

FINAL

1999
Data

Nevada Trends in Hazardous Waste Management



Prepared by: **The Business Environmental Program**

For:

The Nevada Division of Environmental Protection



Hazardous Waste Generation and Management in Nevada

This report summarizes hazardous waste generation and management statistics compiled by the Nevada Division (NDEP) from 1991 to 1999 (91, 93, 95, 97, and 99) Facilities that treat, store or dispose of hazardous waste or "TSDFs" are subject to State and Federal Regulations. These regulations require that hazardous waste is stored, handled and treated properly from its original generation point to its final disposal place. The regulations also require certain categories of generators and TSDFs to report their hazardous waste generation and management activities for every odd-numbered year and report their statistics in every even-numbered year. This report is called the Biennial Generator Report, and is due every two years. The data collected is used for a variety of purposes, including State hazardous waste management program planning and hazardous waste minimization program development.

The information presented here is intended to familiarize members of the general public with the activities, industries, and facilities generating hazardous waste within the state of Nevada. This report identifies the types of



hazardous waste being managed, and what steps are being taken by facilities to insure that the wastes that are generated are managed in the most environmentally sound manner. A series of charts and graphs are included to present significant facts and trends related to these issues.

What is Hazardous Waste?

Hazardous waste is a term defined in State and Federal Regulations. Waste are considered hazardous if they are ignitable, toxic, reactive, corrosive, or if they are "listed" in regulations. Examples of hazardous waste include spent degreasing solvents, spent sulfuric acid, waste mercury, and some painting waste. The law requires that hazardous waste be

transported, treated, and disposed of by specially permitted business and facilities to reduce the waste's risks to humans and the environment. The costs of this management are usually much higher than the costs associated with the management of other, non-hazardous solid waste.

Technical Assistance for Nevada Generators

The NDEP is committed to educating citizens and business about the proper management and disposal of hazardous waste, promoting source reduction and recycling as preferred waste management options, and ensuring the safe and environmentally sound management of hazardous waste generated within its State boundaries.

In support of its goal of regulatory and pollution prevention assistance, the NDEP has contracted with the Nevada Small Business Development Center (NSBDC), Business Environmental Program (BEP) to provide education, technical assistance, and outreach activities to the business

community. The NSBDC provides services statewide and operates out of the University and Community College System. BEP helps businesses understand the hazardous waste regulations and comply with them using pollution prevention and other cost effective approaches.

Any hazardous waste generator seeking assistance with waste management or waste minimization can contact BEP at (800) 882-3233 or in Clark County at (702) 866-5962. BEP's free and confidential services include assistance over the phone or on-site, training seminars, fact-sheets, and the Waste Reporter Newsletter.

What Activities Generate Hazardous Waste?

For the 1991, 1993, and 1995 reporting periods, waste generation statistics were broken down into three different types of activities: 1) One-time Waste/Cleanups; 2) Residuals; and 3) Recurrent Processes. This information was not requested for the 1997 or 1999 reporting periods. A discussion of these various activities has been included in this report because the information is relevant for the 1991, 1993, and 1995 data points.

One-time Waste/Cleanups

Cleanup activities include the remediation of contaminated sites (e.g., Superfund or other required cleanups) decommissioning and cleanup of spilled hazardous substances, generate "one-time" waste generation.

One-time hazardous waste generation was the highest in 1991 (6,880 tons, or 63% of the total amount for hazardous waste reported in the State). In 1993 (1,172 tons or 17% of the total amount of hazardous waste was generated in the State). In 1995 (334 tons or 5% of the total amount of hazardous waste was generated in the State). One-time waste generation data is not available for 1997 or 1999.

Residuals/Treatment Activities

Typically the management of hazardous waste streams result in the generation of hazardous waste treatment residue.

In 1991, 4% (430 tons) of the entire hazardous waste stream was made up of treatment residuals. In 1993 33% (2264 tons) and in 1995 3% (194 tons). Treatment residuals data is not available for 1997 or 1999.

