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# Action Plan

This Action Plan is a concise, high level synopsis of the Countywide Solid Waste Management Plan (Plan). Volumes I and II of the Plan were developed by NewPoint Group Inc., Bryan A. Stirrat and Associates, the County of El Dorado Solid Waste Management Plan Committee (Committee) and County Environmental Management Department staff. The Action Plan contains the recommendations of the Committee and County staff, who took into consideration current and projected economic, demographic and community development conditions.

## Background

In August of 2008, the El Dorado County Board of Supervisors (Board) received a status report on solid waste services in the County. In March of 2009, the Board considered the options of either maintaining the current status of solid waste facilities and services or working proactively to enhance facilities and services. The Board directed staff to establish a working solid waste planning committee and identify a proactive solid waste planning approach with performance measures and an implementation timeline.

In June of 2009, the Board directed the Environmental Management Department, in conjunction with the newly established Solid Waste Management Plan Working Committee, to develop a written Solid Waste Management Plan (Plan) to manage solid waste over the next several decades. The Committee assisted County staff with the development of a Request for Proposals (RFP), which was approved by the Board and released in September 2009. The Committee reviewed the responses to the RFP and recommended the County select NewPoint Group, Inc. to write the Plan. In February 2010 the Board selected NewPoint Group, Inc. and directed Environmental Management to negotiate a contract for the development of the Plan. The Board approved the negotiated contract with NewPoint Group to draft this Plan in April 2010.

NewPoint Group conducted a comprehensive review of current solid waste conditions and provided recommendations for improving solid waste management to meet the County's future needs. To that end, the attached Volumes I and II of the Plan were developed. These volumes describe in detail the current solid waste conditions, programs and facilities in El Dorado County, current and potential future regulatory requirements, solid waste goals, and strategies for reaching those goals. Initial drafts of Volumes I and II were reviewed and revised by the Solid Waste Management Plan Working Committee and County Environmental Management Department staff.

This Plan was designed to assist the County in reaching a future 75% landfill diversion goal in the most cost-effective manner. The Plan provides a strategic roadmap to use in planning for: coordinated, countywide, and jurisdiction cooperation (via a Joint Powers Authority, or JPA on the West Slope); initiating new or enhancing existing solid waste programs and services; developing new and enhanced solid waste facility infrastructure; and maintaining solid waste flow control. The Plan includes the estimated potential diversion gains for each strategy and methods to track strategy progress.

## Jurisdiction Cooperation

To implement the strategies contained in the Plan, cooperation between jurisdictions is recommended to provide a more comprehensive, integrated waste management approach so that economies of scale can be realized and maximum diversion achieved. Currently, the two community service districts, two cities and the unincorporated areas have different programs, services, participation requirements, rate structures and franchise terms. While

each jurisdiction will maintain control over respective franchise agreements, enhanced cooperation will benefit all County jurisdictions.

In the South Lake Tahoe area, a solid waste Joint Powers Authority (JPA) was created in 1994. Under this JPA, the City of South Lake Tahoe, Douglas County and El Dorado County have successfully managed solid waste by jointly supporting facility improvements and program enhancements. These coordination efforts contributed to the South Lake Tahoe area achieving a 50% diversion level in 2004.

In an attempt to duplicate the success of the JPA model used in South Lake Tahoe, and in many other jurisdictions throughout the State, a West Slope JPA is recommended. It will include the City of Placerville, Cameron Park CSD, El Dorado Hills CSD and the County of El Dorado. The steps required to create a JPA include, but are not limited to:

1. Member agency representatives will meet to discuss JPA goals.
2. A joint powers agreement will be developed.
3. The joint powers agreement will be presented to each jurisdiction's governing body for consideration.
4. If the agreement is approved, JPA board members will be selected.

Should the West Slope JPA effort be unsuccessful, the County will still move forward with implementing the Plan.

The El Dorado County Solid Waste Advisory Committee (EDSWAC) has been instrumental in developing and overseeing the implementation of the County's Integrated Waste Management Programs. El Dorado County was the first rural California County to achieve the State Mandated 50% diversion goal for all three jurisdictions. The Committee will continue to assist in development, implementation and measurement of effectiveness of the programs.

