

State of Nevada Solid Waste Management Plan 2017



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Appendix 1

Amendments to the Nevada Revised Statutes
and Administrative Code

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EXECUTIVE SUMMARY

Nevada's Solid Waste Management Plan (*Plan*) provides a current snapshot of the State's existing Solid Waste Management system in accordance with applicable statutes and regulations. The *Plan* describes the roles and responsibilities of State and local government, and current trends in solid waste management. It also identifies management challenges and proposes solutions for future consideration to improve solid waste management in Nevada.

Nevada Revised Statutes (NRS) 444.570 requires the State Environmental Commission (SEC), in cooperation with governing bodies of Nevada's municipalities to develop a plan for a statewide solid waste management system. The *Plan* strives to fulfill this requirement, providing information and guidance to support:

1. The SEC in their adoption of solid waste management regulations;
2. The Nevada Division of Environmental Protection (NDEP) in their efforts to effectively allocate solid waste management resources;
3. Nevada's municipal governments in their efforts to develop and implement effective solid waste management plans and ordinances; and
4. Stakeholders and their activities to provide solid waste services to Nevada's communities and businesses statewide.

In Nevada, state and local governmental entities share certain roles and responsibilities for solid waste regulations and program management. Governmental authority is defined in the Nevada Revised Statutes (NRS) 444.440 – 444.645 (see Appendix 5), and the Nevada Administrative Code (NAC) 444.570 – 444.7499 (see Appendix 6). In Southern Nevada, the authority to regulate solid waste is assigned by statute to Clark County's Southern Nevada Health District (SNHD), and in the North to the Washoe County Health District (WCHD). NDEP is the solid waste management authority for all other counties of the State.

Regulatory programs implemented by all three solid waste management authorities (SWMA) primarily focus on the administration of the environmental protection standards for the collection

and disposal of solid waste; however, the NDEP has additional responsibilities for statewide planning, public information, and educational activities. The local municipal governments are responsible for planning and implementing solid waste management systems for the solid waste generated in their municipalities.

Statewide Trends (Section 2)

This section addresses current trends in Landfills, Collection, Waste Generation and Recycling Rates, Importation, and Data Collection and Reporting.

Noteworthy Trends...

Since the early 1990's, the major trend in Nevada's solid waste management infrastructure has been toward regionalization. Landfills range in size from the very small (3 tons per day) to one of the largest in the U.S. (Apex, according to a 2016 report, receives over 6,800 tons per day). Nevada's two largest landfills (Apex in Southern Nevada and Lockwood in the North) receive about 90% of all the municipal solid waste disposed in the entire state.

Solid Waste importation has decreased approximately 20% in the past 10 years; however, waste importation may increase due to an emerging trend toward existing landfills, and proposed new landfills, positioning themselves to accept larger amounts of imported waste.

Solid Waste Management Systems (Section 3)

The solid waste management systems in each of Nevada's 17 counties are profiled in Appendix 3. Each description includes a map of the county showing where the solid waste facilities are located, and a companion profile describing the solid waste infrastructure and services.

Solid Waste Management Issues (Section 4)

The challenges facing landfills, Recycling and Waste Prevention, Importation of Solid Waste, Special Waste Management, Rural Solid Waste Management, Illegal Dumping and Open Burning, and State and Local Funding are covered in this section. The *Plan* provides suggestions for future consideration to improve Nevada's solid waste management system.

Noteworthy Changes and Challenges...

Due to new research on traditional landfill liner requirements, the Plan recognizes that site-specific conditions are critically important in the liner decision-making process.

Nevertheless, any effort to further develop Nevada's solid waste disposal infrastructure must put the highest priority on carefully assessing new innovations in landfill design to ensure that they protect the environment.

Recycling and Waste Prevention (Section 4.2)

In 1991, Assembly Bill (AB) 320 was enacted and set the stage for Nevada's entrance into the world of recycling. Shortly thereafter, a 25% recycling goal was set in law for each municipality that is required to have a recycling program.

Noteworthy Changes and Challenges...

For the past several years, Douglas, Washoe, and Carson City counties have surpassed the 25% recycling goal. Nevada's largest county, Clark, surpassed the 25% goal in 2012, but has since struggled to repeat those numbers. Since Nevada began tracking recycling rates, the statewide rate steadily increased to over 28.8% in 2012, but has fallen back to 22.3% in 2016. Proven as a powerful tool for increasing both participation and recycling rates, the availability of single-stream recycling has expanded to approximately 90% of Nevadans through the diligent efforts of several of Nevada's larger municipalities.

