



# 2007

# NEVADA BIENNIAL GENERATOR REPORT



**Prepared For:**  
**THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION**

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The purpose of this report is to summarize all of the hazardous waste generation for Large Quantity Generators in the state of Nevada for 2007, as well as analyze, interpret, and compare this data to previous years, including the growth/decline of hazardous waste generation within the state. The information used to create this report was submitted by hazardous waste generators to the Nevada Division of Environmental Protection (NDEP).

**FACT:**  
**In 2007, 9,975 tons of hazardous waste were generated by Large Quantity Generators (LQGs) in the state of Nevada.**

## GENERATOR STATUS: WHAT DOES IT MEAN?

There are three categories of generator status: Large Quantity Generator (LQG), Small Quantity Generator (SQG) and Conditionally Exempt Small Quantity Generator (CESQG). An LQG is a business that generates 1,000 kilograms (kg) (approximately 2,200 lbs.) or more of hazardous waste or 1 kg (2.2 lbs.) or more of an acutely hazardous waste in a calendar month. If a business generates between 100 kg and 1,000 kg (220 lbs. to 2,200 lbs.) of hazardous waste in a calendar month, they are classified as an SQG. The lowest category is the CESQG, which includes businesses that generate less than 100 kg (220 lbs.) of hazardous waste or less than 1 kg of acutely hazardous waste in a calendar month.

The Nevada Biennial Generator Report will focus solely on data received from LQGs. Since they account for the majority of the waste generated in the state, they are the most heavily regulated all the categories. LQGs are also federally required to submit a biennial generator report. The data generated by these companies will encompass the overall generation for the State of Nevada.

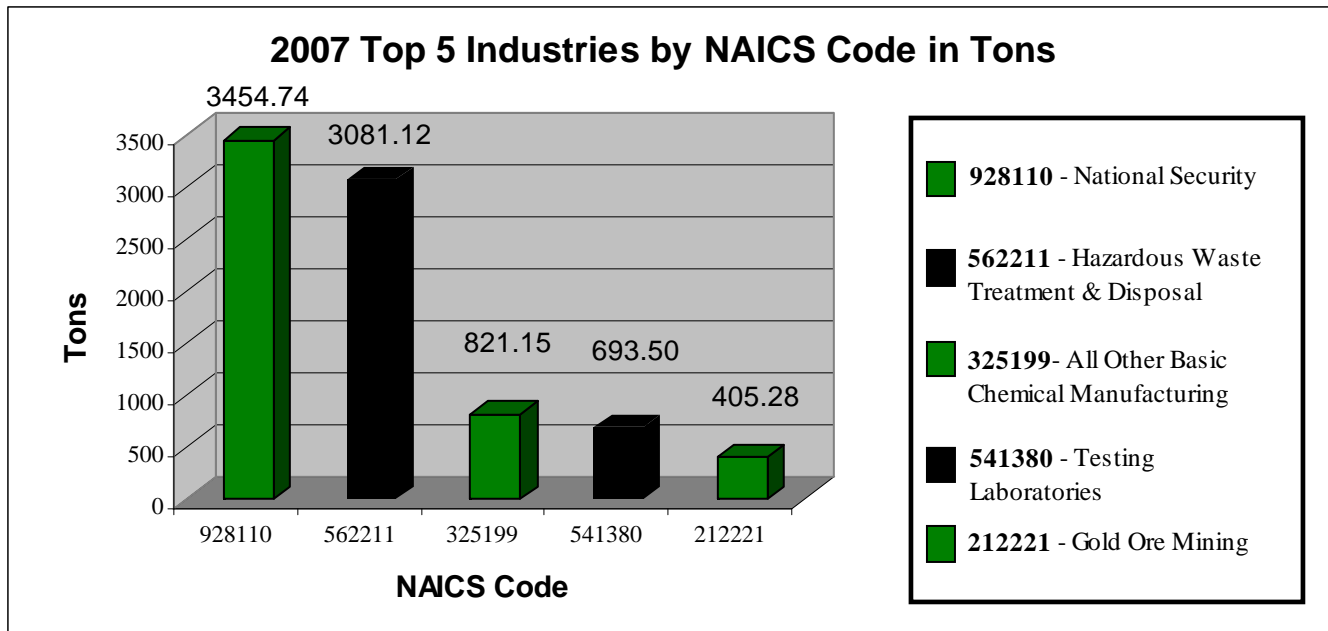
## WHAT IS HAZARDOUS WASTE?