## Strategy Evaluation

There are a total of 42 solid waste management strategies identified in the Plan. These strategies can be categorized as program strategies and infrastructure strategies. Program strategies are designed to either improve existing programs or initiate new programs. Infrastructure strategies involve upgrading existing facilities or constructing new facilities.

Some of these strategies are necessary to meet existing regulatory requirements and are not optional (Commercial Recycling Program; Construction and Demolition Recycling Ordinance; and Develop a Commercial Food Waste Collection Program). Other strategies are designed to increase Countywide diversion to meet a 75 percent landfill diversion goal. The State legislature has recently considered several bills which would increase the diversion goal to 75 percent and many California jurisdictions already have set their target diversion goal at 75 percent. The non-mandatory strategies have been prioritized from the most to the least cost-effective to implement.

If unlimited funding was available, County jurisdictions might elect to implement most, if not all, of the strategies contained in the Plan. However, County jurisdictions have a primary overriding goal of maintaining cost-effective solid waste services for residents and businesses. County jurisdictions also are constrained by the current poor economic climate which may limit

funding for new facilities and services. Based on these investment limitations, County jurisdictions must carefully prioritize which strategies to implement and when to implement them.

As shown in Exhibit 4 on page 25 of Volume I, the 42 strategies include 21 near-term strategies (2011 to 2016), 10 intermediate-term strategies (2017 to 2025) and 11 long-term strategies (2025 to 2040). The following program and infrastructure strategies are recommended for implementation by the Solid Waste Management Plan Committee and County staff. The recommended strategies are based upon cost effectiveness, return on investment and regulatory requirements. While there are costs identified for each strategy, these costs may or may not necessarily be borne by the ratepayer. Many of the costs, or portions thereof, may be negotiated with the existing or future solid waste franchise companies who wish to conduct business in El Dorado County.

The Solid Waste Management Plan Committee further recommends that the Plan and this Action Plan be reviewed at least once every five (5) years by the El Dorado Solid Waste Advisory Committee and County staff, and that adjustments to the Action Plan strategies be made as necessary to accommodate the changing economy, demographic and regulatory environmental circumstances as well as changes in technology. The comprehensive five (5) year review of this Plan should be scheduled to coincide with the 5 year comprehensive review of the County Integrated Waste Management Plan as required by AB 939.

## Program Strategies

NewPoint Group estimates that implementing all of the program strategies would result in a total increase in Countywide diversion of approximately 7.5%. The estimated maximum cost for all of these program strategies is approximately \$397,000 in initial one-time costs and \$2.4 million, per year, to sustain (shown as the sum of costs provided in Table 1 on page 4).

An efficiency factor of Tons Diverted per \$1,000 Spent is provided for each strategy. By comparing a strategy's cost with the anticipated increase in landfill diversion, Plan strategies can be ranked from most to least efficient. Table 3 in Volume I summarizes estimated diversion levels, and initial and ongoing annual costs for each strategy.

**Table 1 - Program Strategy Rankings**

Rank	Strategy Number and Name	Estimated One-Time Costs	Estimated Recurring Annual Costs	Tons Diverted per \$1,000 Spent <sup>a</sup>	Diversion Increase
1	2.2 Use Greater Pay-As-You-Throw (PAYT) Pricing Programs	\$25,000 – \$40,000	Minimal	231	0.2%
2	<b>2.5 Enhance and Enforce C&amp;D Ordinance</b>	<b>\$5,000 – \$10,000</b>	<b>\$5,000 – \$10,000</b>	<b>61</b>	<b>0.1%</b>
3	2.3 Expand Purchasing Preference Practices	\$5,000 – \$7,500	\$2,000	57	0.0%
4	1.4 Expand Mandatory Residential Collection Ordinance	\$35,000 – \$50,000	\$250,000 – \$500,000	36	3.1%
5	2.16 Implement Residential Food Waste Collection Program	\$15,000 – \$35,000	\$100,000 – \$300,000	28	1.3%
6	2.13 Enhance Home Composting Programs	\$25,000 – \$50,000	\$10,000 – \$20,000	19	0.1%
7	2.6 Expand Use of Curbside Recycling Programs	\$35,000 – \$50,000	\$250,000 – \$750,000	13	1.6%
8	<b>2.4 Implement Mandatory Commercial Recycling Program</b>	<b>\$35,000 – \$50,000</b>	<b>\$100,000 – \$300,000</b>	<b>13</b>	<b>0.6%</b>
9	2.1 Implement New Waste Reduction Actions (Commercial Facility Waste Audits)	Minimal	\$15,000 – \$30,000	13	0.1%
10	2.8 Enhance Existing School, Park, and Community Facility Recycling Programs	\$25,000 – \$50,000	\$5,000 – \$10,000	11	0.0%
11	<b>2.10 Enhance Multi-Family Recycling Program</b>	<b>\$15,000 – \$20,000</b>	<b>\$75,000 – \$200,000</b>	<b>7</b>	<b>0.2%</b>
12	<b>2.12 Implement Commercial Food Waste Collection Program</b>	<b>\$15,000 – \$35,000</b>	<b>\$200,000 – \$300,000</b>	<b>6</b>	<b>0.3%</b>
	Total	\$235,000 – \$397,500	\$1,012,000 – \$2,422,000		7.5%

