

# SOLID WASTE MANAGEMENT PLAN

## ESMERALDA COUNTY, NEVADA

Prepared by

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## I. INTRODUCTION

Primary responsibility in Nevada for solid waste management [SWM] rests with the local citizenry and the county government. The State gave regulatory oversight to the Nevada Division of environmental Protection [NDEP] for ensuring that the citizens of the state are served by the solid waste management system. Each county or health district is required to submit a solid waste management plan [SWMP] to the NDEP for review and approval.

This document was prepared in accordance with Nevada Administrative Code [NAC] 444.658 in order to provide the NDEP with a review of current conditions in landfills and solid waste collection services, projections of population and solid waste generation growth, and options, recommendations, and strategies for a waste management system as they exist in the county of Esmeralda, Nevada. The purpose of this SWMP is to ensure that the County's municipal solid waste [MSW] is properly managed to protect the public health and the environment in accordance with state and local regulations.

### JURISDICTION

The jurisdiction of this SWMP encompasses all of Esmeralda County and municipalities therein. There are no incorporated cities in the County. The entire County is administered by the Board of Commissioners. The Commission is made up of three members each representing population centers within geographic areas. District 1, is the eastern most encompasses the unincorporated Town of Goldfield, the County Seat. The central District 2, contains the unincorporated Town of Silver Peak, and other areas of population concentration namely: Lida, Coaldale Junction, Lambertucci Roma Trailer Park, and the Tonopah Apartments. District 3 is the western most and includes Dyer and the remainder of the Fish Lake Valley. [refer to Attachment A for a map of Esmeralda County].

The Esmeralda County boundary line runs through Tonopah, Nevada. All citizens residing within this area utilizes the Tonopah Landfill in Nye County and fall outside the jurisdiction of the SWMP. There are no inter-local agreement between Nye County and Esmeralda County having to do with Tonopah residents living in Esmeralda County utilizing the Tonopah Landfill.

### DEMOGRAPHICS AND COUNTY CHARACTERISTICS

Esmeralda County is located in Southwest Central Nevada and is bordered by California on the west, Nye County, Nevada on the south and east and Mineral County on the north [refer to Attachment A]. It has a total area of 3,570 square miles. The County is rural in nature and the population centers are widely scattered. According to an estimate by the Nevada Department of Taxation Nevada State Demographer, NSBDCUNR the population in Esmeralda County for 2005 was 1,276.

The unincorporated towns of Goldfield and Silver Peak are the only "urban" areas present in the county covered by this SWMP. Both got their start when rich precious metal deposits were discovered. Goldfield, the County Seat, was once Nevada's largest population center. There are no major mines operating in the Goldfield area at this time, however, mineral deposits still exist. In recent years the economy in Goldfield has been based upon tourism and government entities, the chief source of employment. Silver Peak remains a mining town with Chemetall Foote, Inc. and its contractor San Roc Construction as the major employer.

Fish Lake Valley with Dyer as its' center is estimated to be the largest population area. Agriculture remains the largest component in the Fish Lake Valley economy. The occupied portion of the valley is about twenty miles along SR264. Residences are widely disbursed. This area of the county is expected to continue to grow because of the availability of private land for development and the attractiveness of the area as a location for retirement and recreation homes.

Lida has historically been a ranching area with a minimal population. This is expected to change because recently the Lida Ranch was sold and it is reported that residential development is planned by the new owner. In addition, the Timbisha-Shoshone Tribe has plans to develop their lands adjacent to the town.

Goldpoint got its' start as a mining town. It retains a few residents today as a ghost town catering to tourists. Esmeralda County has endeavored since 2000 to resolve a land ownership issue through federal legislation. When the legislation passes it is expected that Goldpoint will also experience moderate population growth.

The population of each community is summarized below:

Population Area	Estimated Population 2005	Source
Goldfield	438.....	State Demographer
Fish Lake Valley	509.....	Balance remaining after other
Silver Peak	126.....	State Demographer
Lida/Goldpoint.....	26.....	Based on voter registration
Areas near/in Tonopah.....	125.....	Manager, Tonopah Apts
Total	1,276.....	State Demographer

The largest employer in Esmeralda County is government {federal, state, and local} according to statistics by the US Department of Commerce-Bureau of Economics Analysis and the Nevada Department of Employment Training and Rehabilitation The second largest employer is the mining industry. With Agriculture coming in third place.

The following table characterizes trends and composition in employment in Esmeralda County.