A hazardous waste is a waste that exhibits characteristics — ignitable, corrosive, reactive, toxic — or is considered a “listed” waste. For additional information, hazardous waste regulations are located in the Code of Federal Regulations (CFR), Title 40 — Protection of Environment. Any business that generates hazardous waste is responsible for it — cradle to grave — and must manage it accordingly. The requirements that apply to a business depend on the amount of hazardous waste produced in a calendar month, referred to as generator status.



73 LQGs  
IN 2007

## TOP 5 INDUSTRIES BY NAICS (North American Industry Classification System) CODE



## ANALYSIS: TOP 5 INDUSTRIES IN 2007

The graph above shows the waste generated by the Top 5 Industries in 2007 based on NAICS code. These industries primarily performed the following activities in order to generate such waste: discarding off-specification or out-of-date chemicals or products, wastewater treatment, laboratory analytical work, and other one-time or intermittent processes.

The top generator, National Security, an industry that typically falls within the Top 5 waste generation industries in Nevada, is

fueled almost completely by the waste generation of Hawthorne Army Depot, which generated 3,151.79 of the 3,454.73 tons for this industry.

The second largest industry to generate waste, Hazardous Waste Treatment & Disposal, has also been one of the largest waste generators in recent years. For this industry, 21st Century EMI accounted for 77.9% of the generation, while Resolvent, Inc. and US Ecology made up the remainder at 19.1% and 3.0% respectively.

## ANALYSIS: TOP 5 INDUSTRIES IN 2007 (cont'd.)

The final three industries, All Other Basic Chemical Manufacturing, Testing Laboratories and Gold Ore Mining, while in the top 5, are not as significant as the prior industries discussed. Combined they generated a little more than half of quantities achieved by each of the top two industries.

The top 2 industries, which included only 9 of the 73 LQGs reporting, generated - 66.9% of the total waste generated in 2007. Three of the Top 5 industries from 2005 remain in the Top 5 in 2007. See the tables below which show the differences between 2005 and 2007.

2007 TOP TEN WASTE GENERATING INDUSTRIES		
NAICS CODE	INDUSTRY	TONS
928110	National Security	3454.74
562211	Hazardous Waste Treatment and Disposal	3081.12
325199	All Other Basic Organic Chemical Manufacturing	821.15
541380	Testing Laboratories	693.50
212221	Gold Ore Mining	405.28
493110	General Warehousing and Storage	402.87
562112	Hazardous Waste Collection	330.78
213114	Support Activities for Metal Mining	214.43
323111	Commercial Gravure Printing	196.70
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	128.66

2005 TOP TEN WASTE GENERATING INDUSTRIES		
NAICS CODE	INDUSTRY	TONS
611310	Colleges, Universities, and Professional Schools	4596.68
928110	National Security	2450.73
562211	Hazardous Waste Treatment and Disposal	2372.35
493110	General Warehousing and Storage	563.29
212221	Gold Ore Mining	470.23
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	316.08
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	296.54
323111	Commercial Gravure Printing	290.70
541380	Testing Laboratories	196.96
424950	Paint, Varnish, and Supplies Merchant Wholesalers	131.72