As the largest county in Nevada, and as such, seen as the greatest opportunity for increasing the State's overall recycling rate, the NDEP continues to promote recycling in Clark County and has implemented even more measures to increase recycling activity.

To evaluate the pros and cons of specific types of recycling, the Nevada Legislature authorized two studies: an electronics waste (e-waste) study in 2009 and a deposit on recyclable products study in 2011. Neither study evidenced enough clear benefit to warrant passage.

In counties over 100,000 in population, a recent bill amendment mandated that recycling services must be made available to newly constructed and major renovated multi-family

dwelling (MFDs), such as apartment complexes and condominiums. For approval, plans for said construction and/or renovation must provide space for collecting recyclables on premises.

Waste Importation (Section 4.3)

Although importation has been in decline, business interests and rural community development planners are beginning to market Nevada's waste disposal capacity to out-of-state customers. Given this trend and the US Supreme Court's prohibition on restriction of waste flow, it appears Nevada will continue to receive imported waste.

Special Waste Management (Section 4.4)

Because of their physical, chemical and/or biological characteristics, "special wastes" have the potential to be hazardous to living organisms and therefore must be specially handled to prevent exposure to them or release to the environment.

Noteworthy Changes and Challenges...

Following several elemental mercury spills in school-settings, NDEP developed a webpage (<https://ndep.nv.gov/land/mercury>) and a brochure to inform the public of the dangers, proper handling and disposal of "household" mercury. A household generated solid waste with the identical characteristics of a hazardous waste is exempt from federal regulations as a hazardous waste.

Medical or pharmaceutical wastes generated by medical and veterinary facilities (e.g., businesses) are generally well-managed through the availability of commercial medical waste disposal services throughout the State. However, disposal services for home-generated medical and pharmaceutical wastes are harder to find as the demand continues to grow.

E-waste continues to grow in volume as does the concern with their components, many of which have been identified as hazardous waste (older model TV cathode ray tubes (CRTs), computer monitors, and cell phones, etc.) As industry and government at the national level search for ways to relieve the accumulation of e-waste, the emphasis in Nevada is on public

education. Informing Nevadans of recycling and disposal locations available in their areas is a key element in e-waste management. NDEP continues to provide support for e-waste collection events and promotes reclamation efforts wherever possible.

Rural Solid Waste Management (Section 4.5)

Due to their sparse populations, many of Nevada's rural municipalities are struggling to provide even the basic elements of a solid waste management system. Rural solid waste management (SWM) systems could benefit greatly from more coordinated planning efforts among communities, landfill operator training programs, and public education regarding recycling and waste reduction. Reinstating the State's recycling and solid waste grant program could provide assistance to local governments to augment their planning efforts and acquire necessary equipment.

Illegal Dumping and Open Burning (Section 4.6)

In 2013, the Nevada Legislature passed Senate Bill 449 which increased enforcement penalties for illegal dumping in an effort to further protect the environment. Illegal, or open dumping, is a persistent problem for both rural and urban areas. Fundamentally local in nature, a combination of local solid waste management planning, local public education, and coordinated enforcement at the local level is essential for success in combating this problem. Local community groups have been instrumental in organizing efforts to control illegal dumping, such as community cleanup projects that include the participation of local government officials, and using public information campaigns to raise awareness and promote a sense of environmental stewardship in its citizenry.

State and Local Funding (Section 4.7)

To supplement their allotted State Tire Fund (tax) revenues, all three SWMAs have established fees on disposal, permitting, and other activities associated with solid waste management. In October 2014, the SEC approved the implementation of solid waste fees for NDEP with collection beginning in 2015. These new solid waste fees are only applicable to solid waste management facilities under the DCNR-NDEP's jurisdiction. This new funding source will help to defray the State's costs of managing and regulating solid waste.

Noteworthy Changes and Challenges...

Nevada's rural local governments may also require increased funding to support local waste management operations. Although local taxing authority may be available, the tax base for some communities may not be sufficient to generate needed revenue. In such locations, private solid waste companies may not be profitable, leaving the municipality to face significant challenges meeting their solid waste needs in a manner that complies with all applicable environmental regulations.