Note: Mandatory program strategies are shown in bold.

<sup>a</sup> Based on average annual costs (the sum of one-time costs amortized over ten years plus recurring annual costs).

## Infrastructure Strategies

Infrastructure strategies range from siting small rural transfer stations and debris boxes (\$1.5 million initial cost, \$300,000 ongoing cost) to reopening Union Mine Landfill (\$43 to \$126 million depending on roadway construction requirements and the degree of landfill expansion efforts). Implementing all facility strategies (with the exception of the Union Mine Landfill expansion) would increase diversion by up to an estimated 12.3%. Facility strategies are summarized in Table 2, below. Table 2 is also based on an efficiency factor of Tons Diverted per \$1,000 Spent and ranked from most to least efficient.

**Table 2 - Infrastructure Strategies**

Rank	Strategy Number and Name	Estimated One-Time Costs	Estimated Recurring Annual Costs	Tons Diverted per \$1,000 Spent <sup>a</sup>	Percent Diversion
<b>West Slope MRF/Transfer Station Options</b>					
1	3.10 Implement a Modern West Slope MRF/Transfer Station	\$10,000,000 – \$15,000,000	\$200,000 – \$400,000	13	2.9%
2	1.3 Extend Use of and Modify WERS as Needed	\$1,000,000 – \$4,000,000	\$0 – \$250,000	10	0.9%
3	3.2 Implement a West Slope Eco Park	\$24,000,000 – \$39,000,000	\$500,000 – \$1,000,000	8	6.9%
<b>Other New West Slope Facility Options</b>					
1	3.9 Implement a West Slope C&D Processing Facility	\$2,000,000 – \$4,000,000	\$200,000 – \$350,000	17	2.3%
2	3.4 Implement a County Composting Facility	\$2,000,000 – \$4,000,000	\$200,000 – \$300,000	14	1.7%
3	3.5 Implement Small Volume Rural Transfer Stations and Strategically Place Debris Boxes on West Slope	\$750,000 – \$1,500,000	\$150,000 – \$300,000	Unknown	Minor Diversion, Greater Convenience, Reduced Illegal Dumping
<b>South Lake Tahoe MR/F/Transfer Station Option</b>					
1	3.8 Upgrade SLT MRF and Transfer Station for Single Stream	\$2,000,000 – \$5,000,000	–	6	0.5%
	Total				5.4% to 12.3%
<b>Union Mine Landfill Option</b>					
1	3.3 Re-open Union Mine Landfill (May be combined with other strategies: compost, MRF...)	\$43,000,000 – \$126,000,000 <sup>b</sup>	Potential Savings		May Enhance Other Strategies

<sup>a</sup> Based on average annual costs (the sum of one-time costs amortized over ten years plus recurring annual costs).

<sup>b</sup> These costs would be amortized over the new useful life of the landfill which could be as long as 29 years.

## Supporting Strategies

Several strategies do not directly increase diversion, but support the other program strategies. The creation of a West Slope JPA will coordinate strategy implementation and enhance economies of scale. Expanding the use of a Three-Cart system would contribute to the success of curbside recycling and the efficiency of a modern MRF. As shown in Table 3, supporting strategy costs are significantly less than costs for the program and infrastructure strategies and could be derived from franchise fees paid to jurisdictions or other funding sources.