## TOP 5 WASTE GENERATORS

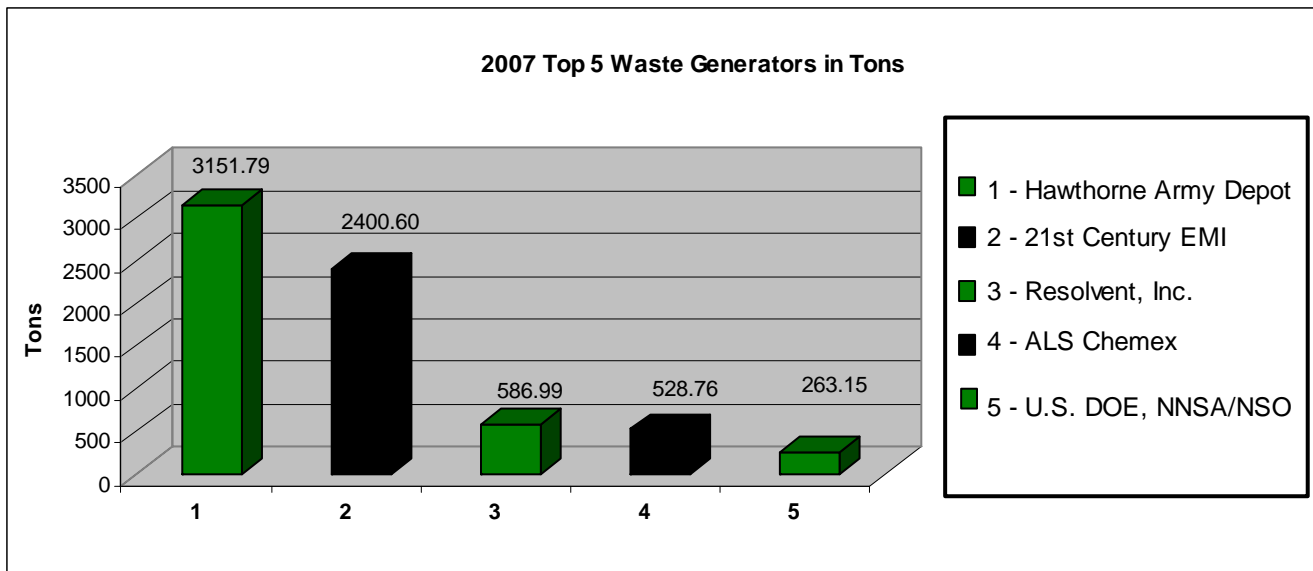
Looking at the graph below showing the Top 5 Waste Generators in 2007, we begin to see significant trends from the information provided while looking at the Top 5 waste generating industries.

The largest waste generator, Hawthorne Army Depot, a military industrial installation, falls into the largest generating industry; National Security. The fifth largest generator, U.S. DOE, NNSA/NSO also is included in this category.

Just as we would have expected, the second and third largest waste generators, 21st Century EMI and Resolvent, Inc., belong to second highest generating industry, primarily through the process of waste treatment.

**FACT:**  
**Hawthorne Army Depot generated 31.6% of Nevada's waste in 2007.**

ALS Chemex, the fourth largest generator in the state, make up for 76.2% of the Testing Laboratories industry's 693.5 tons of hazardous waste generation.



## TOP 5 WASTE GENERATORS (cont'd.)

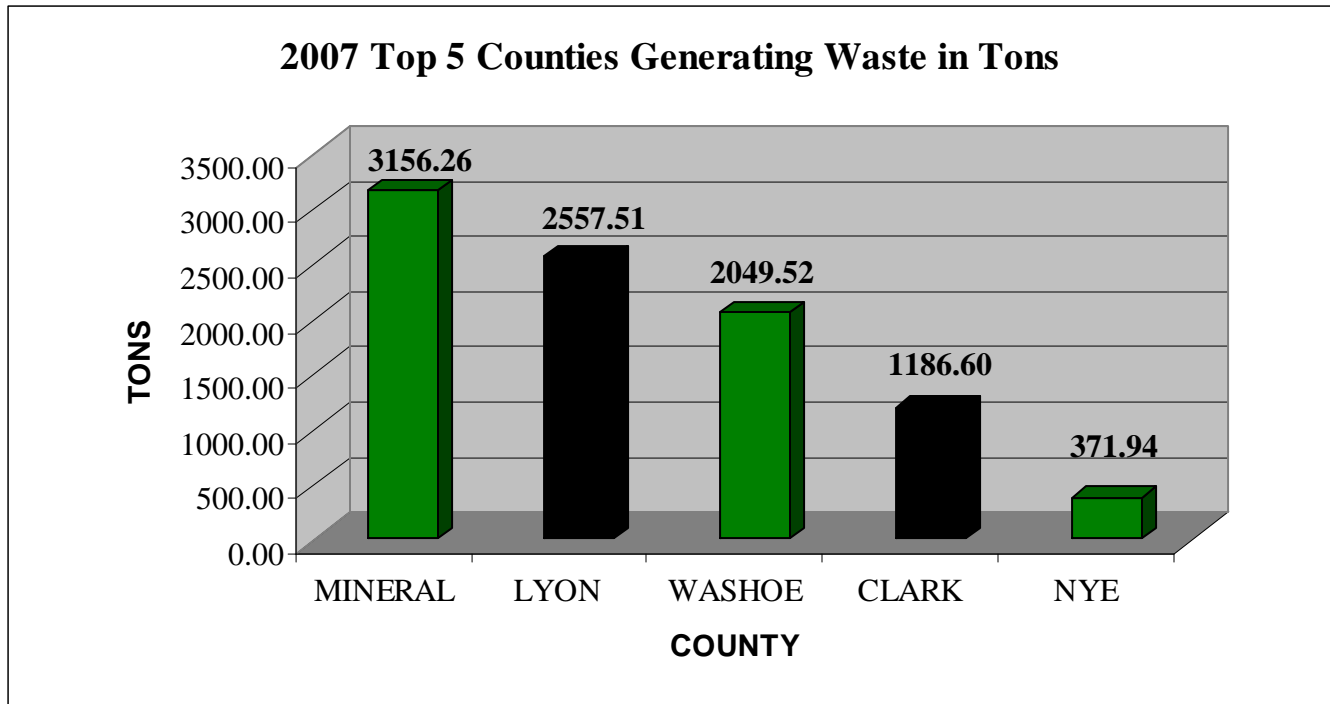
Looking back at the waste generation data for 2003 and 2005, two of these companies, Hawthorne Army Depot and 21st Century EMI, remain among the top five generators. In 2003, they generated 3,874 and 2,266 tons