**ESMERALDA COUNTY TRENDS IN INDUSTRY AND EMPLOYMENT**

	Number employed				Percentage of total employment			
	2001	2002	2003	2004	2001	2002	2003	2004
Industry								
Agriculture, Forestry and Fishing	63	54	61	59	13.55	11.79	13.03	12.69
Mining	108	79	75	73	23.23	17.25	16.03	15.70
Construction	D	D	D	D				
Manufacturing								
Administrative and Waste Services		D	10	11			2.14	2.37
Educational and Health Services	0	0	0	0				
Finance and Insurance	0	17	18	18		3.71	3.85	3.87
Information	0	0	0	0				
Leisure and Hospitality Services	L	8	9	L		1.75	1.92	
Professional, Technical	D	D	D	D				
Real Estate, Rental/Lease	15	15	17	18	3.23	3.28	3.63	3.87
Trade, Retail	D	D	D	D				
Transportation	14	17	18	D	3.01	3.71	3.85	
Utilities	0	0	0					
Government	103	109	104	104	22.15	23.80	22.22	22.37
<b>Total Employment</b>	<b>465</b>	<b>458</b>	<b>468</b>	<b>466</b>				

Sources: U S. Department of Commerce-Bureau of Economics Analysis and the Nevada Department of Employment Training and Rehabilitation (DETR) Release Date: April 2006 and December 22, 2005 respectively

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

(L) Less than 10 jobs, but estimates for this item are included in the totals.

## H. EXISTING FACILITIES

Esmeralda County currently operates one Class II landfill, which is located in Goldfield, Esmeralda County also operates two drop box facilities which are located in Silver Peak and Fish Lake Valley. There are no other municipal landfills in the County. However, several mining companies operate private landfills.

The County operated landfill uses the trench method with one active trench, per NAC, the Class 11 site is covered with six inches of soil, or covered by an alternative cover, daily. The inactive areas of the landfill have been covered with at least two feet of soil. The landfill is fenced and gated, however there is a drop box available for use immediately adjacent to the Goldfield Landfill.

## OWNERSHIP AND LEGAL DESCRIPTIONS

Esmeralda County obtained a patent from the Bureau of Land Management [BLM] for the Goldfield Landfill site on October 23, 1990 [see Attachment C]. The Fish Lake Drop Box Facility received a patent on December 13, 2005. The Silver Peak Drop Box Facility received a patent on February 17, 2000.

### Goldfield Landfill

Legal description: T.2 S., R. 42R., Section 33, NW1/4NE1/4,NE1/4NW1/4NE1/4  
Operated by: Esmeralda County Solid Waste Department  
Patent number: 27-91-0002

### Fish Lake Valley Drop Box Facility

Legal description: T. 3 S., R. 35 E., Section 36, NE1/4NW1/4 [19.69 acres]  
Operated by: Esmeralda County Solid Waste Department  
Patent number: 27-2006-0013

### Silver Peak Drop Box Facility

Legal description: T. 2 S., R. 39 E., Section 22, NW1/4SE1/4  
Operated by: Esmeralda County Solid Waste Department  
Patent number: 27-2000-0041

## REMAINING CAPACITY

At this time there is approximately 44,000 cubic yards capacity with the trench method, in addition there is an additional 201,730 cubic yards capacity when the area method begins. Total capacity 245,730 cubic yards.

## COLLECTION SYSTEM

No local ordinances mandating garbage collection exist anywhere in the County. Each home and business is responsible for transporting its own garbage to the closest landfill or drop box Facility.

In Goldfield, the County Government contracts Ken Seeley Disposal Service to pick up garbage at public buildings, parks, and other facilities. Seeley Disposal also contracts with a few individual businesses in Goldfield. The public currently has free access to the landfill or drop box facilities.

## III. SOLID WASTE INVENTORY

### MUNICIPAL SOLID WASTE

A study of the composition of waste streams in Nevada was published in the Nevada Solid Waste Management Plan 1992. A comparative analysis of sampling done at six rural landfills yielded the following characterization of rural solid waste composition in Nevada. Since none of the landfills surveyed had scales, the values given are percentages based on volume.

#### WASTE COMPOSITION IN RURAL NEVADA COMMUNITIES

Description	Percent [%]
Paper.....	33.9
Plastic	6.7
Glass	7.5
Metals	9.1
Yard Waste	5.7
Food	23.0
Other	4.2

Since the waste stream is so small, a site specific waste survey was not done in Esmeralda County. A visual inspection of the garbage and conversations with landfill operators indicate that the waste stream is fairly typical of rural communities and follows the pattern established in the above table.

