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AB 447 Testimony
Jason Geddes, Ph.D. Assembly District-24, Washoe County

- ❖ NRS 444A.040 Availability of programs for recycling or disposal of solid waste.
 - The recycling program was added to the NRS starting in 1991
 - AB 447 proposes to add separation at the source of recyclable material for multifamily dwellings
 - A study of Clark County recycling program by the Tellus Institute for the EPA region IX reports that currently there is no access to the recycling program for multifamily dwellings. Most multifamily unit buildings cannot easily accommodate recycling bins and do not receive them
 - A suggestion to remedy this would be to either offer larger recycling bins in a centralized location or provide clearly marked 90 gallon totes situated near dumpsters.
- ❖ NRSA.020 Establishing standards for recycling or disposal of solid waste; goal of standards
 - Established recycling centers, separation at source recycling and goal of recycling.
 - NRSA.020 (2) The regulation adopted in 1991, pursuant to subsection 1 must be adopted with the goal of recycling at least 25 percent of the total solid waste generated within a municipality after the second full year (1993) following the adoption of such standard.
 - According to the EPA study, Clark County's current recycling rate is 4 percent.
 - NRSA.020 (2) clearly states that the goal for reduction of recyclable material reaching the landfill is 25 percent.
 - Refer to recycling rates handout
 - According to the EPA 2001 Recycling Report, the quantity of municipal solid waste diverted from landfill disposal has fallen in the last three years both in absolute value and as a percentage of the total quantity of municipal solid waste generated. The recycling rate in Nevada has declined from approximately 14.5 percent in 1997 to 11.3 percent in 1999. This trend can be linked to the steady decline of recycling in Clark County.
 - There are two important reasons for this performance: poor markets for recyclables and lack of convenient recycling in Nevada.
 - ◆ Analysis shows If a convenient method for recycling is available, people will continue to recycle materials regardless of market value.
- ❖ There are several possible factors why the recycling percentage for Clark County is so low.
 - Frequency of solid waste pickup
 - ◆ It is currently picked up twice a week
 - ◆ The capacity of the solid waste can is 33 to 90 gallons
 - The Franchisee receives compensation for collecting recyclables from every residence whether or not the residence receives the service.
 - ◆ Recycling and solid waste collection is covered by a single fee
 - Some customers are not even aware that they are paying for the recycling service
 - Showing customers where their fees are going would be an incentive to recycle

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ASSEMBLY NATURAL RES., AGRICULTURE & MINING
DATE: 3/31/03 ROOM: 3161 EXHIBIT P 1-5
SUBMITTED BY: Jason Geddes

- The Solid waste bill should clearly state where customer's fees are being allocated
- Recycling is picked up every other week
 - ◆ As stated by the EPA study, this causes customers to have to actively remember which is a recycling week.
 - ◆ According to psychological principles, environmentally responsible behaviors are often matters of personal habit or household routine (Stern, 2000).
 - Picking up recyclables every other week makes it more difficult to establish these
- Again according to the EPA study the 39+ year contract term may cause the Franchisee to be less responsive to the county to meet minimum service requirements
 - ◆ The long contract term might encourage the county to avoid actions that might precipitate premature termination of the contract since this would create prohibitive compensation costs.
 - ◆ However, the Franchisee has a countervailing incentive to maintaining service quality above a level that might allow the County to terminate their contract with cause
 - Contract termination with cause would deny the Franchisee significant revenue that would have been earned in the unfulfilled contract term.
- The EPA study suggests financial incentives for raising recycling diversion rates over a specified level.
 - The core elements are to place a cap on overall disposal and recycling rates or fees, and a remuneration system that allows the contractor to retain some or all of the cost savings and/or additional revenue from increased diversion and sale of recyclables.
 - ◆ Another suggestion is for the County to set performance based targets tied to overall recycling rates, similar to the scenarios presented in the handout.
 - As an incentive to encourage recycling diversion, the Franchisee receives all or a portion of the net benefits from achieving the performance targets.
 - ◆ According to the EPA study, current reporting to the County is not frequent or detailed enough to enable meaningful analysis, spot trends or identify opportunities. With the current data, the County cannot develop a clear picture of the relative contribution of residential and commercial sectors to the solid waste stream and diverted recyclables, participation rates and patterns.
 - Currently, the Franchisee Agreement requires reporting of very little performance data, what is required is highly aggregated and cannot be used to identify areas for improvement.
 - A suggestion would be to require more detailed performance reporting.
 - ◆ Analysis by the EPA study shows that if the Franchisee increased recycling they would also increase their own profit
 - *Refer to handout*
- NRS 444A.110 Program of public education concerning disposal of solid waste, recycling, reuse and waste reduction.
 - ◆ (1) The division of environmental protection shall develop a program of public education to provide information, increase public awareness of the

individual responsibility of properly disposing of solid waste and encouraging public participation in recycling, reuse, and waste reduction. The program must include promotion of the private and public efforts to accomplish conservation, recovery, and reuse.