**Table 3 - Supporting Strategies**

Strategy Number and Name	Estimated One-Time Costs	Estimated Recurring Annual Costs
1.1 Create West Slope JPA	\$10,000 – \$50,000	\$150,000
1.2 Conduct County Waste Characterization Studies	\$150,000	–
1.5 Create Regional JPA	\$10,000 – \$50,000	–
2.11 Expand Types of Recyclables Collected Curbside	\$5,000 – \$10,000	\$10,000 – \$20,000
2.14 Prepare for Possible Elimination of Residential Yard Waste Burning on West Slope	\$15,000 – \$25,000	\$5,000 – \$10,000
2.15 Develop Community Composting Programs	\$15,000 – \$20,000	\$5,000 – \$10,000
2.17 Advance Outreach and Education Programs	–	\$15,000 – \$20,000
2.7 Use Residential Three-Cart System (Contributes to Diversion for 2.6)	–	–
2.9 Expand Diversion Programs at Public Facilities	\$5,000 – \$10,000	\$5,000
Total	\$210,000 – \$315,000	\$190,000 – \$215,000

## Strategy Selection and Implementation

Given current economic conditions, it is reasonable to assume that the jurisdictions, residents, and solid waste franchisees could significantly improve solid waste management in the County by implementing program strategies with an efficiency rating of more than 10 tons diverted per \$1,000 spent, and selectively implementing several lower to medium cost infrastructure strategies. The strategies recommended by the Committee and County staff are the creation of a West Slope JPA, the strategy programs mandated by current regulation and the program and infrastructure strategies with cost efficiencies of at least 10 tons of diversion per \$1,000 spent. The implementation timeline and steps to achieving these recommended efficient and effective strategies are shown in Table 4.

**Table 4 – Strategy Timeline**

**Phase 1 Near-Term Strategies – 2012 to 2016**

**2012 Strategy 1.1 – Create a West Slope JPA**

- Jurisdictions meet and develop agreement
- Present agreement to governing bodies for approval
- Select Board members and Director
- Develop budget and funding mechanism
- File notice with Secretary of State

**Strategy 1.3 – Extend Use of and Modify West Slope MRF**

- Redesign WERS dirty MRF sort line to process single stream recyclables
- Purchase and install sorting equipment

**Strategy 2.5 – Enhance and Enforce the C&D Ordinance**

- Revise existing C&D Ordinance to conform with California Green Building Code
- Conduct outreach to building community
- Present draft Ordinance to Board of Supervisors
- Implement new C&D recycling requirements

**Strategy 5.1 – Identify Appropriate Performance Metrics**

- Identify metric for each selected strategy
- Track performance data

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**2013 Strategy 1.4 – Expand Mandatory Residential Collection Ordinance**

- Establish 85% collection trigger for each zip code area
- Annually determine customer percentages
- As areas reach trigger percentage, conduct outreach informing residents of mandatory collection implementation
- Develop Ordinance codifying new requirement
- Include mandatory collection outreach requirement to franchise agreements

**Strategy 2.2 – Use Greater Pay as You Throw (PAYT) Pricing Programs**

- Evaluate PAYT rate structures in other jurisdictions
- Incorporate PAYT rate structure in franchise agreements

**Strategy 2.4 – Implement Mandatory Commercial Recycling**

- Draft commercial recycling Ordinance
- Conduct public outreach
- Present draft Ordinance to Board of Supervisors
- Phase in implementation, begin with large generators

**Strategy 2.8 – Enhance School, Park, and Community Facility Recycling Programs**

- Meet with franchisees to develop program
- Franchisees will conduct outreach and implementation

**Table 4 – Strategy Timeline (continued)**

**Phase 1 Near-Term Strategies – 2012 to 2016**

**2014 Strategy 2.13 – Enhance Home Composting Programs**

- Work with the University of California Cooperative Extension to expand compost class offerings
  - Conduct outreach to publicize classes
  - Provide promotional materials to class participants
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**2015 Strategy 2.3 – Expand Use of Purchasing Preference Practices**

- Work with County Purchasing Agent to develop Ordinance
- Present draft Ordinance to Board of Supervisors