respectively, while in 2005 they generated 2,301 and 2,194 tons respectively. See the tables below for a comparison of the top 10 generators from 2005 and 2007.

2007 TOP 20 WASTE GENERATORS	
GENERATOR	TONS
HAWTHORNE ARMY DEPOT	3151.79
21ST CENTURY EMI	2400.60
RESOLVENT, INC.	586.99
ALS CHEMEX	528.76
U. S. DOE, NNSA/NSO	263.14
SAFETY-KLEEN SYSTEMS INC	261.07
MONTROSE CHEMICAL CORPORATION OF CA	234.15
CORTEZ GOLD MINE-PIPELINE	222.40
AMERICAN ASSAY LAB	214.43
INSPECTORATE AMERICA CORPORATION -	164.74
THE SHERWIN WILLIAMS COMPANY RENO N	159.73
WAL-MART RC 9153	149.45
QUEBECOR WORLD NEVADA	120.05
E.I. DUPONT DE NEMOURS & CO	95.10
CAROLINA SUPPLY CHAIN SERVICES	93.67
US ECOLOGY NEVADA	93.52
R.R. DONNELLEY	76.64
CAPITAL CABINETS DIVISION OF MASTER	74.10
LAS VEGAS ARC INTERNATIONAL	69.70
ABLE WEST, LLC	56.58

2005 TOP 20 WASTE GENERATORS	
GENERATOR	TONS
RAINBOW GARDENS RESTORATION AREA	2750.65
HAWTHORNE ARMY DEPOT	2301.19
21ST CENTURY EMI	2194.47
LAVA BUTTE RESTORATION AREA	1809.52
WAL-MART RC 9153	491.44
MASTER-HALCO, INC.	296.55
GREG STREET PLATING & METAL FINISH	253.74
CORTEZ GOLD MINE-PIPELINE	217.44
QUEBECOR WORLD NEVADA	196.72
US ECOLOGY NEVADA	177.88
BARRICK GOLDSTRIKE	151.03
E.I. DUPONT DE NEMOURS & CO	131.72
LIFETOUCH PORTRAIT STUDIOS	113.20
AMERICAN ASSAY LAB	107.61
HAMILTON COMPANY	96.10
SAFETY-KLEEN SYSTEMS, INC	95.17
R.R. DONNELLEY	93.98
INSPECTORATE DBA ROCKY MT GEO	89.36
CALNEV PIPE LINE LLC LAS VEGAS TER	77.43
U.S. DOE, NNSA/NSO	76.33

## TOP 5 COUNTIES GENERATING WASTE



Analyzing the Top 5 waste generating counties in 2007, we can search for discrepancies in the data from the previous two graphs. We can also determine what counties in Nevada account for the primary waste generation.

The graph above shows us that Mineral County generated the majority (31.6%) of Nevada's waste in 2007. Mineral County, located in the west-central part of Nevada, is home to the largest hazardous waste generator in the state, the Hawthorne Army Depot, which accounts for over 99% of the generation for the county.

The second largest waste generating county, Lyon County, generated 2,557.51 tons of waste in 2007. Lyon County, located in Western Nevada below Washoe County, is composed of cities such as Dayton and Fernley, where 21st Century EMI is located and generates 94% of the county's hazardous waste.

The third largest waste generating county in 2007 was Washoe County with 2,049.52 tons between 17 reporting generators.

## TOP 5 COUNTIES GENERATING WASTE (cont'd.)

Clark County, the fourth largest generating county in 2007, had a 4,455.19 ton reduction from its 2005 figures. This drop is due to the completion of two restoration projects in that county since the last reporting period. After Clark County, waste generation by county drops significantly, as shown in the table to the right.

