

No permitted landfills are operating in the county. Solid waste disposal occurred in out-of-county landfills, namely: Altamont, Anderson, Forward, and Hay Road. The primary landfill used is Anderson.

TRINITY COUNTY

The Trinity County solid waste system is comprised of 9 transfer stations with outlying waste being transported to a main station in Weaverville. The waste is then hauled out-of-county to the Anderson Landfill. The Weaverville Landfill is still a permitted solid waste disposal facility but it is not operational. The facility is scheduled for closure with expectations that the final closure plan will be approved this year.

APPENDIX D

TABLE D1 - DETAILED CALCULATION ECONOMIC COMPARISON

		Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.		County only at D&S LHTS	Town only MD LHTS
	Alternative	BASE	1	2	3	4	5	6A	6B		5A	4A
	PROGRAM, TRANSFER & DISPOSAL	29,515	29,515	29,515	29,515	29,515	29,515	29,515	29,515		8,855	20,661
1	Transfer Station											
2	Land Cost	$2,700	$2,700	$2,700	$2,700	$125,519	$0	$2,700	$2,700		$0	$125,519
3	*TS O&M*	$514,700	$353,974	$957,425	$514,700	$957,425	$957,425	$799,700	$799,700		$744,032	$309,908
4	*TS/MRF Transport*	$128,700	$128,700	$1,203,046	$128,700	$1,233,348	$986,603	$1,123,645	$1,004,543		$308,860	773,254
5	TS - Facility Capital	$147,100	$147,100	$205,676	$147,100	$214,043	$247,515	$205,676	$205,676		$230,779	$66,943
6	TS - Permitting or other costs	$50,000	$50,000	$50,000	$50,000	$50,000	$25,000	$50,000	$50,000		$25,000	$ 25,000
7	TS - LF Disposal Tip Fee (not in County landfill, below)	$0	$0	$442,725	$0	$442,725	$442,725	$413,505	$369,675		$92,972	309,908
8												
9	Landfill											
10	Land Cost (amortized in COP for new LF)	$1,400	$1,400	$0	$20,900	$0	$0	$0	$0		$0	$0
11	Facility Capital (LF amortized in COP for first module)	$238,500	$238,500	$0	$661,571	$0	$0	$0	$0		$0	$0
12	Permitting or other "Soft" costs (new LF in COP above)	$93,000	$93,000	$0	$144,881	$0	$0	$0	$0		$0	$0
13	Closure/financial assurance funding (See early closure 16b)	$69,500	$69,500	$69,500	$187,560	$69,500	$69,500	$64,913	$58,033		$12,734	$0
14	Operations and Maintenance	$871,200	$740,520	$0	$1,045,440	$0	$0	$0	$0		$10,000	$10,000
15	Other (Land and other improvements budget item)	$337,700	$287,045	$0	$337,700	$0	$0	$0	$0		$0	$0
16	Other (Most BCLF ops related)	$464,500	$464,500	$0	$464,500	$0	$0	$0	$0		$0	$0
16a	Accelerated LF closure(s) (assume over 3 yrs)		$575,442								$50,082	$116,858
	General and Administration											
17	Solid Waste Division	$151,700	$151,700	$151,700	$151,700	$151,700	$151,700	$151,700	$151,700		$151,700	$ -
18	Public Works	$128,200	$128,200	$128,200	$128,200	$128,200	$128,200	$128,200	$128,200		$128,200	$ -
	Added Diversion and Alt Tech											
19	Capital	$0	$0	$0	$0	$0	$0	$180,000	$1,240,000		$0	$ -
20	O&M	$0	$0	$0	$0	$0	$0	$250,000	$810,000		$0	$ -
21	Permitting or other "Soft" costs	$0	$0	$0	$0	$0	$0	$50,000	$62,000		$0	$ -
22	Revenues	$0	$0	$0	$0	$0	$0	$0	-$100,000		$0	$ -
	Other											
23	Annual Cost for Env. Mitigation	$0	$0	$0	??	$0	$0	$0	$0		$0	$ -
24	Other	$0	$0	$0	$0	$0	$0	$0	$0		$0	$ -
25	TOTAL SYSTEM LINE ITEMS	$3,200,000	$3,400,000	$3,200,000	$4,000,000	$3,400,000	$3,000,000	$3,400,000	$4,800,000		$1,800,000	$1,700,000
26	Annual Tonnage	29,515	29,515	29,515	29,515	29,515	29,515	29,515	29,515		8,855	20,661
27	Transfer & Disposal ($/Ton over Waste Stream)	$ 108	$ 115	$ 108	$ 136	$ 115	$ 102	$ 115	$ 163		$ 203	$ 82
	INCREMENTAL HAULING											
28	*Commercial Hauling Co.*	$0	$0	$0	$0	-$120,000	$200,000	$0	$0			
29												
30	*Self Haul Customers*	0	$200,000	$0	$0	$0	$0	$0	$0			
31	TOTAL COMPARATIVE ANNUAL COST	$3,200,000	$3,600,000	$3,200,000	$4,000,000	$3,300,000	$3,200,000	$3,400,000	$4,800,000			

TABLE 3-3: ALTERNATIVE FACILITY CHART LIST

	FACILITY LIST	Base Case	Reduced TS System	County LHTS	New Landfill	Mammoth Disposal LHTS	D&S Disposal LHTS	Add Composting	MRF/Alt. Tech.		County only at D&S LHTS	Town only MD LHTS
	Alternative	BASE	1	2	3	4	5	6A	6B		5A	4A
	Transfer Stations											
1	Walker (closed LF/permitted inert disposal)	X	O	X	X	X	X	X	X		X	
2	Bridgeport (closed LF)	X	X	X	X	X	X	X	X		X	
3	Pumice (closed LF/permitted inert disposal)	X	O	X	X	X	X	X	X		X	
4	Chalfant (closed LF)	X	O	X	X	X	X	X	X		X	
5	Benton (closed LF)	X	X	X	X	X	X	X	X		X	
6	Paradise	X	O	X	X	X	X	X	X		X	
7	Mammoth Disposal (Town of ML)	x	x	x	x	X	x	x	x			X
8	D&S (Hwy 167)						P				P	
	Landfill											
A	Benton Crossing	X	X									
B	Lockwood			X		X	P	X	X		X	Assumed
C	Hawthorne											
D	Other OOC											
E	Bishop Sunland (120 TPD permit)											
F	New Regional Landfill near Mammoth				X							
	Other											
I	Composting							X	X			
II	Conversion or Technology								X			

NOTES AND ASSUMPTIONS BY LINE ITEM

Gen The 29,515 tons shown is based on total disposal tonnage (both County and Mammoth) for FY08/09 used to relate to FY08/09 Base Case budget

A Assumed % of waste attributed to Town of total 70% (mass balance sheet generated 20,578 Town Vs 8,762 County)

B Assumed % of waste attributed to Unic. County of total 30% (mass balance sheet generated 20,578 Town Vs 8,762 County)

Base Case

2 Land cost shown is 2/3 of 2/3 of lease budget item 3295 (2-TS sites with 2/3 of Item 3295 comprising facility lease costs for 3 sites)

3 Facility O&M is 80% of budget item 3245 covering current operational contract

4 Transfer operation is assumed remainder of #3 from budget item 3245 covering current operational contract

5 Portion of COP payment for TS construction improvements

7 Cost within County System is included in landfill cost elements below to service County TS system (Note: $50/ton tip "fee" is not based on direct cost elements)

10 Land cost shown is 1/3 of 2/3 of lease budget item 3295 (BCLF site; with 2/3 of Item 3295 comprising facility lease costs for 3 sites)

11 Remainder of COP from #5, above.

12 Includes 80% of budget item 3250, other professional services

13 Assumes FA 2009 closure funding level (FA sheets provided by MC- See Tab 5 2A1 08 costs applied)

14 Most salary and material costs are related to BCLF operations

15 Assumed for other minor operational budget items PLUS land and improvement line item (minus 1-time closure costs in FY 08/09 expenses).

16 Liability Insurance [3051], mem. dues [3170], oil grant [3312], BB grant [3312], [3312-fees], [3335], cost alloc [3296],[3027?]

Alternative 1 - Short Term Revisions

Gen Unless noted as system change, Base Case figures are used.

3 Assumes Walker, Pumice, Paradise and Chalfant TS are closed in cost cutting measure.

Percent saving in TS operations staffing 69% Based on hours of operation (See detail sheet)

4 Percent saving in Transport (note none assumed) 100% Hours transport assumed similar as users will still deliver to some station

5 Assumes payment of COP required even if some TS closed; uses base case COP cost

7 Assumes same amount of tons managed and disposed as in base case

12 Assumes same as base case for BCLF capital costs

13 Same as Base - See #16 for accelerated closure 2 LF sites

14 Assumes reduction in LF O&M costs by efficiency measures 15% Reduction assumed

15 Assumes reduction in costs by system efficiency measures 15% Reduction assumed

16 Base Case plus following LF closure cost

	CCE '09	Fund Bal	Liability $
Walker	$ 735,854	$ 131,209	$ 604,645
Pumice	$ 1,438,778	$ 317,096	$ 1,121,682
Totals	$ 2,174,632	$ 448,305	$ 1,726,327

Assume over 3 years shown for comparison $ 575,442

Alternative 2 - BCLF Longhaul TS

2 Assumes same lease amount as base case; assumes LHTS located at BCLF (unclear but assumed allowed in LADPW lease extension).