## INDUSTRIAL, COMMERCIAL, AND SPECIAL WASTES

### Industrial Solid Waste

The primary industry in Esmeralda County is the mining industry. Wastes generated due to mining activities are specifically exempted as "industrial waste" under NAC 444.585. Most, if not all, mines have their own Class III waiver landfills. The only other industrial activity that generates industrial waste as defined by NAC is construction and demolition waste. The relatively small amount of construction waste generated by the County is typically considered "inert" waste and can be landfilled.

### Commercial Waste

Commercial waste from a few saloons and restaurants in Goldfield does not contribute significantly to the waste stream. There are no other significant commercial enterprises in Esmeralda County.

### Special Waste

Esmeralda County has no large generators of special waste. Most wastes regulated as hazardous are generated in "household" quantities and are exempt from special handling procedures. The only special waste which is processed separately from municipal solid waste is oil that is burned in the oil heater at the county shops. Special waste like asbestos, medical waste, pathological waste, sewage sludge and septic tank dumping may not be deposited at the Goldfield Landfill or any of the Transfer Facilities. {See Attachment D County Ordinances}

However, the County is concerned about keeping batteries, tires, appliances, car bodies, and the small quantities of used oil thrown away as household garbage out of the landfill. These wastes are deposited in specific areas at the landfill and drop box facilities. Esmeralda County is currently stockpiling junk cars at the Fish Lake Valley Drop Box Facility until enough cars have been collected to call a scrap iron company, which will benefit the county.

## ILLEGAL DUMPS

There are no known active illegal dumps in Esmeralda County,

## IMPORTED AND EXPORTED WASTE

The County does not import or export any waste. However, a few ranches in the California portion of Fish Lake Valley occasionally dispose of wastes in the Fish Lake Valley Facility.



#### IV. POPULATION TRENDS AND WASTE GENERATION

##### RESIDENTIAL

The table below depicts past, present, and future population trends in Esmeralda County.

Waste generation estimates based on these population figures are also presented on the table using the national average of 7.55 pounds per person per day

POPULATION AND WASTE GENERATION TRENDS			
Year	Population	Waste Generation {tons/year}	Percent Increase from Previous Year
1950	614	846	---
1960	619	853	1.01
1970	629	867	1.02
1980	777	1071	1.24
1990	1,344	1852	1.73
2000	1,650	2273	1.23
2010	2,250	3100	1.37
2020	2,600	3582	1.16

Population growth in Esmeralda County largely depends on the mining industry. These estimates assume that the mining industry will remain viable, although fluctuations will likely occur as one operation closes down and others start up. Goldfield is currently experiencing a decrease in population because the only large mine in the area has closed. In any case, these projections indicate that the county is likely to remain sparsely populated.

##### NON-RESIDENTIAL

Esmeralda County has tourism. Numerous recreational opportunities exist. The County has a number of ghost towns and historic sites. Few are developed and accommodations for travelers are extremely limited.

The potential for a thriving tourist industry exists, particularly since the Historic Goldfield Hotel has been partially restored. The development of a large tourist trade in Goldfield would impact the Solid Waste System. That impact has been incorporated into the SWMP and will be reviewed and updated at least every five years, as required by NAC 444.658 {7}.

Since wastes generated by the mining industry are disposed of in privately operated landfills and do not significantly impact the municipal waste stream, no projections have been made for industrial wastes.

## V. FACILITIES: CURRENT STATUS AND COMPLIANCE

### FACILITIES, EXISTING

The landfill located in Goldfield is the only landfill in the county. The landfill and two drop box facilities [transfer stations] are patented by the Bureau of Land Management [BLM]. They are the waste disposal facilities in the county. They are located as follows: Landfill, Goldfield, Nevada; Transfer Station [drop box facility], Fish Lake Valley, Nevada; Transfer Station [drop box facility] Silver Peak, Nevada.

### FACILITIES, PROPOSED

Twenty acres surrounding a fenced in closed landfill at the North end of Fish Lake Valley was recently acquired from the BLM. A rapidly increasing residential population at the North end of this [40] forty mile long valley may require activation of this site as a drop box location in the future. Currently, the only drop box location is at the South end of Fish Lake Valley, approximately 14 miles south of the acquisition. This activation could occur by 2010.

### OPERATION OF EXISTING CLASS II LANDFILL

The single Class II Landfill, as defined by the NAC is a disposal site.

1. It is comprised of one municipal solid waste landfill unit.
2. It accepts less than twenty [20] tons of solid waste per day on an annual average.
3. There has been no evidence of contamination aground water originating from this site.
4. It serves a community that has no other practicable alternative for waste management, and
5. It is located in an area which annually receives no more than twenty five [25] inches of precipitation.