Looking at the relationship between these results and the previous graphs showing the Top 5 Industries and Generators, it is interesting to see that the counties of Mineral, Lyon, Washoe, Clark, and Nye show 2, 3, 17, 30, and 3 total large quantity generators reporting respectively. Notice that Mineral and Lyon have the highest levels of waste generation, yet have so few generators. This is because they house the largest generators in the state.

Hazardous Waste Generation By County		
County	# of LQGs	Tons
MINERAL	2	3156.26
LYON	3	2557.51
WASHOE	17	2049.52
CLARK	30	1186.60
NYE	3	371.94
LANDER	2	225.14
CARSON CITY	5	116.00
HUMBOLDT	3	84.96
EUREKA	2	69.93
STOREY	1	56.58
ELKO	2	44.65
PERSHING	1	38.23
WHITE PINE	1	11.56
CHURCHILL	1	5.83
TOTAL	73	9974.71

## WASTE SHIPPED OFF-SITE BY COUNTY

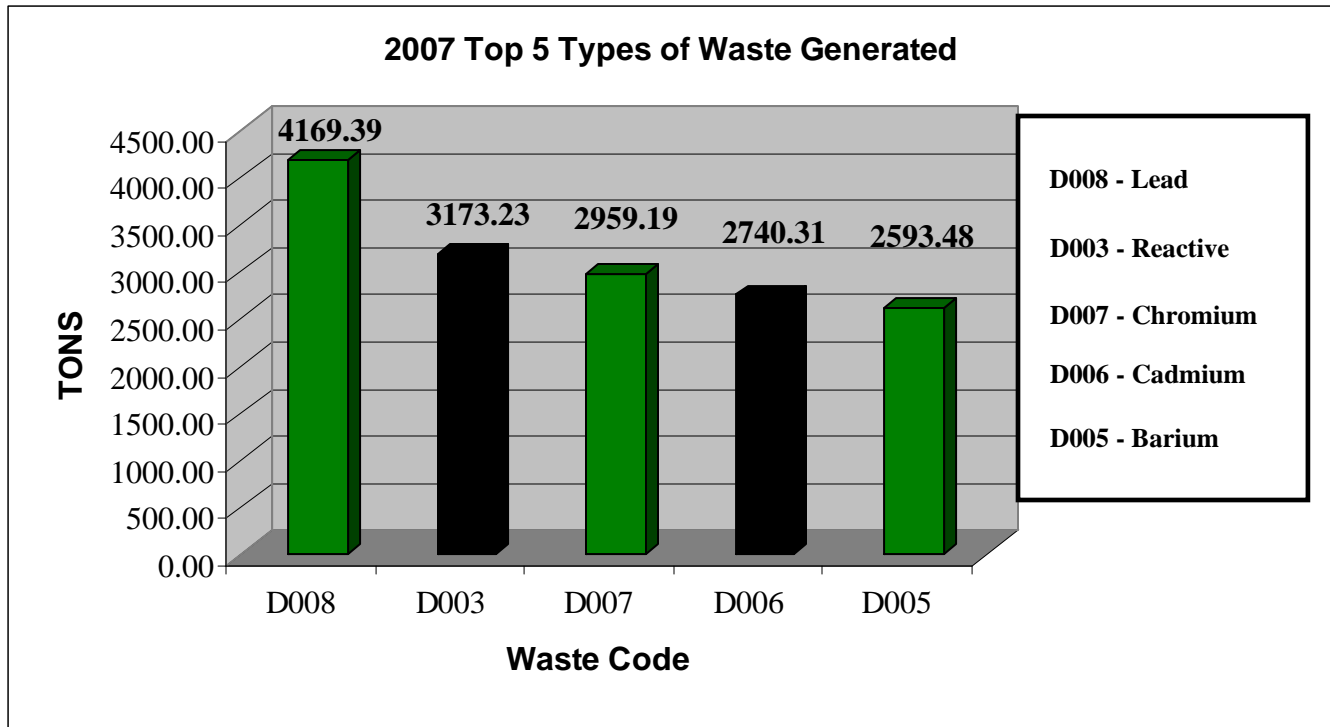
In previous years, we have analyzed the amount of waste shipped off-site by county. There has typically been a noteworthy difference between the amount of waste generated per county and the amount of waste shipped off-site.