Recurrent Processes

Waste generated from ongoing processes. Recurrent process waste presents the largest opportunity for waste minimization techniques.

In 1991 and 1993 respectively (3,633 tons) (3,449 tons) were reported. In 1995 the amount reported increased to (6,887 tons). Recurrent waste generation data is not available for 1997 or 1999.

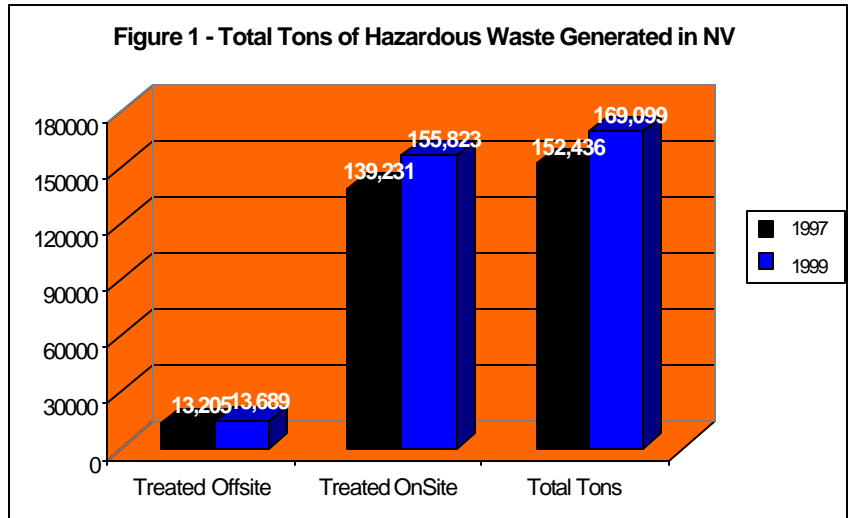
Hazardous Waste Generated Annually

In 1999, Nevada facilities reported generating **13,689** tons of hazardous waste shipped off-site to TSDFs and **155,823** tons treated on-site. For the purpose of comparison in 1997 there were a total of **13,205** tons of hazardous waste shipped off-site and **139,231** tons of hazardous waste treated on-site. Figure 1 presents total tons of (non-wastewater) hazardous waste generated in 1997, 1999 and

total tons of hazardous waste generated (both treated on-site and shipped off-site, as well as wastewaters and non-waste waters).

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Beginning with the 1997 biennial reporting cycle, EPA changed the reporting requirements for aqueous waste, commonly called wastewaters, managed in treatment systems regulated by the Clean Water Act and not by RCRA. This change to the reporting requirements makes cursory data comparisons prior to 1997 misleading.