3 Assumes Base case costs for County TS system retained plus cost to operate station for both County and Town waste for longhaul

a Assume Base Case annual cost for TS O&M $514,700 Base Case contract operations

b Assume cost for TS operations for entire Co waste $ 15.00 Cost per ton basis for pad operations (See Table A1.2)

Annualized basis based on disposal tonnage $ 442,725 Does not include diversion over minimal floor recovery and source separated drop

4 Assumes Base Case costs for County small TS contract transport retained plus cost to longhaul transport to Lockwood Landfill for both County and Town waste.

a Retain Base Case cost for County transport TS *$128,700* Similar transport costs to current system

b Include longhaul of County and Town waste Longhaul System waste f/County (at BCLF new LHTS) to Lockwood; per below calculation

Transfer Truck haul time 253 Google earth auto on-way time 110% for TT haul vs car

9.10 hours per one truck per round trip per day (include 20 min each end for load)

$ 80.00 Assumed fully loaded hourly truck cost

$ 728 Cost per load

Payload 20 Tons

$ 36.40 Cost per ton

Cost per year transport MDTS to Lockwood $ 1,074,346

Total for transport $ 1,203,046 County TS to BCLHTS; total stream from BCLHTS to Lockwood (does not include tip fee)

5 Assumes conceptual annualized cost for BCLHTS facility capital improvements belowplus COP pmts continue for small TS system (TS Base Case)

Assumed site and building improvements $ 700,000 See Table A1.3

Assume Financing period 20 years

Assumed approximate interest rate to include financing 5.5% interest

Assume cost applied above (PMT) $58,576 pmt

6 Assume same as base case

7 Assumed tip fee at Lockwood landfill for TPY shown $ 15 $/ton Long term contract

10 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

11 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

12 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

13 Assumes base case closure liability to existing County landfills - comparative purposes only (same as Base Case).

14 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

15 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

16 Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.

Alternative3 - New Regional Landfill

2 Assume same as Base Case

3 Assume same as Base Case

4 Assume same as Base Case

5 Assume same as Base Case

6 Assume same as Base Case

7 Cost within County System is included in landfill cost elements below to service County TS system (Note: below includes additional costs for new landfill)

10 See annual 20-year COP PMT assumed ; pmt= $20,900 Assumes $/acre Table A1.1 - Item A

11 Assumes landfill development on 50 acre parcel [minimal]; and first 5-year module to include items in C, Construction in more detailed landfill development cost sheet.

a Construction of site facilities and first landfill Module $ 2,185,527 See cost est (Table A1.1); *C. Capital Cost* items; first module assumed to serve 5 years

Assume Financing period 20 years

Assumed approx. int. rate to include financing 5.5% interest

Assume cost applied above (PMT) *$182,883* pmt

b	Current COP as long-term operations remain		*$238,500*		
c	Include ongoing liner LFG system fund	*$*	*8.14*	Taken as $/ton based on items C 11, 13, and 14 (Table A1.1 - LF Capital)	
12	Initial landfill invest., design and permitting	$	620,000	Includes initial investigation, monitoring for 1-year, design, EIR, and initial permitting.	
	Assume Financing period in COP		20	years	
	Assumed approximate interest rate to include financing		5.5%	interest	
a	Assume cost applied above (PMT)		*$51,881*	pmt	
b	Retains other permitting/soft costs (as Base Case)		$93,000		
13	Assumes a per ton amount for financial assurance	$	4.00	per ton for new landfill	
a	Closure Minimum Financial Assurance funding (2009)	$	69,500	xls sheets for Pumice, BCLF, Walker	
b	Include Base Case budget Item (include non FA)		$0	Other Closure costs?	
14	Assume operating cost at existing landfill factored by		120%	Due to additional leachate monitoring	
15	Assume same as Base Case				
16	Assume same as Base Case				

Alternative 4 - Mammoth Longhaul TS

2	Assumes Annualized costs for land over 20 yrs	$	1,500,000	Cost for 1 acre "Mammoth Firewood" parcel per Mike Grossblatt 08/0310 - expected by end of year	
	Assume Financing period		20	years	
	Assumed approximate interest rate to include financing		5.5%	interest	
	Assume cost applied above (PMT)		$125,519	pmt	NOTE - This cost would be borne by the Town unless shared by County "System" fund.
3	Assumes Base case costs for County TS retained plus cost to operate station for both County and Town waste for longhaul				
a	Assume Base Case annual cost for TS O&M		$514,700	Base Case contract operations	
b	Assume cost for TS operations for entire Co waste	$	15.00	Cost per ton basis (See Table A1.2)	
	Annualized basis based on disposal tonnage	$	442,725	Does not include diversion over minimal floor recovery and source separated drop	
4	Assumes Base case costs for County contract transport retained plus cost to transport to Lockwood Landfill for both County and Town waste for longhaul				
a	Retain Base Case cost for County transport TS		*$128,700*		
b	Include longhaul of County and Town waste			Longhaul system waste f/Town (MD station) to Lockwood Landfill; per below calculation	
	Transfer Truck haul time		260.7	Google earth auto on-way time	110% for TT haul vs car
			9.36	hours per one truck per round trip per day (include 20 min each end for load)	
		$	80.00	Assumed fully loaded truck cost	
		$	749	Cost per load	
	Payload		20	Tons	
		$	37.43	Cost per ton	
	Cost per year transport MDTS to Lockwood	$	1,104,648		
	Total for transport	$	1,233,348	County TS to MDTS and total waste stream from MDTS to Lockwood (not include tip fee)	
5	Assumes conceptual annualized cost for LHTS facility capital improvements; Plus existing TS COP portion				
	Assumed site and building improvements	$	800,000	Discussed with Mike Grossblatt - see report	
	Assume Financing period		20	years	
	Assumed approximate interest rate to include financing		5.5%	interest	
	Assume cost applied above (PMT)		$66,943	pmt	Discussed with Mike Grossblatt that comparison includes only LHTS component
6	Assume same as base case				
7	Assumed tip fee at Lockwood landfill for TPY shown	$	15	Long term contract	
10	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
11	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
12	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
13	Assumes base case closure liability to existing County landfills - comparative purposes only.				
14	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
15	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
16	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				

Alternative 5 - D&S Longhaul TS

2	Assumes D&S owns the land for continued collection yard use and does not charge County for payments on the land use for LHTS.				
3	Assumes Alternative 1 costs for County TS retained plus cost to operate station for both County and Town waste for longhau				
a	Assume Base Case annual cost for TS O&M		$514,700	Base Case contract operations	
b	Assume cost for TS operations for entire Co waste	$	15.00	Cost per ton basis (See Table A1.2; TS Operations "Pad" Cost)	
	Annualized basis based on disposal tonnage	$	442,725	Does not include diversion over minimal floor recovery and source separated dro	
4	Assumes Alternative 2 costs for County contract transport retained plus cost to transport to Lockwood Landfill for both County and Town waste for longhaul				
a	Retain Base Case cost for County transport TS		*$128,700*		
b	Include longhaul of County and Town waste			Longhaul system waste from D&S station to Lockwood Landfill; per below calculation	
	Transfer Truck haul time		198	Google auto 1-way time	110% for TT haul vs car
			7.27	hours per one truck per round trip per day (adds 20 min each end)	
		$	80.00	Assumed fully loaded truck cost	
		$	581	Cost per load	
	Payload		20	Tons	
		$	29.07	Cost per ton	
	Cost per year transport D&S TS to Lockwood	*$*	*857,903*	This Alt is for total WS including Town	
	Total for transport	$	986,603	County TSs to MDTS & total stream f/MDTS to Lockwood (does not include tip fee)	
5	Assumes conceptual annualized cost for LHTS facility capital improvements; Plus existing TS COP portion				
	Assumed site and building improvements	$	1,200,000	See Table A1.5	
	Assume Financing period		20	years	
	Assumed approximate interest rate to include financing		5.5%	interest	
	Assume cost applied above (PMT)		$100,415	pmt	
6	Assume reduced to % f/Base Case as D&S responsible for most			50%	Assumes D&S retains internally as part of vertical integration.
7	Assumed tip fee at Lockwood landfill for TPY shown	$	15	Long term contract assumption noted by phone to D&S	
10	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
11	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
12	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
13	Assumes alternative 1 closure liability to existing County landfills - comparative purposes only.				
14	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
15	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				
16	Assume no landfill on County for this alternative and landfill cost accounted for in item 7, above.				