Moreover, this landfill is currently fully operational and in compliance with NAC regulations.

### COSTS TO OPERATE THE CLASS II LANDFILL

There are many factors involved with the cost of operating a Class II Landfill. A Class II Landfill must be manned during operating hours, a random screening program has been implemented and employees have been provided with drinking water, sanitary facilities, safety equipment, training and a communication system. Insurance costs, fuel costs and the weekly roll-off truck runs that are made to both transfer stations all contribute to annual costs.

Closure and Post-closure care costs are also included as an annual expense. Esmeralda County currently sets aside \$1700.00 per year for closure and post-closure purposes. It has been estimated that total financial assurance for closure and post-closure is \$20,254.84. To date \$16000.00 has been set aside for these costs. Because Esmeralda County estimates that the expected life-span of the landfill is over 90 more years [at the current disposal rates] and with the realization that costs will continue to increase. Esmeralda County plans to continue to set aside at least \$1700.00 per year, even after the \$20,254,84 has been reached. Total annual costs to

## SOLID WASTE MANAGEMENT FUNDING MECHANISM

Esmeralda County operates the landfill and transfer stations by a special assessment fund. This mechanism is outlined in Esmeralda County Ordinance #223 {see attachment D} and is an assessment of \$36.00 per each parcel of land in the county per year.

## RECYCLING AND WASTE REDUCTION

Pursuant to NRS 444A.040, Esmeralda County, having a population of under twenty-five [25,000] "may" require:

- a. The separation at the source of recyclable material from other solid waste originating from the residential premises where services for the collection of solid waste are provided.
- b. The establishment of recycling centers for the collection and disposal of recyclable material where existing recycling centers do not carry out purposes of the program.
- c. The disposal of hazardous household products which are capable of causing harmful physical effects if inhaled, absorbed or ingested. This program may be included as a part of any program made available pursuant to paragraph [a] or [b].

Esmeralda County is currently stockpiling junk cars that will be sold to a salvage company. This will create a small amount of revenue to cover costs. Used oil is burned in oil heaters to heat county road shops. Appliances containing Freon and car batteries are controlled according to applicable NRS or NAC regulations.

## ILLEGAL DUMPING

Esmeralda County Ordinance 212 [Bill # 99-003] [See Attachment D] adopted June 15, 1999, provides for criminal penalties where illegal dumping is concerned either on or off the landfill or transfer sites.

Provisions to facilities use of authorized disposal means are enhanced by an active waste management policy that provides bins for special events or as otherwise needed to collect refuse from construction or other activities that generate waste that is not prohibited for collection by other statutes. Both the County Commissioners and Esmeralda County Solid Waste Management are cognizant of this policy and may call for special measures as needed under the supervision of county waste management personnel in accordance with applicable disposal laws.

## PUBLIC EDUCATION

Public education is consistent with practices prevalent in counties with populations of forty-thousand [40,000] or less and disseminates information at public meetings, and with flyers concerning transfer station practices, hours of operation, and recycling programs.

## VI. ACTIVE PROGRAM CONFORMANCE {IMPLEMENTATION}

As outlined in this Solid Waste Management Plan, Esmeralda County has patented its existing landfill and separate drop box properties in accordance with BIM and other applicable regulations. There are two drop box sites, one in Fish Lake Valley [75 miles from Goldfield] and one in Silver Peak [30 miles from Goldfield]. All of these sites are strategically located to service the three primary population centers of this county that boasts a population of almost 1,300 souls.

## VII. CHALLENGES

Esmeralda County faces several challenges. Long distances must be traveled from existing drop box facilities to the Goldfield Landfill. That combined with high fuel prices have severely stressed the Solid Waste Departments ability to function. The Solid Waste Department is funded by a special assessment to property owners {see ordinance #223 in attachment D}. Esmeralda County is also sparsely populated and the local economy is moderate at best.

Esmeralda County is making every effort to run as efficient an operation as possible in an attempt to avoid further burdening its' citizens with more taxes,

Esmeralda County has received permission from NDEP to store junk cars, whereby an auto salvage company can crush and transport these junk cars. This will then become a means of revenue [rather than an expense] to the county.

Esmeralda County has also received an adjustment to our county landfill permit to allow the use of alternative daily cover. We are currently attempting to begin this program; however, it has been difficult to find a feasible way to cover because there is only one operator at the landfill. However, we are looking into alternatives.

Esmeralda County is also researching Nevada State Solid Waste Grant Program Opportunities in an effort to enhance solid waste management systems.

Esmeralda County, through its membership with the Nevada Association of Counties is resisting any further unfunded mandates which would further harden our ability to provide this important function.