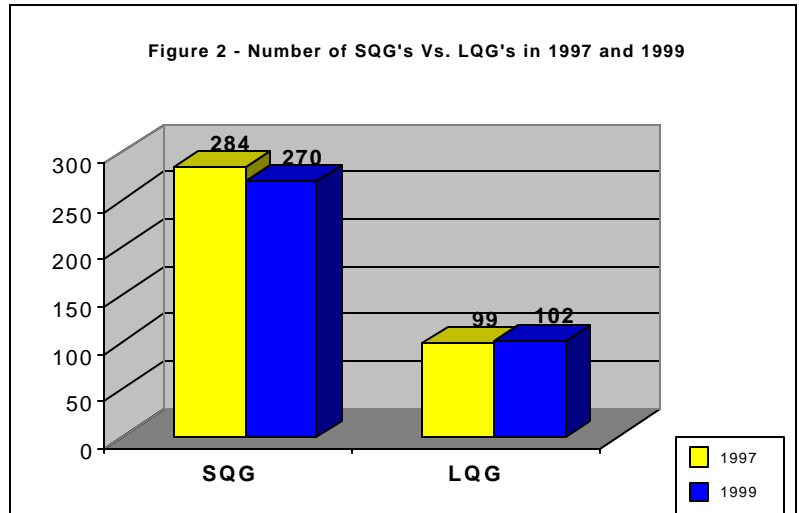
Generators of Hazardous Waste

Hazardous waste is generated from a variety of industries and types of businesses. Individual hazardous waste generators fall into one of the three “generator status” categories depending on how much hazardous waste a business generates per month, what type of waste the business generates, and/or how hazardous waste a business stores on-site at any one time. The hazardous waste regulations that apply to a business that generates hazardous waste differ, depending upon the individual business’ “generator status.” The three generator status categories are Conditionally Exempt Small Quantity Generator (CESQG), Small Quantity Generator (SQG), and Large Quantity Generator (LQG). In 1999, a total of 102 Nevada businesses reported as LQGs, 270 reported as SQGs.

In 1997, a total of 99 Nevada businesses reported as LQGs, 284 reported as SQGs.

CESQGs

Facilities generating less than 220 pounds or (100 kilograms) of hazardous waste in each month of the calendar year are considered CESQGs and have the fewest regulations to comply with. Legally CESQGs do not need to have an EPA Identification Number and do not need to submit information associated with the Biennial generator report. Many CESQGs; in Nevada ship their hazardous waste to California for treatment and disposal. California requires any business that ships hazardous waste into California to obtain either a Federal EPA Identification Number or a state of California Identification number. As a result many Nevada CESQGs



do have an assigned Federal EPA Identification Number and therefore do submit a Biennial Generator Report. CESQGs are not required to report in detail on their hazardous waste activities in the Biennial Generator Report; CESQGs solely report on business contact information (owner, mailing address, etc.) to allow the State to maintain updated files.

SQGs and LQGs

SQGs are businesses generating between 220 pounds and 2,200 pounds of hazardous waste in any one month during the calendar year. Both SQGs and LQGs are required to manage their waste according to more stringent requirements than CESQGs. Though Federal regulations do not require SQGs to Report on their hazardous waste generation activities; Nevada does require SQGs to report on their hazardous waste generation statistics as they account for a significant amount of hazardous waste generated in Nevada.

Generators of Hazardous Waste (continued)

Number of LQGs

The number of LQGs reporting in 1999 increased to **102**, reporting **169,099** tons of hazardous waste. The 1997 reporting period identified a total of 99 LQGs reporting **153,575** tons of hazardous waste. However when we exclude on-site treatment in an effort to make comparisons with previous years meaningful the 1999 reporting period identifies **98** LQGs reporting **13,686** tons of hazardous waste shipped off-site. The 1997 number excluding on-site treatment identifies 93 LQGs reporting **11,940** tons of hazardous waste shipped off-site. The 1995 reporting period identified 85 LQGs reporting 6,028 tons of hazardous waste. The 1993 reporting period identified 59 LQGs reporting 2,744 tons of hazardous waste. The 1991 reporting period identified 78 LQGs reporting 3,052 tons of hazardous waste.

Number of SQGs

The number of SQGs reporting in 1999 decreased to **250** and the volume of hazardous waste reported **2,757** tons. The 1997 reporting period identified 284 SQGs generating **1,468** tons of waste. However when we exclude on-site treatment in an effort to make comparisons with previous years meaningful the 1999 reporting period identifies **242** generators reporting **2,751** tons of hazardous waste shipped off-site. The 1997 number excluding on-site treatment identifies **258** SQGs reporting **925** tons of hazardous waste shipped off-site. The 1995 reporting period identified 237 SQGs reporting 860 tons of hazardous waste. The 1993 reporting period identified 248 SQGs 690 tons of hazardous waste. The 1991 period identified 207 SQGs reporting 581 tons of hazardous waste,