TABLE D1.1 - COMPARATIVE LANDFILL DEVELOPMENT AND CAPITAL COST

	Item	Unit	Quantity	Unit Cost	Cost	Capacity Served	Years Served	Tons Served	
									$/Ton
A	*Land Acquisition (from current funds)*	ACRES	50	$ 5,000	$ 250,000	Total Landfill	See financing assump	2,904,000	$ 0.09
B	*Design and Permitting*								
1	Site Investigation and monitoring	LS	1	$ 200,000	$ *200,000*	N/A - This is in operating costs			
2	Preliminary Design	LS	1	$ 80,000	$ *80,000*	Total Landfill		2,904,000	$ 0.03
3	Environmental Impact Report	LS	1	$ 200,000	$ *200,000*	Total Landfill		2,904,000	$ 0.07
4	Permitting	LS	1	$ 80,000	$ *80,000*	Assume 5 Years		125,000	$ 0.64
5	PS&E, CQA PLAN (80% from permit)	LS	1	$ 60,000	$ *60,000*	First Expansion Module [4 acres]	5.00	125,000	$ 0.48
C	*Construction*								
6	Site Grading/Drainage	acres	13	$ 3,000	$ 37,500	N/A - This is in operating costs			
7	On-site Roads ()	LF	8,000	$ 40	$ 320,000	N/A - This is in operating costs			
8	Off-site Road	LF	3,000	$ 60	$ 180,000	Assume none required			
9	Scale facility	LS	1	$ 240,000	$ 240,000	Facility Life of 20-years assumed	20	800,000	$ 0.30
10	Admin/Maintenance Trailers	SF	3,180	$ 60	$ 190,800	Facility Life of 20-years assumed	20	800,000	$ 0.24
11	LFG Control (First Module)	LS	1	$ 100,000	$ 100,000	First Expansion Module [4 acres]	5.00	125,000	$ 0.80
12	LFG Flare (First Phase)	LS	1	$ 200,000	$ 200,000	Assume 20-year service life	20.00	800,000	$ 0.25
13	Cell Construction	acres	4.00	$ 213,309	$ 853,235	First Expansion Module [4 acres]	5.00	125,000	$ 6.83
14	Cell QA/QC	percent	$ 853,235	7.5%	$ 63,993	First Expansion Module [4 acres]	5.00	125,000	$ 0.51
D	TOTAL				$ 3,100,000			TOTAL>	$ 10.23

NOTES FOR TABLE

A *For Annual analysis main economics table - Assumes new site for landfill purchase (likely BLM)*

Assume acreage	50	acres
Assume Cost per Acre	$ 5,000	
Total assumed sale value	$ 250,000	
Assume COP over 20 years for annual pmt	$20,920	
rate	5.5%	
years	20	

B Design and Permitting

1 Assumes expansion not possible at BCLF; new site requires investigation and one year monitoring before permitted.

4 Assumed cost for JTD for CR, RWQCB; and LAPCD permitting.

5 PS&E assumed for first expansion module (does not include partial closure or other closure)

6 Assume initial development required for 1/4 site and perimeter work.

7 Assumes that rough grading includes provide perimeter road, other site roads, drainage system to control run-on and run-off, and other site civil work. $ *40.00* */LF*

8 Assumed add for access

15.0 SY $ *60.00* */LF*

9 Assumes the following for Landfill

In bound scales	LS	*1*	$ *70,000*	$	*70,000*
Outbound scales	LS	*1*	$ *70,000*	$	*70,000*
Scale house	LS	*1*	$ *100,000*	$	*100,000*
				$	*240,000*

10 Assume maintenance building and office is future addition. This is for assumed building dimensions:

Length (scraper bay work)	*60*			
Width (two bays plus office area)	*53*			
Assumed SF	*3180*	*Assume trailers*	$ *60.00*	*/SF*

11 LFG Control System on unit cost basis (First Module increment shown for comparison to other options).

$	*15,000*	*Design for 1/4 of System (design serves 20 yrs)*	
$	*20,000*	*Cost per Acre for control system*	
	4.00	*Acre unit*	
	80,000	*Cost for GCCS*	
$	*8,000*	*CQA*	*10.0%*
	100,000	*Total Project*	***(w/o O&M- O&M in budget items)***

12 It is assumed that a flare would ultimately be required for LF.
Assumed would be a number of years after initial modules, which would allow use of tip fees to in a fund for this cost rather than financing.

13 Assumed excavation, subgrade compaction, GCL, HDPE and LCRS system for

	Units	*Quantity*	*Unit Cost*	
Excavation (contract)	*CY*	*120,933*	$ *2.00*	$ *241,867*
1-Foot Prepared Subgrade Layer	*CY*	*6,453*	$ *6.00*	$ *38,720*
Fine Grading and Compaction	*SF*	*174,240*	$ *0.15*	$ *26,136*
GCL	*SF*	*174,240*	$ *0.65*	$ *113,256*
60 mil HDPE	*SF*	*174,240*	$ *0.65*	$ *113,256*
LCRS and Drain layer	*Acre*	*4.00*	$ *60,000*	$ *240,000*
Operation layer (Using on-site free soils)	*Acre*	*4.00*	$ *20,000*	$ *80,000*
			TOTAL	$ *853,235*
Construction cost per acre				*213,309*

4.00 *acre unit Base Yr unit*

TABLE D1.2 - CONCEPTUAL "PAD" TRANSFER STATION OPERATIONS COST

								6.5	DPW
TS OPS quick estimate single Shift							29,515	tpy	
PAD OPS ONLY							87.32	ave TPD	
Labor				unit Ann. w/benefits		Total Ann			
Equipment Operator (Incl. foreman)	2	$	21	$	72,072	$	144,144		
Laborer (spotter/helper)	2	$	15	$	51,480	$	102,960		
Scale (Relief or split w/laborer)	1.5	$	12	$	41,184	$	61,776		
RO Truck Driver(s)	1.0	$	17	$	58,344	$	58,344		
	6.5		65%	$	367,224	$	12.44	81%	
Equipment		Unit cost		Total Ann					
Loader	1	$	225,000	$	40,305				
Sweeper	0	$	60,000	$	-				
RO Truck*	1	$	110,000	$	19,705				
Total (bins in Diversion $/T)	6%		7	$	60,010	$	2.03	13%	
Equipment Fuel and Maintenance		Unit cost		Total Ann					
Loader	2912	$	30	$	15,649				
Sweeper	0	$	25	$	-				
RO Truck	2080	$	25	$	9,315				
				$	24,964	$	0.85	6%	
Total (no G&A, transport, MRF or capital costs f/facility)						*$*	*15.30*		
				$	452,198	$	15.00	Rounded up to nearest $/T	

CHECK OF RO TRUCKS REQUIRED FOR DIVERSION

12%	% diversion
50%	Portion to RO trucks remainder TT
1770.9	TPY RO trucks
5	Ave tons per trip RO
354.18	Trips per yr
2	Assume round trip ave hrs
708.36	Hours per year
1.0	number of trucks/driver required (rounded up to even #, above)

TABLE D1.3 - BCLHTS CAPITAL CONCEPT COMPARATIVE COST ASSUMPTION				
DESCRIPTION	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
1 Site Work				
Grading	65,340	SF	$0.25	$16,300.00
Asphalt paving and striping	19,602	SF	$2.50	$49,000.00
Landscaping	0	SF	$0.00	$0.00
				$65,300.00
2 T.S. Building				
Foundation and Slab	7,680	SF	$15.00	$115,200.00
Building Shell	**6,400**	SF	$20.00	$128,000.00
O.H. coiling door 14'x24'	1	EA	$15,000.00	$15,000.00
O.H. coiling door 28'x24'	0	EA	$20,000.00	$0.00
Sprinkler	6,400	SF	$2.25	$14,400.00
Electrical	6,400	SF	$6.00	$38,400.00
Conc Pushwall (see loadout tunnel)	0	LF	$0.00	$0.00
Wood Pushwalls 8.5 ft tall	0	LF	$300.00	$0.00
				$311,000.00
3 Loadout Tunnel				
10" thick x 6' tall x 210' long ret wall exterior	25	CY	$800.00	$20,000.00
3.5' wide x 1' thick x 210' long footing	25	CY	$350.00	$8,800.00
14" thick x 15' tall x 40' long ret wall /pushwall	40	CY	$800.00	$32,000.00
12" thick x 9' tall x 38' long x 2 ret walls	25	CY	$800.00	$20,000.00
5' wide x 1.5' thick x 120' long footing	30	CY	$350.00	$10,500.00
10" thick x 15' wide x 140' long slab on grade	65	CY	$300.00	$19,500.00
Trench Drains assume gravity drain	2	EA	$1,200.00	$2,400.00
Oil/Water Separater with pumps for contact water	1	EA	$22,000.00	$22,000.00
				$135,200.00
4 Tarping Station				
3' wide x 60' long each side	0	LS	$15,000.00	$0.00
				$0.00
5 Scale House				
Foundation and Slab	0	SF	$15.00	$0.00
Building Shell	0	SF	$100.00	$0.00
Concrete stair and ramp	0	SF	$12.00	$0.00
Interior Finishes	0	SF	$30.00	$0.00
HVAC	0	SF	$5.00	$0.00
Electrical	0	SF	$2.50	$0.00
				$0.00
6 Scales				
Foundation and Slab	0	LS	$5,000.00	$0.00
10' x 80' above grade scale	0	EA	$60,000.00	$0.00
				$0.00
7 Fence				
8' Chain Link	0	LF	$15.00	$0.00
20' sliding gate	0	EA	$3,000.00	$0.00
				$0.00
8 Water Storage Tank				
250,000 Gal ground tank	0	LS	$300,000.00	$0.00
Pipes and pumps	0	LS	$60,000.00	$0.00
				$0.00
TOTAL [Subcontract] DIRECT COST				**$511,500.00**
General Conditions [Mobe, untilities, Mgmt, ect]	7.50%			$38,400.00
Survey	1.00%			$5,100.00
Concrete Testing	0.25%			$1,300.00
Insurance	1.50%			$7,700.00
FEE plus OH&P	7.50%			$38,400.00
Contingency	10.00%			$51,200.00
TOTAL COST	**28%**			**$700,000**
Design and Permitting costs not included				

1 Improvement equivalent to 1.5-acre area to provide 3 wall facility with partial depressed tunnel
2 Assume use existing scalehluse and scale
3 Assumes 80 x 80 building