- This statute was added to the NRS beginning in 1991.
- A relatively limited biennial advertising is required of the municipality by the state (NRS 444A.050).
- ◆ Amend NRS 444A.050 recycling education program
 - Change biennial advertising to tri-annually; prepared by NDEP with Franchisee sending flyer out.
 - Send out flyers providing detailed information about what can and cannot be recycled, how to properly prepare recyclables for recycling, and where drop off locations are situated.
 - Include in flyer, information on items that are not well known that can be recycled.
 - Such as: paperboard, brown paper bags, and office paper
 - Empathize importance of recycling and conservation.
 - Pro-environmental behaviors becomes more probable when an individual is aware of harmful consequences to others from a state of the environment and when that person ascribes responsibility to himself for changing the offending environmental condition (Stern, Dietz, & Kalof, p.324, 1993)
 - Coincides with NRS 444A.110 (1) "increasing public awareness of the individual responsibility...."
 - In order for people to recycle on a regular basis, they must hold positive recycling attitudes (reasons to continue with current behavior or begin behavior) and they must have positive experiences associated with recycling (Werner, and Makela, 1998)
 - There are many more psychological studies that have been performed to evaluate recycling behaviors.

References

- Tellus Institute (2002). *Assessing the Potential for Resource Management in Clark County, Nevada*. A Report Prepared for: US EPA Region IX.
- Stern, P. (2000). *Toward a Coherent Theory of Environmentally Significant Behavior*. *Journal of Social Issues*, 56(3), 407-424.
- Stern, P., Dietz, T., Kalof, L. (1993) *Value Orientation, Gender, and Environmental Concern*. *Environment and Behavior*, 25(3), 322-348.
- Werner, C., & Makela, E. (1998). *Motivations and Behavior that Support Recycling*. *Journal of Environmental Psychology*, 18, 373-386.
- Department of Conservation and Natural Resources

Definition of Environmental Psychology-*is the study of relationships between behavior and experience and the built and natural environments.*

Table 4: Clark County, NV Cost/Benefit of Increased Diversion of Recyclables from Residential Waste Stream

	Recycling rate		Land disposal (avoided costs)	Recycling revenue	Cost of Increased Recycling	Net gain or loss
Cost/Benefit (per ton):			\$4	\$81	(\$27)	\$38
Scenario 1						
	4%	Tons of waste/recyclables	993,522	37,747		
		Total revenue/cost	\$4,212,534	\$2,287,103		
Scenario 2						
	8%	Tons of waste/recyclables	948,787	82,502	82,502	
		Total revenue/cost	\$4,022,774	4,998,820	(\$2,237,441)	
		<i>Difference from baseline</i>	\$189,760	\$2,711,717	(\$2,237,441)	\$664,036
Scenario 3						
	12%	Tons of waste/recyclables	907,517	123,752	123,752	
		Total revenue/cost	\$3,847,871	7,498,230	(\$3,356,162)	
		<i>Difference from baseline</i>	\$364,663	\$5,211,127	(\$3,356,162)	\$2,219,629
Scenario 4						
	25%	Tons of waste/recyclables	773,452	257,817	257,817	
		Total revenue/cost	\$3,279,435	15,621,312	(\$6,992,003)	
		<i>Difference from baseline</i>	\$933,099	\$13,334,209	(\$6,992,003)	\$7,275,305
Scenario 5						
	35%	Tons of waste/recyclables	670,325	360,944	360,944	
		Total revenue/cost	\$2,842,177	21,869,837	(\$9,788,805)	
		<i>Difference from baseline</i>	\$1,370,357	\$19,582,734	(\$9,788,805)	\$11,164,286

Table 6: Net benefit of increased recycling in Clark County¹

Per Ton		\$4	\$81	\$27	\$38
Scenario 1	8%	\$189,760	\$2,711,717	\$2,237,441	\$664,036
Scenario 2	12%	\$364,663	\$5,211,127	\$3,356,162	\$2,219,629
Scenario 3	25%	\$933,099	\$13,334,209	\$6,992,003	\$7,275,305
Scenario 4	35%	\$1,370,357	\$19,582,734	\$9,788,805	\$11,164,286

1 - Summary of data from Table 4

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County	Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Clark	MSW Disposed (tons)	1227750	1763739	1853433	1862657	2029445	2138147	2312247	2467571	2338305	1922073
	MSW Generated (tons)	1227750	1772015	1869885	1878523	2047323	2157678	2327935	2483805	2356737	1942284
	Imports Disposed (tons)	0	0	0	0	0	3	0	0	0	0
	I&S Disposed (tons)	215808	69094	140891	509091	529532	522068	984586	912847	1192064	1457888
	Diversion (tons)	No Report	374080	266618	340032	362642	266258	211601	303211	No Report	
Recycling Rate		17%	12%	15%	15%	15%	11%	8%	11%		
Washoe	MSW Disposed (tons)	0	0	0	0	0	0	0	0	0	0
	MSW Generated (tons)	389042	395724	437753	448191	493835	504964	518266	531613	554249	574436
	Imports Disposed (tons)	0	0	0	0	0	0	0	0	0	0
	I&S Disposed (tons)	0	0	0	0	0	0	0	0	0	0
	Diversion (tons)	15255	44501	68307	96020	142391	133446	139104	158797		
Recycling Rate	4%	10%	13%	18%	22%	21%	21%	23%	Not Calc.		