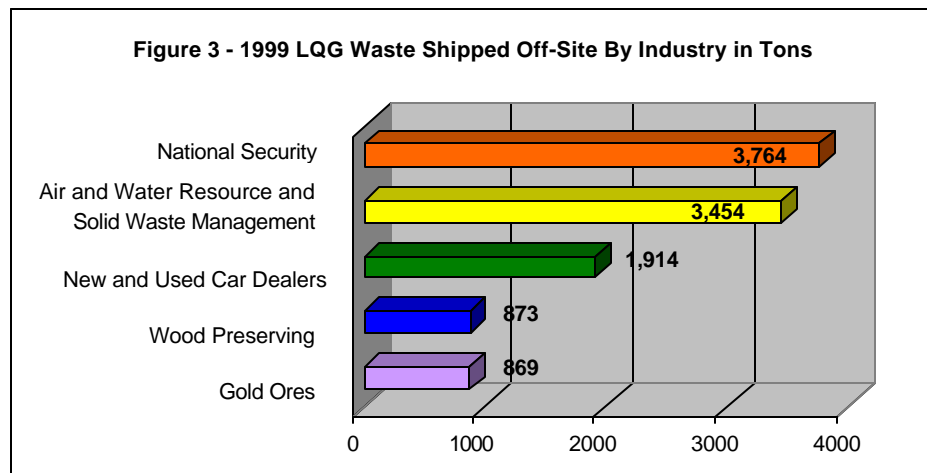
LQG Waste Generation by Industry

LQG generated a total of **13,689** tons of hazardous waste shipped off-site
 SQG generated a total of **2,751** tons of hazardous waste shipped off-site

LQG Waste Generation by Standard Industrial Classification

In 1999 the top five LQGs for total hazardous waste shipped off-site, identified by industry include:

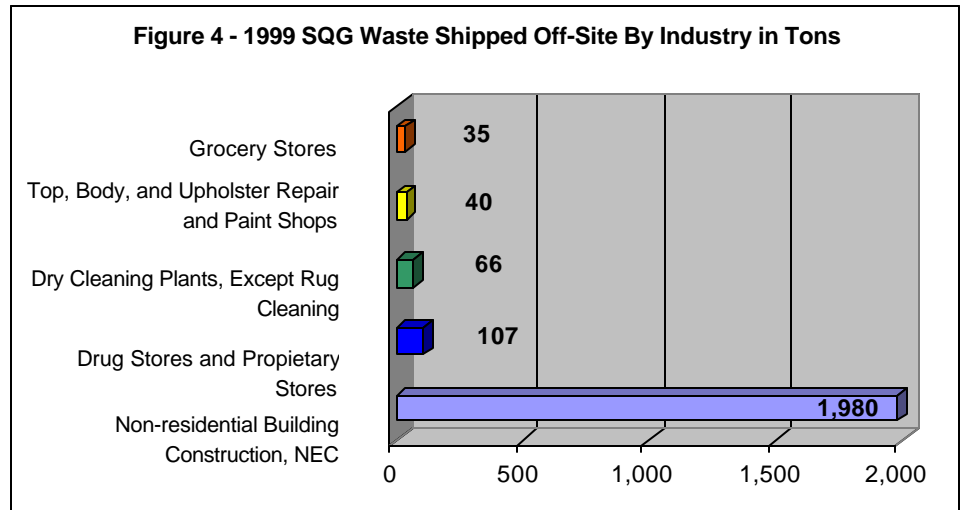
- 1) National Security (9711), 2) Air and water resource and solid waste management (9511), 3) New and used car dealers (5511), 4) Wood Preserving (2491), 5) Gold Ores (1041)



SQG Waste Generation by Standard Industrial Classification (SIC)

In 1999 the top five SQGs for total hazardous waste shipped off-site, identified by industry include:

- 1) Non-residential building construction, NEC (1542), 2) Drug stores and proprietary stores (5912), 3) Dry cleaning plants, except rug (7216), 4) Top, body, and upholstery repair and paint shops (7532), 5) Grocery stores (5411)