This year, however, looking at the total quantity of hazardous waste generated by all 14 counties and comparing these numbers to the amount of waste shipped off-site by

county, we found that 98% of the waste generated was shipped off-site for treatment and disposal.

The key information that should be taken from this section is that the majority of the waste generated in 2007 was shipped off-site for treatment, rather than companies treating this waste on-site.

## TOP 5 TYPES OF WASTE GENERATED



Analyzing the types of hazardous waste generated by the total population of Large Quantity Generators in 2007, we must first take into consideration the accuracy of this data as well as the accuracy of data from years past. When reporting waste generation, generators are able to assign multiple waste codes to each waste. The problem with this is that we are unable to determine the percentage of each waste within that one report.

Some wastes are hazardous for a variety of reasons, and therefore contain multiple

waste codes. We've considered the entire quantity of that waste as being hazardous for each of those characteristics which results in multiple counting when comparing waste types.

With that, looking at the graph above, we see that the following types of waste were the primary types of waste generated in 2007:

## TOP 5 TYPES OF WASTE GENERATED (cont'd)

**Lead (D008)** - This waste has increased approximately 20% between the 2005 and 2007 reporting cycle, making it the top waste generated for this cycle. Several industries, such as mining, automotive, and manufacturing, can generate lead waste. In 2007, the top two industries that were responsible for lead waste generation were Hazardous Waste Treatment and Disposal and Gold Ore Mining.

one waste with multiple waste codes. 21st Century EMI is accountable for generating 2245.74 tons of this multi-coded waste.

**Reactive Waste (D003)** - This waste was the second highest waste produced in Nevada during 2007. The National Security industry was the top generating category and the Hawthorne Army Depot was the largest generator of reactive waste. A reactive waste is very unstable and readily, rapidly, or violently changes when exposed to water, heat, pressure, or other materials.

**Chromium (D007), Cadmium (D006), and Barium (D005)** - These three wastes, can be generated from industries such as plating, machine shops, metal finishing and printing. However, in 2007, 21st Century EMI was the largest generator of these three wastes, stemming from wastewater treatment and metals reclamation related activities. On the previous page, the chart shows these wastes generated at over 2,500 tons each. However, this is misleading because these wastes are

**FACT:**  
Lead waste in Nevada has increased 20% since 2005.

## 2007 SUMMARY

In 2007, the state of Nevada saw a significant reduction in hazardous waste generated by LQGs, generating 2,750.29 tons less than in 2005, while adding only 1 LQG in total. As a state, we generated 9,974.71 tons from 73 LQGs. The main types of waste generated in 2007 were Lead, Reactive Waste, Chromium, Cadmium, and Barium.

In 2007, the top five waste generating industries were: National Security, Hazardous Waste Treatment and Disposal, All Other Basic Chemical Manufacturing, Testing Laboratories, and Gold Ore Mining. The tables provided on page 3 show that seven of the top ten waste generating industries from 2005 still remain in the top ten in 2007.

In 2007, the top five waste generators were: Hawthorne Army Depot, 21st Century EMI, Resolvent Inc., ALS Chemex, and US DOE NNSA/NSO. Shown in the tables on page 5, eleven of the top twenty waste generating companies from 2005 still remain in the top twenty in 2007.

Perhaps the most notable change in 2007 was the drastic reduction achieved by the Colleges, Universities, and Professional Schools sector (NAICS code 611310). Their emergence as the top generating industry in 2005 was due to clean up efforts at the Rainbow Gardens Restoration Area and Lava Butte Restoration Area. These cleanups have been completed

and the land has been transferred to the BLM. As a result, this industry is no longer among the top five generators. The top five counties generating waste for this reporting period were: Mineral, Lyon, Washoe, Clark, and Nye.

**\*NOTE:**

The Nevada Division of Environmental Protection (NDEP) is committed to educating businesses about the proper handling and disposal of hazardous waste and promotes source reduction and recycling as waste management options. In support of these goals, NDEP has partnered with the Nevada Small Business Development Center (NSBDC) through the Business Environmental Program (BEP), and provided funding support since 1988, to provide free and confidential environmental management assistance to Nevada businesses. The confidential third party assistance is delivered by experienced professionals that understand the challenges of operating a successful business. BEP delivers this assistance through its toll-free assistance line and website and also provides on-site assistance, training seminars, newsletters, and fact sheets. Any business seeking assistance with waste minimization and management can contact BEP at 800-882-3233, in Clark County at 702-866-5927, or through their website at [www.envnv.org](http://www.envnv.org).