Key Stakeholders

Although NDEP is required to submit this *Plan* to the SEC, it is also intended to be used as a resource and guide for the State Legislature, NDEP, SNHD, WCHD, state and local agencies, and Nevada's municipal governments as they seek to craft effective Solid Waste Management laws, regulations and policies. It is hoped that the *Plan* also provides useful information to generators of solid waste (residents, businesses, and various industries) and solid waste service providers (refuse collectors, landfill operators, recyclers). Implementation of the suggestions provided for future consideration in each section of the *Plan* could further serve to enhance and strengthen solid waste management in Nevada.

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1. Introduction

1.1 Scope and Purpose

Solid waste management is vital to the infrastructure of every city and county. A comprehensive and effective management system includes the following key components:

- Reuse and Recycling Programs: these help to conserve resources, while instilling a “conservation ethic” in citizens and their communities;
- Cost-effective and efficient waste collection systems: these help to prevent illegal dumping while protecting public health and the environment; and,
- Properly designed and operated landfill sites: these ensure safe disposal of solid waste at the end of its life.

The responsibility for planning and implementing effective solid waste management systems lies with local government.

The State’s primary role in solid waste management is regulatory through implementation of regulations adopted by the State Environmental Commission (SEC). Per NRS 444.570, the SEC is required to develop and update a statewide plan for solid waste management in Nevada. This update requirement provides the Nevada Division of Environmental Protection (NDEP) with the opportunity to meet with county government officials to review the efficacy of existing laws and regulations, and engage in an informational give-and-take as concerns challenges and planning efforts to improve their local solid waste management systems.

The regulations and statutes governing solid waste management are found in

- Nevada Revised Statutes (NRS) 444.440 – 444.645,
- Nevada Administrative Code (NAC) 444.570 – 444.7499,
- NRS 444A.010 – 444A.110; and
- NAC 444A.005 – 444A.655

For complete references to these statutes and regulations, please see Appendices 5 – 8. Amendments to these NRS and NACs are in Appendix 1.

In addition to regulatory oversight, the State bears additional responsibilities for solid waste management planning, inter-agency coordination, and public education.

Central to the mission of the NDEP-Bureau of Waste Management (BWM) is ensuring that solid waste is handled safely. To this end, this Solid Waste Management Plan (*Plan*) presents the current status of collection and disposal systems within each county, and reviews the adequacy of landfill standards, especially in light of the potential for importation of solid waste to rural disposal facilities. Finally, this *Plan* attempts to identify economic incentives to encourage efficient use of available resources, reduce waste generation, and optimize recovery of reusable/recyclable resources from the solid waste stream.

Annual Solid Waste disposal reports show that Nevada's infrastructure for solid waste collection and disposal has improved over recent years, especially in rural areas of the State. Curbside recycling services are now common place in our major urban areas, and a composting industry is taking root in Nevada. It is estimated that at the end of 2016, single-stream (co-mingled) curbside recycling services was being offered to approximately 90% of the residents of Nevada in the more urbanized municipalities in Clark, Washoe and Elko Counties.

1.2 Governmental Roles and Responsibilities

1.2.1 Municipal Governments

Per NRS 444.510 (App. 5), each municipality, or Health District, in Nevada is required to develop and implement a plan for a, "solid waste management system." A solid waste management system is defined in statute as, "The entire process of storage, collection, transportation, processing, recycling and disposal of solid waste. The term includes plans and programs for the reduction of waste and public education." Municipalities are also required to implement recycling requirements as found in NRS 444A.040 (App. 7). In order to carry out these responsibilities, the statutes give authority to municipalities to adopt ordinances, acquire land, offer franchises for solid waste collection, and levy appropriate fees (Note: these fees are not subject to the fee revenue cap specified in NRS 354.5989).

One of the common challenges local governments face is unlawful (illegal) dumping. Municipalities and Health Districts are largely responsible for enforcing the statutory prohibitions against unlawful

dumping. Amendments to the solid waste statutes adopted by the 2001 and 2013 Nevada Legislature provide significant authority to local government agencies and peace officers to levy civil and criminal penalties for unlawful dumping. Penalties collected from unlawful dumping violations can be used to support the local government's solid waste management programs. Unlawful dumping is classified as a misdemeanor crime subject to penalties/fines, community service, and/or revocation of a business license.