TABLE D1.4 - MDLHTS INCREMENTAL CAPITAL CONCEPT COMPARATIVE COST ASSUMPTION				
DESCRIPTION	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
1 Site Work				
Grading	43,560	SF	$0.25	$10,900.00
Asphalt paving and striping	13,068	SF	$2.50	$32,700.00
Landscaping	0	SF	$0.00	$0.00
				$43,600.00
2 T.S. Building				
Foundation and Slab	7,680	SF	$15.00	$115,200.00
Building Shell	**6,400**	SF	$20.00	$128,000.00
O.H. coiling door 14'x24'	1	EA	$15,000.00	$15,000.00
O.H. coiling door 28'x24'	0	EA	$20,000.00	$0.00
Sprinkler	6,400	SF	$2.25	$14,400.00
Electrical	6,400	SF	$6.00	$38,400.00
Conc Pushwall (see loadout tunnel)	0	LF	$0.00	$0.00
Wood Pushwalls 8.5 ft tall	80	LF	$300.00	$24,000.00
				$335,000.00
3 Loadout Tunnel				
10" thick x 6' tall x 210' long ret wall exterior	25	CY	$800.00	$20,000.00
3.5' wide x 1' thick x 210' long footing	25	CY	$350.00	$8,800.00
14" thick x 15' tall x 40' long ret wall /pushwall	40	CY	$800.00	$32,000.00
12" thick x 9' tall x 38' long x 2 ret walls	25	CY	$800.00	$20,000.00
5' wide x 1.5' thick x 120' long footing	30	CY	$350.00	$10,500.00
10" thick x 15' wide x 140' long slab on grade	65	CY	$300.00	$19,500.00
Trench Drains assume gravity drain	2	EA	$1,200.00	$2,400.00
Oil/Water Separater with pumps for contact water	1	EA	$22,000.00	$22,000.00
				$135,200.00
4 Tarping Station				
3' wide x 60' long each side	1	LS	$15,000.00	$15,000.00
				$15,000.00
5 Scale House (See separate item on general sheet)				
Foundation and Slab	0	SF	$15.00	$0.00
Building Shell	0	SF	$100.00	$0.00
Concrete stair and ramp	0	SF	$12.00	$0.00
Interior Finishes	0	SF	$30.00	$0.00
HVAC	0	SF	$5.00	$0.00
Electrical	0	SF	$2.50	$0.00
				$0.00
6 Scales				
Foundation and Slab	0	LS	$5,000.00	$0.00
10' x 80' above grade scale	0	EA	$55,000.00	$0.00
				$0.00
7 Fence				
8' Chain Link	660	LF	$15.00	$9,900.00
20' sliding gate	1	EA	$3,000.00	$3,000.00
				$12,900.00
8 Water Storage Tank				
250,000 Gal ground tank	0	LS	$300,000.00	$0.00
Pipes and pumps	1	LS	$50,000.00	$50,000.00
				$50,000.00

TOTAL [Subcontract] DIRECT COST		**$591,700.00**
General Conditions [Mobe, untilities, Mgmt, ect]	7.50%	$44,400.00
Survey	1.00%	$5,900.00
Concrete Testing	0.25%	$1,500.00
Insurance	1.50%	$8,900.00
FEE plus OH&P	7.50%	$44,400.00
Contingency	10.00%	$59,200.00
TOTAL COST	**28%**	**$800,000**
Design and Permitting costs not included		

1 Improvmenet on 1-acre parcel to provide 3 wall facility with partial depressed tunnel
2 Assume existing scale facility adequate and reused
3 Assumes 80 x 80 building

TABLE D1.5 - D&SLHTS CAPITAL CONCEPT COMPARATIVE COST ASSUMPTION				
DESCRIPTION	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
1 Site Work				
Grading	65,340	SF	$0.25	$16,300.00
Asphalt paving and striping	19,602	SF	$2.50	$49,000.00
Landscaping	0	SF	$0.00	$0.00
				$65,300.00
2 T.S. Building				
Foundation and Slab	7,680	SF	$15.00	$115,200.00
Building Shell	**6,400**	SF	$20.00	$128,000.00
O.H. coiling door 14'x24'	1	EA	$15,000.00	$15,000.00
O.H. coiling door 28'x24'	0	EA	$20,000.00	$0.00
Sprinkler	6,400	SF	$2.25	$14,400.00
Electrical	6,400	SF	$6.00	$38,400.00
Conc Pushwall (see loadout tunnel)	0	LF	$0.00	$0.00
Wood Pushwalls 8.5 ft tall	0	LF	$300.00	$0.00
				$311,000.00
3 Loadout Tunnel				
10" thick x 6' tall x 210' long ret wall exterior	25	CY	$800.00	$20,000.00
3.5' wide x 1' thick x 210' long footing	25	CY	$350.00	$8,800.00
14" thick x 15' tall x 40' long ret wall /pushwall	40	CY	$800.00	$32,000.00
12" thick x 9' tall x 38' long x 2 ret walls	25	CY	$800.00	$20,000.00
5' wide x 1.5' thick x 120' long footing	30	CY	$350.00	$10,500.00
10" thick x 15' wide x 140' long slab on grade	65	CY	$300.00	$19,500.00
Trench Drains assume gravity drain	2	EA	$1,200.00	$2,400.00
Oil/Water Separater with pumps for contact water	1	EA	$22,000.00	$22,000.00
				$135,200.00
4 Tarping Station				
3' wide x 60' long each side	0	LS	$15,000.00	$0.00
				$0.00
5 Scale House				
Foundation and Slab	120	SF	$15.00	$1,800.00
Building Shell	120	SF	$100.00	$12,000.00
Concrete stair and ramp	300	SF	$12.00	$3,600.00
Interior Finishes	120	SF	$30.00	$3,600.00
HVAC	120	SF	$5.00	$600.00
Electrical	120	SF	$2.50	$300.00
				$21,900.00
6 Scales				
Foundation and Slab	1	LS	$5,000.00	$5,000.00
10' x 80' above grade scale	1	EA	$60,000.00	$60,000.00
				$65,000.00
7 Fence				
8' Chain Link	1,000	LF	$15.00	$15,000.00
20' sliding gate	1	EA	$3,000.00	$3,000.00
				$18,000.00
8 Water Storage Tank				
250,000 Gal ground tank	1	LS	$300,000.00	$300,000.00
Pipes and pumps	1	LS	$60,000.00	$60,000.00
				$360,000.00

TOTAL [Subcontract] DIRECT COST		**$976,400.00**
General Conditions [Mobe, untilities, Mgmt, ect]	7.50%	$73,200.00
Survey	1.00%	$9,800.00
Concrete Testing	0.25%	$2,400.00
Insurance	1.50%	$14,600.00
FEE plus OH&P	7.50%	$73,200.00
Contingency	10.00%	$97,600.00
TOTAL COST	**28%**	**$1,200,000**
Design and Permitting costs not included		

1 Improvmenet on 1.5-acre area to provide 3 wall facility with partial depressed tunnel
2 Assume need scalehluse and scale
3 Assumes 80 x 80 building

Greenwaste/Composting Facility
Facility Sizing

Feedstock Description	**Value**	**Unit**
Incoming Green Waste (includes Wood for Chipping) =	10,000	tons/yr
Processed Green Waste (deducts Wood for Chipping) =	6,000	tons/yr
Incoming Food/Mixed Green Waste =	0	tons/yr
Processing Days per Year =	260	days/yr
Tons per Day =	23	tons/day
Greenwate Density	500	lb/cu yd
Greenwaste Moisture Content	60%	
Foodwaste/Mixed Green Waste Density	650	lb/cu yd
Foodwaste/Mixed Green Waste C:N Ratio	45	
Foodwaste/Mixed Green Waste Moisture Content	40%	
Target C:N Ratio	30 to 45	
Target Moisture Content	60% to 65%	
Net Bulk Density	500	lb/cu yd
Net C:N Ratio	25	
Net Moisture Content*	60%	
Annual Volume Processed	**24,000**	cu yd

* Add water as needed to increase moisture content

Composting Parameters	**Value**	**Unit**
Continuous or Batch	Continuous	
Composting Period	80	days
Curing Period	30	days
Storage Period	15	days
Compost Shrinkage Factor	40%	
Curing Shrinkage Factor	5%	

Unloading/Receiving Area		
Unloading Area for Greenwaste	10,000	tons/yr
Green Waste pile vol	154	cubic yards
Green Waste pile area	519	sf
Unloading area	10,000	tons per year
Tons per Veh	4	tons per veh
Unloading Time	10	minutes
Vehicles per hour	2	veh/hr
Number of Unloading Bays	0	unloading bays
Required Area	1200	
Space Required	361	sf
Manuevering Space	901	sf
Total Unloading/Receiving Space	**1,262**	sf

Compost Pad

Average Volume on Compost Pad	5,260	cu yd
Compost Windrow Length	150	ft
Compost Windrow Height	8	ft
Compost Windrow Width	16	ft
Cubic Yards per Row	356	cu yd
Number of Rows	15	
Spacing Between Windrows	8	ft
Total Pad Area	**54,000**	sf

Curing Pad

Average Volume on Curing Pad	1,184	cu yd
Curing Windrow Length	500	ft
Curing Windrow Height	10	ft
Curing Windrow Width	20	ft

Cubic Yards per Row	1,852	cu yd
Number of Rows	1	
Spacing Between Windrows	15	ft
Total Pad Area	**17,500**	sf

Storage Pad

Average Volume on Curing Pad	542	cu yd
Storage Windrow Length	200	ft
Storage Windrow Height	15	ft
Storage Windrow Width	30	ft
Cubic Yards per Row	1,667	cu yd
Number of Rows	0	
Spacing Between Windrows	15	ft
Total Pad Area	**2,929**	sf

Green Waste Stockpile

Days of Green Waste Storage	3	days
Tons of Storage Required	69	tons
Volume of Green Waste Stockpile	277	cu yd
Depth of Pile	8	ft
Width of Pile	20	ft
Calculated Length of Pile	93	ft
Stockpile Area	**1,869**	sf