Individual Facilities

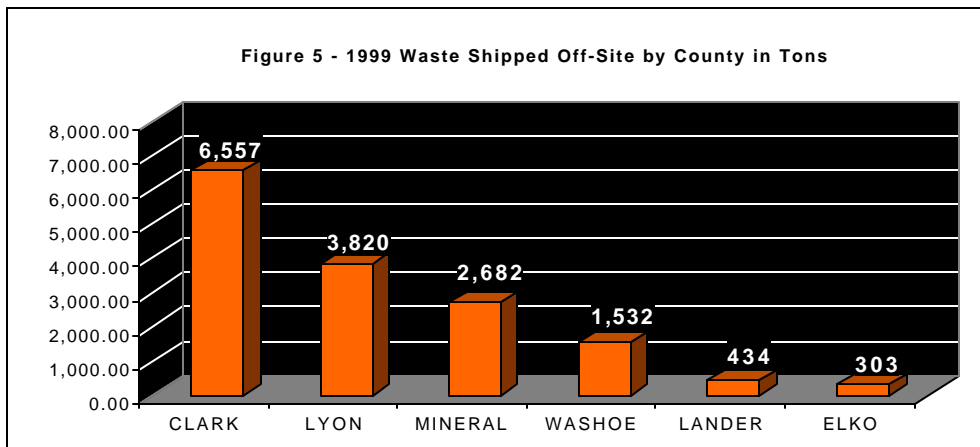
In 1999, the five largest generators of waste shipped off-site accounted for **67%** of the total hazardous waste shipped off-site by generator.

- 1) 21st Century EMI
- 2) Hawthorne Army Depot
- 3) Perini Building Co.
- 4) Chaisson Motor Cars
- 5) Nevada Wood Preserving

In 1997, the five largest generators of waste shipped off-site accounted for **59%** of the total hazardous waste shipped off-site by generator.

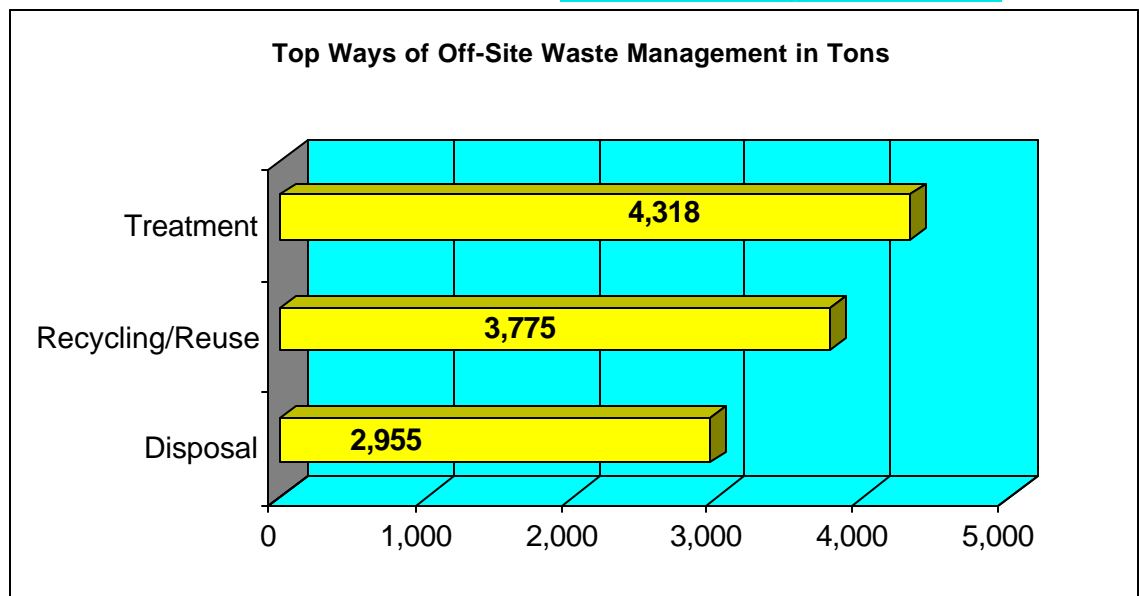
- 1) 21ST Century EMI
- 2) BLM Former Monite Exp. Factory
- 3) Hawthorne Army Depot
- 4) Bechtel NV For USDOE NTS
- 5) Safety-Kleen Corp.