**Strategy 2.6 – Expand Use of Curbside Recycling Programs**

- Incorporate cart based collection requirement into franchise agreements
  - Conduct outreach and education to residents transitioning to cart based service
- 

**2016 Strategy 3.9 – Develop West Slope C&D Processing Facility**

- Select facility site
  - Design facility
  - Conduct CEQA process and obtain permitting
  - Construct and operate facility
-



**Table 4 – Strategy Timeline (continued)**

**Phase 2 Intermediate-Term Strategies– 2017 to 2025**

**2017 Strategy 2.1 – Implement New Waste Reduction Actions (Facility Audits)**

- Develop facility audit program components
- Conduct facility audits

**Strategy 2.11 – Expand Types of Recyclables Collected at Curbside**

**Strategy 2.12 – Develop Commercial Food Waste Collection Program**

- Conduct education and outreach
- Provide businesses with bins for compostable food scraps
- Collect and compost food scraps

**2018 Strategy 2.15 – Develop Community Composting Programs**

**Strategy 2.16 – Develop Residential Food Waste Collection Program**

- Conduct education and outreach
- Provide residents with bins for compostable food scraps
- Collect and compost food scraps

**2020-2025 Strategy 2.18 – Reduce Emissions from Collection Fleets**

**Strategy 3.4 – Develop El Dorado County Composting Facility**

**Strategy 3.10 Develop Modern and Economical MRF/Transfer Station on the West Slope**

- 7 to 15 acre parcel
- Covered building
- Modern Single Steam Sort Line

**Strategy 4.5 Create New Funding Sources and Rate Mitigation Strategies**

**Strategy 5.2 – Summarize, Evaluate and Report Metric Data**

- Compile data documenting program progress and include in reports to CalRecycle

**Phase 3 Long –Term Strategies– 2026 to 2040**

**2026 Strategy 2.14 – Prepare for Possible Elimination of Yard Waste Burning**

**Strategy 2.19 – Use Advanced Technologies for Collection Vehicles**

**Strategy 3.2 – Develop a West Slope EcoPark**

**Strategy 3.3 – Re-Open Union Mine Landfill**

**Strategy 3.6 – Plan for Conversion Technologies, if Feasible**

**Strategy 3.8 –Renovate South Lake Tahoe MRF and Transfer Station to Accept Single Stream Recyclables**

- Redesign dirty MRF sort line to process single stream recyclables
- Purchase and install sorting equipment

## Strategy Funding

Diversion programs typically come with a cost to rate payers. If the entire cost was passed on to residents, an annual increase in system costs of \$1 million could equate to a residential customer bill increase of approximately \$1.00 per month. A \$1 million investment in the County's waste management system could raise a typical average residential customer's bill from approximately \$28 to \$29 per customer per month.

**Programs:** Program strategies will be implemented by both the jurisdictions and the franchisees. Funding for those strategies may require small increases in collection fees.

**Facilities:** Any customer bill increases for infrastructure would convey an ownership percentage, creating a public private partnership of funded facilities. Rate increases may need to be phased in, in advance of facility construction. Facility costs will be amortized over the useful life of facilities.

Many of the costs, or a portion thereof, associated with new programs and/or facilities may be negotiated with current or future solid waste franchise companies who wish to conduct business in El Dorado County.

## Conclusion

The combination of strategies identified in the Plan could increase the Countywide diversion rate to approximately 77% and potentially higher compared to the most recent 2010 diversion rates for each of the 3 jurisdictions. The strategies recommended by the Committee and County staff are the creation of a West Slope JPA, the strategy programs mandated by current regulation and the program and infrastructure strategies with cost efficiencies of at least 10 tons of diversion per \$1,000 spent. The cost efficient infrastructure strategies are:

- Develop West Slope C&D Processing Facility,
- Develop County Composting Facility, and
- Develop Modern West Slope MRF/Transfer Station

The following Volumes I and II contain extensive background information supporting this Plan. The method for determining strategies, and the strategies selected in this Action Plan may be revised based on public input and Board of Supervisors direction.

The Environmental Management Department and EDSWAC would like to thank the Solid Waste Management Plan Committee for their commitment, diligence and dedication to complete a comprehensive long range Solid Waste Management Plan for the County of El Dorado. With your help and recommendations, we have developed a plan that will prepare the County for a successful solid waste program.