Unloading/Grinding Area

Load Traffic Area Width	75	ft
Load Traffic Area Length	150	ft
Load Traffic Area	11250	sf
Grinder w/ Stockpiles Width	50	ft
Grinder w/ Stockpiles Length	150	ft
Grinder w/ Stockpiles Area	7,500	sf
Total Processing Area	**18,750**	sf

Compost Screening Area

Load Traffic Area Width	50	ft
Load Traffic Area Length	100	ft
Load Traffic Area	5000	sf
Mixing Bin & Trommel Screen w/ Stockpiles Width	50	ft
Mixing Bin & Trommel Screen w/ Stockpiles Length	100	ft
Mixing Bin & Trommel Screen w/ Stockpiles Area	5,000	sf
Total Processing Area	**10,000**	sf

Summary of Areas

Total Receiving Area	**1,262**	**sf**	
Compost Pad	**54,000**	**sf**	
Curing Pad	**17,500**	**sf**	
Storage Pad	**2,929**	**sf**	
Green Waste Stockpile	**1,869**	**sf**	
Unloading/Grinding Area	**18,750**	**sf**	
Compost Screening Area	**10,000**	**sf**	
Total Area Required for Operations	**106,311**	**sf**	
	2.4	**acres**	**Facility Alone**

Development Cost	quantity	unit cost	units	total
Cement Treated Base Surface	106,311	$ 3.50	sf	$ 372,087
Utilities	106,311	$ 1.50	sf	$ 159,466
Grinder	1	$ 150,000	ea	$ 150,000
Loader	**1**	$ 75,000	ea	$ 75,000
Screens	1	$ 50,000	ea	$ 50,000
Converors	1	$ 50,000	ea	$ 50,000
Subtotal				$ 856,553
Contingency				$ 128,483
Total				**$ 985,036**

APPENDIX E

Annual Report Summary: Mono-Unincorporated (2009)

This Annual Report Summary is an official record of your CalRecycle Electronic Annual Report submission, except for your Venue/Event section information, which is contained in a separate report. You may reach that section from the Electronic Annual Report's left navigation bar.

Before submitting your report to CalRecycle, please take the time to review everything on this page to confirm it is complete and correct. If you need to modify some information, close this window to return to the Electronic Annual Report to make your corrections. Then, preview the report again.

Summary Generated On: Wednesday, August 11, 2010 at 4:46 PM

Summary

Jurisdiction: Mono-Unincorporated
Report Year Filed: 2009
Report Status: Submitted

Submitted Information

Date Report Submitted: Wednesday, July 21, 2010 at 4:09 PM
Report Submitted By: Carter Matt (mcarter@mono.ca.gov)

Jurisdiction Contact

Jurisdiction Contact: Matt Carter
Address: 74 N School St Bridgeport, CA 93517
Phone Number: (760) 932-5453
Fax Number:
Email Address: mcarter@mono.ca.gov
Update Contact Info: http://www.calrecycle.ca.gov/LGCentral/Contacts/ContactChg.htm

Disposal Rate Calculation

Definition of Terms

Show

Reporting-Year Disposal Amount (tons):		7,118.51
Disposal Reduction Credits (Reported):		
Disaster Waste (tons):	0.00	
Medical Waste (tons):	0.00	
Regional Diversion Facility Residual Waste (tons):	0.00	
C&D Waste (tons):	0.00	
Class II Waste (tons):	0.00	
Out-of-State Export (Diverted) (tons):	0.00	
Other Disposal Amount (tons):	0.00	
Total Disposal Reduction Credit Amount (tons):		0
Total Adjusted Reporting-Year Disposal Amount (tons):		7,119.00
Reporting-Year Transformation Waste (tons):		00.00
Reporting-Year Population:		6,250
Reporting-Year Employment:		2,272

Reporting-Year Calculation Results (Per Capita)

	Population		Employment	
	Target	Annual	Target	Annual
Disposal Rate without Transformation(pounds/person/day):		6.2		17.2
Transformation Rate (pounds/person/day):	2.3	0.0	5.1	0.0
The Calculated Disposal Rate (pounds/person/day):	11.4	6.2	25.6	17.2

Calculation Factors

If any boxes are checked, please complete, and sign the Reporting Year Disposal Modification Certification Sheet and mail, e-mail or FAX to CalRecycle within 7 business days of submitting your report. If you are only claiming report-year disposal deductions for waste transported to a certified Transformation facility, you do not need to fill out the certification request.

Although you will be able to submit your electronic Annual Report without completing this sheet, your Annual Report will not be deemed complete until this sheet is completed and received by CalRecycle. Contact your LAMD representative for details.

- ☐ Alternative disposal tonnage
- ☐ Deductions to DRS disposal tonnage

Questions and Responses

Rural Petition for Reduction in Requirements

Rural Petition For Reduction

1. ***Question:*** Was your jurisdiction granted a rural Petition for Reduction by CalRecycle?
   For more information regarding Rural Petition For Reduction, go to Rural Solid Waste Diversion Home Page.

   Response

   No.

Newly Incorporated Cities

New City

1. ***Question:*** Since the date of your last Annual Report, are there any newly incorporated cities within your county/regional agency?

   Response

   No.

Disposal Rate Accuracy

Disposal Rate Accuracy

1. ***Question:*** Are there extenuating circumstances pertaining to your jurisdiction's disposal rate that CalRecycle should consider, as authorized by the Public Resources Code Section 41821(c)? If you wish to attach additional information to your annual report, please send those items or electronic files to your LAMD representative; include a brief description of those files below. If so, please use the space below to tell CalRecycle.

   Response

   No.

Planning Documents Assessment

Source Reduction and Recycling Element (SRRE)

1. ***Question:*** Does the SRRE need to be revised?

   Response

   No.

Household Hazardous Waste Element (HHWE)

2. ***Question:*** Does the HHWE need to be revised?

   Response

   No.

Non-Disposal Facility Element (NDFE)

3. ***Question:*** Describe below any changes in the use of nondisposal facilities, both existing and planned (e.g., is the jurisdiction using a different facility within or outside of the jurisdiction, has a facility closed, is a new one being planned).

   Response

   None.

Non-Disposal Facility Element (NDFE)

4. ***Question:*** Are there currently any nondisposal facilities that require a solid waste facility permit located (or planned to be sited) in your jurisdiction that are not identified in your NDFE?

   Response

   No.

Summary Plan Assessment

Summary Plan

1. ***Question:*** Does the Summary Plan need to be revised?

   Response

   No.

Siting Element Assessment

Total County or Agency Wide Disposal Capacity

1. ***Question:*** Based on the best available estimates of current and future disposal, how many years of disposal capacity does your county or regional agency have?

   Response

   17

Total County or Agency Wide Disposal Capacity

2. ***Question:*** If you do not currently have 15 years of disposal capacity, describe your strategy for obtaining 15 years of capacity.

   Response

   No response has been entered

Siting Element Adequacy

3. ***Question:*** Does the Siting Element need to be revised? The Siting Element will need to be revised if you have less than 15 years disposal capacity and have not described a strategy for obtaining 15 years disposal capacity.

   Response

   Yes. Yes. Yes. The Benton Crossing Landfill and Pumice Valley Landfill have both gone through the permit revision process in recent years, both of which resulted in an increased capacity. Closure construction was completed on the Benton and Chalfant landfills in 2008. The Bridgeport Landfill closed in 2009. These landfill closures will be addressed in a revised CSE that should be completed within the next year.

Areas of Concern / Conditional Approvals

Areas of concern

1. ***Question:*** Did CalRecycle require your jurisdiction to address any areas of concern when determining the adequacy of your solid waste planning documents, or any of their elements?

   Response

   No.

Conditional approvals

2. ***Question:*** Did CalRecycle give conditional approval to any of your solid waste planning documents, or any of their elements?

   Response

   No.

Additional Information

Additional Information

1. ***Question:*** Is there anything else you would like to tell CalRecycle about unique or innovative efforts by your jurisdiction to reduce waste generation and increase diversion, about your jurisdiction's public education efforts, or about specific obstacles to reaching your jurisdiction's diversion goal? If you wish to attach additional information to your annual report, please send those items or electronic files to your LAMD representative and include a brief description of those files below.

   Response

   No.

SRRE and HHWE Diversion Programs

1020-SR-BWR (Business Waste Reduction Program)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

1030-SR-PMT (Procurement)

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

1050-SR-GOV (Government Source Reduction Programs)

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

1060-SR-MTE (Material Exchange, Thrift Shops)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2010-RC-DRP (Residential Drop-Off)

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 53.84
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In, 2009, a total of 17.62 tons of cardboard (OCC), 22.63 tons of beverage containers (glass, plastic, aluminum), and 13.59 tons of used motor oil were dropped off for recycling at County transfer stations and its regional landfill.

2020-RC-BYB (Residential Buy-Back)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2030-RC-OSP (Commercial On-Site Pickup)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2004
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

2050-RC-SCH (School Recycling Programs)

Current Status: SO - Selected and Ongoing
Program Start Year: 1993
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2060-RC-GOV (Government Recycling Programs)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2070-RC-SNL (Special Collection Seasonal (regular))

Current Status: AO - Alternative and Ongoing
Program Start Year: 2001
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2080-RC-SPE (Special Collection Events)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2002
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

3010-CM-RSG (Residential Self-haul Greenwaste)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2001
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

676.70 tons of green waste (consisting of pine needles, pine cones, bark, grass clippings, sod hay, and manure) generated in unincorporated Mono County was recycled at Mono County disposal sites. See 4050 for wood waste quantities.