Waste Generation By County



The Waste Management Hierarchy

EPA has established a “waste management hierarchy”, which reflects the public’s interest in having the waste managed in the most environmentally sound manner. At the top of the hierarchy is prevention and reduction (i.e., not generating the waste in the first place) The NDEP, encourage generators to seek opportunities to avoid generating waste from their processes. If waste cannot be completely eliminated, NDEP encourages generators to manage waste by recycling and reuse, treatment, and as a last choice disposal.



Waste Managed Through Landfilling

In 1999, a total of **2,219** tons of hazardous waste were managed off-site through landfilling.

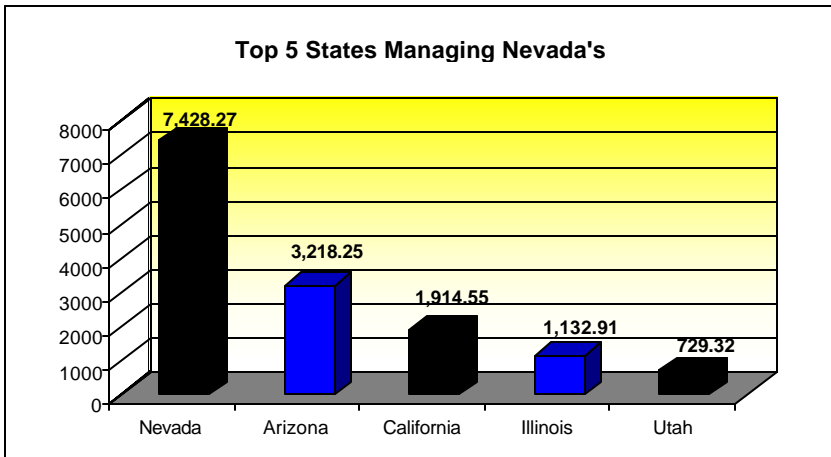
In 1997, a total of **1,132** tons of hazardous waste were managed off-site through landfilling.

Nevada generators continue to divert waste from landfilling to other more preferred waste management alternatives.

Managers of Nevada's Waste

In 1999 Nevada business generated **16,440** tons of hazardous waste shipped off-site. The majority of Nevada's hazardous waste shipped off-site for treatment and disposal were shipped to California, Illinois, Arizona, Utah, and Nevada. This reflects generators' choices of where to send their waste and the selected

type of treatment available, economics, convenience, and other factors. For example California is a state that offers a wide variety of permitted hazardous waste treatment facilities with close proximity to Nevada, thereby reducing transport time and cost.



Population Growth Impact on Waste Generation

Nevada continued to see unprecedented population growth in the 1990s.

The State Demographers Office estimated the population of Nevada at 1,779,850 in 1997. In 1999 the State Demographers Office estimated the population of Nevada at 1,967,650. This demonstrates an estimated population growth of 10.6% over the two-year period.

The three data sets appear to grow together. This may indicate a relationship between Nevada's economic and population growth and the generation of hazardous waste. A determination of the full casual chain requires a greater range of data and analysis; however this does not discount the need for increased awareness of hazardous waste and its proper management.

In 1997 the Regional Economic Measurements Division, Bureau of Economic Analysis, US Department of Commerce reported the total number of jobs in the State as 1,107,863. In 1999 the total number of jobs reported was 1,212,367. This shows a 9.4% increase in the number of jobs in Nevada over the two-year period.

The amount of reported hazardous waste shipped off-site in 1997 was **12,876**.

In 1999 the amount of reported hazardous waste shipped off-site was **16,440**.

This represents an increase of **3,564** over the two-year period.