3030-CM-CSG (Commercial Self-Haul Greenwaste)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2000
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

3040-CM-FWC (Food Waste Composting)

Current Status: AO - Alternative and Ongoing
Program Start Year: 1998
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

3070-CM-OTH (Other Composting)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

4010-SP-SLG (Sludge (sewage/industrial))

Current Status: AO - Alternative and Ongoing
Program Start Year: 2001
Report Year Diversion Tons: 6.48
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

In 2009, a total of 6.48 tons of dried sewage sludge was accepted for processing as an ADC at the Benton Crossing Landfill from unincorporated Mono County sources.

4020-SP-TRS (Tires)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 87.86
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In 2009, a total of 87.86 of tires were recycled at County disposal sites from unincorporated Mono County sources.

4030-SP-WHG (White Goods)

Current Status: SO - Selected and Ongoing
Program Start Year: 1996
Report Year Diversion Tons: 75.08
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In 2009, 75.08 tons of white goods generated in the unincorporated Mono County were recycled at County disposal sites.

4040-SP-SCM (Scrap Metal)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 230.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In 2009, 230.00 tons of scrap metal generated in the unincorporated Mono County were recycled at County disposal sites.

4050-SP-WDW (Wood Waste)

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 952.87
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In 2009, a total of 952.87 tons of wood waste generated in the unincorporated Mono County was received at County disposal sites for chipping and recycling.

4060-SP-CAR (Concrete/Asphalt/Rubble)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 371.51
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Selected Program Details: Asphalt Paving | Brick | Concrete/cement | Rock, soils and fines

Jurisdiction Notes

In 2009, a total of 371.51 tons of rock and soil generated in the unincorporated Mono County was accepted at County disposal sites for use as cover material. This quantity was identified separately in BOE quarterly reports. In addistion, 630.98 tons of inert C&D (concrete and asphalt rubble, 12" or less in dimension) generated in unincorporated Mono County was accepted for use as cover material or base material for site roads.

4090-SP-RND (Rendering)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

5000-ED-ELC (Electronic (radio ,TV, web, hotlines))

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

5010-ED-PRN (Print (brochures, flyers, guides, news articles))

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

5020-ED-OUT (Outreach (tech assistance, presentations, awards, fairs, field trips))

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

5030-ED-SCH (Schools (education and curriculum))

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

6010-PI-EIN (Economic Incentives)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2000
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Selected Program Details: Differential tipping fee | Fee waiver

Jurisdiction Notes

6020-PI-ORD (Ordinances)

Current Status: DE - Dropped in an earlier year
Program Start Year: 1994
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

7010-FR-LAN (Landfill)

Current Status: SO - Selected and Ongoing
Program Start Year: 1994
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

7020-FR-TST (Transfer Station)

Current Status: SO - Selected and Ongoing
Program Start Year: 1994
Report Year Diversion Tons: 0.00
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

7040-FR-ADC (Alternative Daily Cover)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2001
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

9000-HH-PMF (Permanent Facility)

Current Status: SO - Selected and Ongoing
Program Start Year: 1990
Report Year Diversion Tons: 41.70
Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

In 2009, 35.54 tons of HHW generated in unincorporated Mono County and the Town of Mammoth Lakes was shipped for recycling, treatment, or disposal. In addition, 6.16 tons of lead-acid batteries generated in unincorporated Mono County were collected and recycled at County transfer stations and regional landill.

9010-HH-MPC (Mobile or Periodic Collection)

Current Status: AO - Alternative and Ongoing
Program Start Year: 1997
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

9030-HH-WSE (Waste Exchange)

Current Status: PF - Planned in Future
Program Start Year: 2011
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

9040-HH-EDP (Education Programs)

Current Status: SO - Selected and Ongoing
Program Start Year: 1995
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

9045-HH-EWA (Electronic Waste)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2001
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

9050-HH-OTH (Other HHW)

Current Status: AO - Alternative and Ongoing
Program Start Year: 2004
Report Year Diversion Tons: 0.00
Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Jurisdiction Notes

APPENDIX F

Urquhart, Mark

From: Saved by Windows Internet Explorer 8
Sent: Tuesday, July 27, 2010 9:39 PM
Subject: Annual Report Summary
Attachments: ATT00005.bin

Annual Report Summary: Mammoth Lakes (2009)

This Annual Report Summary is an official record of your CalRecycle Electronic Annual Report submission, except for your Venue/Event section information, which is contained in a separate report. You may reach that section from the Electronic Annual Report's left navigation bar.

Before submitting your report to CalRecycle, please take the time to review everything on this page to confirm it is complete and correct. If you need to modify some information, close this window to return to the Electronic Annual Report to make your corrections. Then, preview the report again.

Summary Generated On: Tuesday, July 27, 2010 at 9:31 PM

Summary

Jurisdiction: Mammoth Lakes
Report Year Filed: 2009
Report Status: Due

Submitted Information

Date Report Submitted: Not Submitted
Report Submitted By: Not Submitted

Jurisdiction Contact

Jurisdiction Contact: MICHAEL GROSSBLATT
Address: PO BOX 1609 MAMMOTH LAKES, CA 93546
Phone Number: (760) 934-8989
Fax Number: (760) 934-8608
Email Address: mgrossblatt@ci.mammoth-lakes.ca.us
Update Contact Info: http://www.calrecycle.ca.gov/LGCentral/Contacts/ContactChg.htm

Disposal Rate Calculation

Definition of Terms

Hide

Reporting-Year Disposal Amount (tons) – defaults to the total tonnage disposed in the Reporting-Year by a jurisdiction as reported to the Disposal Reporting System (DRS). Disposal contains all jurisdiction waste that was disposed in CA landfills, transformation facilities, and exported out-of-state.
Reporting-Year Transformation Waste (tons) – defaults to the total tonnage of waste sent in the Reporting-Year by a jurisdiction to a CalRecycle-permitted transformation facility as reported to the Disposal Reporting System (DRS). Transformation is factored into the Per Capita rate only, and is not deductable. To eliminate the Per Capita credit for transformation tonnage, change the *Reporting-Year Transformation Waste (tons)* number to 0.00.
Reporting-Year Population – January 1st estimate of the number of inhabitants occupying a jurisdiction in the Reporting-Year as prepared by the California Department of Finance (DOF)
Reporting-Year Employment – the estimate of the annual average number of employees by jurisdiction in the Reporting-Year as prepared by the California Employment Development Department (EDD)
Disposal Reduction Credits - if you need information or definitions about the Disposal Reduction Credits listed below, please go to the Reporting Year Disposal Modification Certification Sheet (PDF); if you need guidance about the Disposal Reduction Credits listed below or how to address miscalculation or misreporting in the Reporting-Year Disposal Amount below

, please contact your LAMD representative.
Additional Definitions - for additional definitions and/or acronym descriptions, see the LGCentral Glossary.

Reporting-Year Disposal Amount (tons):		15,811.04
Disposal Reduction Credits (Reported):		
Disaster Waste (tons):	0.00	
Medical Waste (tons):	0.00	
Regional Diversion Facility Residual Waste (tons):	0.00	
C&D Waste (tons):	0.00	
Class II Waste (tons):	0.00	
Out-of-State Export (Diverted) (tons):	0.00	
Other Disposal Amount (tons):	0.00	
Total Disposal Reduction Credit Amount (tons):		0
Total Adjusted Reporting-Year Disposal Amount (tons):		15,811.00
Reporting-Year Transformation Waste (tons):		00.00
Reporting-Year Population:		7,254
Reporting-Year Employment:		4,737

Reporting-Year Calculation Results (Per Capita)

	Population		Employment	
	Target	Annual	Target	Annual
Disposal Rate without Transformation(pounds/person/day):		11.9		18.3
Transformation Rate (pounds/person/day):	3.5	0.0	6.6	0.0
The Calculated Disposal Rate (pounds/person/day):	17.6	11.9	32.9	18.3

Calculation Factors

If any boxes are checked, please complete, and sign the Reporting Year Disposal Modification Certification Sheet and mail, e-mail or FAX to CalRecycle within 7 business days of submitting your report. If you are only claiming report-year disposal deductions for waste transported to a certified Transformation facility, you do not need to fill out the certification request.

Although you will be able to submit your electronic Annual Report without completing this sheet, your Annual Report will not be deemed complete until this sheet is completed and received by CalRecycle. Contact your LAMD representative for details.

[ ]Alternative disposal tonnage
[ ]Deductions to DRS disposal tonnage

Questions and Responses

Rural Petition for Reduction in Requirements

Rural Petition For Reduction

1. ***Question:*** Was your jurisdiction granted a rural Petition for Reduction by CalRecycle?
   For more information regarding Rural Petition For Reduction, go to Rural Solid Waste Diversion Home Page.

Response

No.

Disposal Rate Accuracy

Disposal Rate Accuracy

1. ***Question:*** Are there extenuating circumstances pertaining to your jurisdiction's disposal rate that CalRecycle should consider, as authorized by the Public Resources Code Section 41821(c)? If you wish to attach additional information to your annual report, please send those items or electronic files to your LAMD representative; include a brief description of those files below. If so, please use the space below to tell CalRecycle.

   Response

   No. 2009 AR. There are no extenuating circumstances pertaining to the Town's disposal rate that CalRecycle should consider 'as authorized by PRC Section 41821 (c)'. However, CalRecycle staff should be aware that the Town has experienced a significant decrease in disposal quantities reported (from 20,993 tons in 2008 to 15,811 tons in 2009) - due, in part, to diversion program implementation and the economic impact of a slowed construction market. The Town is a resort and recreational destination. with notable surges in people coming into town for special events. skiing and other snow sports and summer activities. These surges result in waste generation from non-fulltime residents. Thus, the 'per capita disposal' actual results (based on population) may not be an accurate measure of disposal reduction. Furthermore, it is not known how accurate the 'disposal per capita' actual results based on employment is. Nevertheless, the Town continues to implement its diversion programs.

Planning Documents Assessment

Source Reduction and Recycling Element (SRRE)

1. ***Question:*** Does the SRRE need to be revised?

   Response

   No. 2009 EAR. The program implementation activity planned by the Town has been made current through the annual reporting process, where programs have been expanded and new programs developed and implemented. The original programs selected in the SRRE have been updated through recent annual reports, particularly since 2004.

Household Hazardous Waste Element (HHWE)

2. ***Question:*** Does the HHWE need to be revised?

   Response

   No. 2009 EAR. The program implementation activity planned by the Town has been made current through the annual reporting process, where programs have been expanded and new programs developed and implemented. The original programs selected in the HHWE have been updated through recent annual reports, particularly since 2000.

Non-Disposal Facility Element (NDFE)

3. ***Question:*** Describe below any changes in the use of nondisposal facilities, both existing and planned (e.g., is the jurisdiction using a different facility within or outside of the jurisdiction, has a facility closed, is a new one being planned).

   Response

2009 EAR. There have been no significant changes in the use of nondisposal facilities by the Town. The Town and its solid waste service provider, Mammoth Disposal, however have firm plans for developing an expansion of the current drop-off facility and transfer station located in the Town. The expansion depends upon the economic cycle when the expansion will occur. Both parties have consummated a new franchise agreement providing flexibility for implementation timing. The County is currently studying its countywide infrastructure to provide cost-effective solid waste management services, including long haul disposal capability. HDR Engineering is the engineering consultant selected by the County to perform the study.

Non-Disposal Facility Element (NDFE)

4. ***Question:*** Are there currently any nondisposal facilities that require a solid waste facility permit located (or planned to be sited) in your jurisdiction that are not identified in your NDFE?

   Response

   Yes. 2009 EAR. Please see above response. The Town is aware of the conformance requirement whereby proposed facilities being planned and required to obtain a solid waste facility permit needs to be identified in the NDFE.

Areas of Concern / Conditional Approvals

Areas of concern

1. ***Question:*** Did CalRecycle require your jurisdiction to address any areas of concern when determining the adequacy of your solid waste planning documents, or any of their elements?

   Response

   No.

Conditional approvals

2. ***Question:*** Did CalRecycle give conditional approval to any of your solid waste planning documents, or any of their elements?

   Response

   No.

Additional Information

Additional Information

1. ***Question:*** Is there anything else you would like to tell CalRecycle about unique or innovative efforts by your jurisdiction to reduce waste generation and increase diversion, about your jurisdiction's public education efforts, or about specific obstacles to reaching your jurisdiction's diversion goal? If you wish to attach additional information to your annual report, please send those items or electronic files to your LAMD representative and include a brief description of those files below.

   Response

   Yes. 2009 AR Update. The Town's diversion program implementation and disposal reduction results are primarily due to many parties, namely: (1) Mono County for programs implemented at the Benton Crossing Landfill; (2) Mammoth Mountain Ski Area; (3) Sierra Conservation Project; (4) Mammoth Disposal; and (5) the Town governance. Additional partners in the governmental and commercial sectors have contributed to the Town's diversion results. The Town appreciates the contributions made by these entities and also the work of the CalRecycle staff involved in the EAR reporting for simplifying the reporting process. Adminsitrative request -

please change fax number for Town contact Mike Grossblatt to (760) 934-7493.

SRRE and HHWE Diversion Programs

1000-SR-XGC (Xeriscaping/Grasscycling)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 400.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Selected Program Details: Grasscycling

Jurisdiction Notes

2009 AR. Grasscycling at two golf courses, primary Town street mediums and parks, during warm weather months (typically May through September) continues to be practiced.

1010-SR-BCM (Backyard and On-Site Composting/Mulching)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR. Little diversion is realized from this program due to weather impacts and a transient population. Nevertheless, the Town encourages property owners and dwellers to practice backyard composting, where feasible.

1020-SR-BWR (Business Waste Reduction Program)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No significant change in program implementation. Mammoth Mountain Ski Area (MMSA) leads program implementation by example. Source reduction activities continue to be implemented, included double-sided copying, use of multiple use beverage containers, etc.

1030-SR-PMT (Procurement)

Current Status: SO - Selected and Ongoing

Program Start Year: 2003
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

2009 AR. No change in program implementation. Town supports procurement of materials, which contain recycled products.

1050-SR-GOV (Government Source Reduction Programs)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

2009 AR. No change in program implementation.

1060-SR-MTE (Material Exchange, Thrift Shops)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1998
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see prior year notes (2002-2008), which summarizes program implementation.

2000-RC-CRB (Residential Curbside)

Current Status: AO - Alternative and Ongoing

Program Start Year: 2000
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Selected Program Details: Multi-family residences | Single-family residences | Commingled (Single-stream) | Source separated | Film Plastic | Glass | Metal | Miscellaneous paper (includes phone books, catalogs, magazines and other paper) | Newspaper | Office paper (white & colored ledger, computer paper, other office paper) | Plastic 1-2 | Uncoated corrugated cardboard and paper bags

Jurisdiction Notes

2009 AR Update. Program implementation increasing due to expansion of customer base. SCP continues to provide collection service to residents and businesses who subscribe for recycling service. Please see prior year notes (2002-2008), which summarizes program implementation. SCP residential service also includes a reminder magnet with recycling guidelines, SCP participant sticker, and e-mail pickup reminders.

2010-RC-DRP (Residential Drop-Off)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. Program offers opportunity for residents and commercial enterprises to drop-off recyclables and divertable materials at Mammoth Disposal in-town drop-off facility, Von's Grocery Store drop-off facility, and also the Benton Crossing Landfill. This program is expanded as it matures due to awareness and facility improvements.

2020-RC-BYB (Residential Buy-Back)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. Program growing in effectiveness due to familiarity and awareness. The Town, SCP, and MMSA have been remarkably effective in receiving DOC grant funds for program expansion.

2030-RC-OSP (Commercial On-Site Pickup)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Selected Program Details: Commingled (Single-stream) | Source separated | Film Plastic | Glass | Metal | Miscellaneous paper (includes phone books, catalogs, magazines and other paper) | Newspaper | Office paper (white & colored ledger, computer paper, other office paper) | Plastic 1-2 | Uncoated corrugated cardboard and paper bags

Jurisdiction Notes

2009 AR Update. Program implementation increasing due to expansion of customer base. SCP continues to provide collection service to residents and businesses who subscribe for recycling service, including The Village at Mammoth. SCP programs include office recycling, bar and restaurant recycling, and new development projects. Please see prior year notes (2002-2008), which summarizes program implementation. SCP residential service also includes a reminder magnet with recycling guidelines, SCP participant sticker, and e-mail pickup reminders.

2040-RC-SFH (Commercial Self-Haul)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Commercial sector has the opportunity to self-haul recyclables to either Mammoth Disposal Drop-off Center Von's Grocery Store Drop-off Facility, and/or Benton Crossing Landfill.

2050-RC-SCH (School Recycling Programs)

Current Status: AO - Alternative and Ongoing

Program Start Year: 2000
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. In 2009 beverage containers and white paper were added to the cardboard recycling program at the Mammoth Lakes High School.

2060-RC-GOV (Government Recycling Programs)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. The amount of white paper recycled in Town offices increased by an estimated factor of 3. White paper recycling also increased at the hospital.

2070-RC-SNL (Special Collection Seasonal (regular))

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation.

2080-RC-SPE (Special Collection Events)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. During the Town's annual cleanup campaign, pine needles, tree limbs, and pulled shrubs are collected and transferred at the MD Drop-off Facility for hauling to the BCLF, where they are diverted through grinding then used as an ADC. This program also serves to promote defensible air space by the Fire Safe Council.

2090-RC-OTH (Other Recycling)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. Other Recycling programs refer to the various programs developed and implemented by the MMSA. No change in program implementation has occurred. Please see notes for prior years from 2002-2008.

3010-CM-RSG (Residential Self-haul Greenwaste)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

3030-CM-CSG (Commercial Self-Haul Greenwaste)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

3060-CM-GOV (Government Composting Programs)

Current Status: AO - Alternative and Ongoing

Program Start Year: 2002
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

3070-CM-OTH (Other Composting)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2004-2008.

4010-SP-SLG (Sludge (sewage/industrial))

Current Status: AO - Alternative and Ongoing

Program Start Year: 1998
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008. A portion of the Benton Crossing Landfill is designated for receiving and stockpiling dewatered sludge. The sludge is generated within the Town limits. It is delivered from the Town of Mammoth Lakes to the BCLF, where it is mixed with soil, dried, then used as ADC.

4020-SP-TRS (Tires)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

4030-SP-WHG (White Goods)

Current Status: AO - Alternative and Ongoing

Program Start Year: 2000
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

4040-SP-SCM (Scrap Metal)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990
Report Year Diversion Tons: 0.00

Existed before 1990: Yes
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

4050-SP-WDW (Wood Waste)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

4060-SP-CAR (Concrete/Asphalt/Rubble)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1995
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Selected Program Details: Asphalt Paving | Concrete/cement | Mixed C + D

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008. A portion of the Benton Crossing Landfill is designated for receiving and stockpiling green waste, which is beneficially used as ADC. Additionally, on occasion, some C&D debris (concrete and asphalt chunks) and road grindings is used as ADC.

4090-SP-RND (Rendering)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 Update. No change in program implementation. Please see program status notes for years 2002-2008.

5000-ED-ELC (Electronic (radio ,TV, web, hotlines))

Current Status: SO - Selected and Ongoing

Program Start Year: 1997
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. Town Manager's Office promotes electronic medium and uses it to publicize recycling as does the MMSA and Sierra Conservation Project (SCP). MMSA's website address is www.mammothmountain.com/docs/assests/recycle_village.pdf. SCP's web address is www.recyclesierra.com. Additionally, program implementation of residential curbside collection and commercial onsite pickup increasing due to expansion of customer base. SCP continues to provide collection service to residents and businesses who subscribe for recycling service. Please see prior year notes (2002-2008), which summarizes program implementation. SCP residential service also includes a reminder magnet with recycling guidelines, SCP participant sticker, and e-mail pickup reminders.

5010-ED-PRN (Print (brochures, flyers, guides, news articles))

Current Status: SO - Selected and Ongoing

Program Start Year: 1997
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

2009 AR Update. Program implementation of residential curbside collecton and commercial onsite pickup increasing due to expansion of customer base. SCP continues to provide collection service to residents and businesses who subscribe for recycling service. Please see prior year notes (2002-2008), which summarizes program implementation. SCP residential service also includes a reminder magnet with recycling guidelines, SCP participant sticker, e-mail pickup reminders, and other print medium increased likewise.

5020-ED-OUT (Outreach (tech assistance, presentations, awards, fairs, field trips))

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. Program implementation increasing due to expansion of customer base. SCP continues to provide collection service to residents and businesses who subscribe for recycling service. Please see prior year notes (2002-2008), which summarizes program implementation. SCP residential service also includes a reminder magnet with recycling guidelines, SCP participant sticker, and e-mail pickup reminders. Additionally, Mammoth Mountain Ski Area (MMSA) has been recognized a number of times by the State of California for its outreach recycling activities and has received multiple DOC grants.

5030-ED-SCH (Schools (education and curriculum))

Current Status: SO - Selected and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

6010-PI-EIN (Economic Incentives)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Selected Program Details: Differential tipping fee | Grant

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008. Grants from the DOR have provided significant economic incentives for expanding recyclables collection and processing (MMSA, SCP, and Mammoth Disposal).

6020-PI-ORD (Ordinances)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1991
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: Yes

Selected Program Details: Recycled content procurement

Jurisdiction Notes

2009 AR Update. The Town has not yet developed a C&D debris diversion ordinance. However, the Town has worked with the County in support of the development of a countywide ordinance. Additionally, the Town has supported economic incentives for diverting C&D debris and also imposed diversion requirements through the building permit process.

7000-FR-MRF (MRF)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No significant change in program implementation. Please see notes for prior years from 2005-2008. The economic downturn has significantly affected the Town's ability to expand the current drop-off facility. The proposed facility is planned for 3 acres whereas the current facility is approximately 2 acres. It is estimated that the facility expansion will cost $7,000,000. The Town is also working with the County on an analysis by HDR Engineering concerning the network and feasibility of facility infrastructure issues countywide (e.g., number, type, size, associated disposal options, cost effectiveness, marginal cost being paid by the Town to support the countywide system). The analysis will also include an assessment of long haul disposal options. The study commenced in May of 2010 and is expected to be completed by the end of the 2010/2011 fiscal year. Progress was realized between the Town and Mammoth Disposal when negotiations for a new franchise agreement were completed. Development of an expanded in-Town facility will be primarily dependent upon the economic cycle and its rebound as to when expansion will occur.

7010-FR-LAN (Landfill)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008. The diversion realized at the BCLF is the primary source of diversion quantities achieved through a variety of programs based at the LF, namely: vegetative, sludge, white goods, scrap metal, tire, wood, and inert debris diversion programs. In addition recyclables, HHW, and electronic waste, which are also dropped off at the LF.

7020-FR-TST (Transfer Station)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

7030-FR-CMF (Composting Facility)

Current Status: SO - Selected and Ongoing

Program Start Year: 2000

Report Year Diversion Tons: 0.00

Existed before 1990: No

Selected in SRRE: No

Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

7040-FR-ADC (Alternative Daily Cover)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999

Report Year Diversion Tons: 4393.69

Existed before 1990: No

Selected in SRRE: No

Owned or Operated: No

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008. A portion of the Benton Crossing Landfill is designated for receiving and stockpiling green waste, which is beneficially used as ADC. Additionally, dewatered sludge delivered from the Town of Mammoth Lakes (where generated) is mixed with soil, dried, then used as ADC. And, lastly, on occasion, some C&D debris (concrete and asphalt chunks) and road grindings may also be used as ADC.

9000-HH-PMF (Permanent Facility)

Current Status: SO - Selected and Ongoing

Program Start Year: 1990

Report Year Diversion Tons: 0.00

Existed before 1990: Yes

Selected in SRRE: Yes

Owned or Operated: Yes

Jurisdiction Notes

2009 AR Update. No change in program implementation. However, the HHWCF located at the BCLF is now open 7 days a week. Please see notes for prior years from 2002-2008.

9010-HH-MPC (Mobile or Periodic Collection)

Current Status: AO - Alternative and Ongoing

Program Start Year: 1999

Report Year Diversion Tons: 0.00

Existed before 1990: No

Selected in SRRE: No

Owned or Operated: Yes

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

9030-HH-WSE (Waste Exchange)

Current Status: SO - Selected and Ongoing

Program Start Year: 2000
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

9040-HH-EDP (Education Programs)

Current Status: SO - Selected and Ongoing

Program Start Year: 1994
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: Yes
Owned or Operated: Yes

Jurisdiction Notes

2009 AR Update. No change in program implementation. Please see notes for prior years from 2002-2008.

9045-HH-EWA (Electronic Waste)

Current Status: AO - Alternative and Ongoing

Program Start Year: 2003
Report Year Diversion Tons: 0.00

Existed before 1990: No
Selected in SRRE: No
Owned or Operated: No

Jurisdiction Notes

2009 AR Update. A notable change occurred in the program implementation when SCP commenced collection of electronic waste. thereby expanding opportunities for the public to properly discard e-waste. Please see notes for prior years from 2003-2008.

APPENDIX G

Benton Crossing Landfill Staff and Duties

Landfill Supervisor

Site Management
Personnel Issues
Equipment Repair
Maintenance Worker Functions
Equipment Operator Functions

Maintenance Worker (2)

Gate Attendant
Litter Control
Snow Removal
Permanent HHW Facility Operations
Green Waste Chipping
Litter Fence Construction
Appliance Dismantling
ADC Cover and Uncover
Post Closure Maintenance
Waste Tire Management
Customer Service
HHW Load Checking

Equipment Operator (3)

Maintenance Worker Functions
Grade Checking
Equipment Maintenance
Sludge Operation
MSW Working Face Management
C&D Working Face Management
Site Grading
Road Maintenance
Metal Pile Management

Matt Carter - 760.932.5453

		Discussions
1	Shift coverage	Mon short crew (3); every other Tues (6) and thurs (6); Weds 4. No Super every other Friday. Ect. Sunday 1 maint and one operator. See schedule sheet Aug 10
2	Cross-training	Confirmed above. Maintenance worker may use light loader functions; supervisor and EO cross-trained as listed
3	Working faces daily	Two - C&D and MSW; D8. Also sludge by supervisor. CRT into overseas container; also HHW processing. Wood chipping routine; haul snow to minimize leachate (let snow go with staff reductions?).
4	What is PCM for MW	Erosion control; wood chip application;
5	Who is being considered?	MW let go
6	Sludge Operation	Took over for contractor that required. $50/ton to City continued.
7	Could Supervisor also be EO?	Yes
8	Grade checking include survey work?	Yes.

STAFF WORK SCHEDULES (9 days / 80 hrs)
AUGUST 21 - SEPTEMBER 20, 2010 PAY PERIOD
BENTON CROSSING LANDFILL

DAY OF WEEK:		Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
TOM MUSIC	WEEK 1			7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	8:30-12:30											7:30-5:00	7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00
	WEEK 2	OFF	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF	
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
TIM KELLER	WEEK 1		7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00		7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00	7:30-5:00
	WEEK 2	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF		
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
VACANT	WEEK 1		7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00		7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00	7:30-5:00
	WEEK 2	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF		
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
DEAN WOODRUFF	WEEK 1		7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00		7:30-5:00	7:30-5:00	8:30-12:30										7:30-5:00	7:30-5:00
	WEEK 2	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF					1:00-5:00	OFF	OFF	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	OFF		
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
DAVID CAMPBELL	WEEK 1					7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30								7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30						
	WEEK 2	7:30-5:00	OFF	OFF	OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF		OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
DON FRANKLIN	WEEK 1					7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30								7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30						
	WEEK 2	7:30-5:00	OFF	OFF	OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF		OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF
		21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep		7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
STEVE JOHNSTON	WEEK 1					7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30								7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF	8:30-12:30						
	WEEK 2	7:30-5:00	OFF	OFF	OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF		OFF							1:00-5:00	7:30-5:00	7:30-5:00	7:30-5:00	7:30-5:00	OFF	OFF

CLOSED FOR LABOR DAY HOLIDAY

DAY OF WEEK:	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday	Monday
NO. STAFF ON-SITE	3	3	4	4	7	7	4	3	3	4	7	7	4	3	3	3	3	4	7	7	4	3	3	4	7	7	4	3	3	3	4
	4.354839																														
Wk1 -0 vacant		2	3	3	6	6	4	3	3	4	7	7	4	3	3	2	3	3	6	6	4	3	3	4	7	7	4	3	3	2	3
	4.354839																														