1.2.2 Health Districts

The Health Districts (Southern Nevada Health District (SNHD) in Clark County, and Washoe County Health District (WCHD) in Washoe County), are the waste authorities and primary regulatory agencies over solid waste management in Nevada's two most populated and urbanized counties. The State's statutes (NRS 444.495) designate these agencies as the Solid Waste Management Authorities (SWMA) in their respective jurisdictions, with the programs of the Health Districts subject to periodic review by the NDEP. In addition to enforcing unlawful dumping provisions, the Health Districts are responsible for issuing permits to, and conducting compliance inspections at, disposal sites, transfer stations, materials recovery facilities (MRF), and other solid waste handling and/or processing facilities in their jurisdictions.

The governing boards of the Health Districts may adopt ordinances governing solid waste disposal sites and solid waste management systems, or any part thereof, which are more restrictive than those adopted by the SEC and other solid waste management regulations as long as they do not conflict with the SEC regulations.

1.2.3 State Government

NDEP is responsible for permitting and inspection solid waste disposal facilities and implementing public information programs outside of Washoe and Clark Counties. NRS 444A (App. 7) gave NDEP additional responsibility for encouraging statewide recycling programs. To ensure that solid waste management practices are consistent with state and federal criteria, all counties are required to submit their updated solid waste management plans to NDEP every five years for review and approval.

In 1994, the US EPA granted Nevada the authority to enforce the federal municipal landfill regulations. In order to receive that approval, the State had to demonstrate that its regulations were at

least as stringent as the federal landfill criteria, and that it had adequate resources and authority to enforce the standards. The NDEP and Health Districts have the responsibility to ensure compliance with the minimum federal standards for municipal landfills. While unlikely, procedures are established in statute for the NDEP to exercise authority over SNHD and WCHD, if necessary the US EPA retains authority to take enforcement action,. This may occur if evidence is found that handling or disposal of solid waste is presenting an imminent and substantial endangerment to public health or the environment, or in cases where there are violations of the federal landfill criteria and the State has failed to take remedial action.

1.2.4 Tribal Governments

The NDEP and the Health Districts do not have authority to regulate solid waste management on tribal lands. The Federal Subtitle D regulations are self-implementing on tribal lands; however the US EPA may issue site-specific flexibility waivers for landfills on tribal lands if a site wishes to establish a “flexible” performance standard rather than adhering to the prescriptive standards set forth in 40 CFR Part 258 (App. 9). This ensures that landfills located on tribal lands may apply for the same flexibility available to landfills in states with US EPA-approved municipal solid waste landfill permit programs.

Historically, coordination between the tribes and the NDEP has been informal regarding solid waste management. However, some issues do clearly cross jurisdictional boundaries. An example is waste collection and recycling services that must be coordinated between vendors and the tribes on and off tribal lands. Open burning (air pollution concerns) and protection of surface waters and groundwater from landfill contaminants are other concerns. NRS 444A.040 (App. 7) requires municipalities with approved recycling programs to make them available to reservations and colonies within their jurisdictions. In an effort toward improving coordination between NDEP and Nevada’s tribes, a tribal liaison position was established in the NDEP in 2007.

1.2.5 Federal Facilities

The federal government operates several solid waste facilities in Nevada, including some with proprietary landfills at Department of Defense (DoD) and Department of Energy (DoE) installations. These landfills are for the federal installations’ use and are not open to the public. A number of these facilities lie within publicly restricted areas but are regulated by the NDEP. NDEP’s Bureau of

Federal Facilities oversees DoE facilities. The remaining solid waste facilities under federal control are regulated by the appropriate SWMA.

2. Statewide Trends in Solid Waste Management

2.1 Landfills

In the 1990's, more stringent state and federal landfill regulations were implemented which started the trend of regionalization of solid waste collection and disposal infrastructure. Faced with the option of upgrading to the new, "more costly" standards or closing their gates, more than 100 of Nevada's small, rural landfills chose the latter. In their place, large, regional municipal landfills became the dominant disposal end-destination for solid waste, served by a network of transfer stations and public waste bins to manage solid waste disposal/collection/storage needs in rural communities prior to transportation to the landfills. *(See Appendix 4 for the current map of Nevada's solid waste infrastructure).*

Roughly corresponding with Nevada's population distribution, Nevada's landfills can range in size from very large to the extremely small. Approximately 90% of all waste disposed of in Nevada (Fig. 1) goes to one of the following landfills: In the South, Apex Landfill serves the greater Las Vegas Valley area; in the North, Lockwood Landfill serves the greater Reno-Sparks area. Both of these landfills are privately-owned and operated.

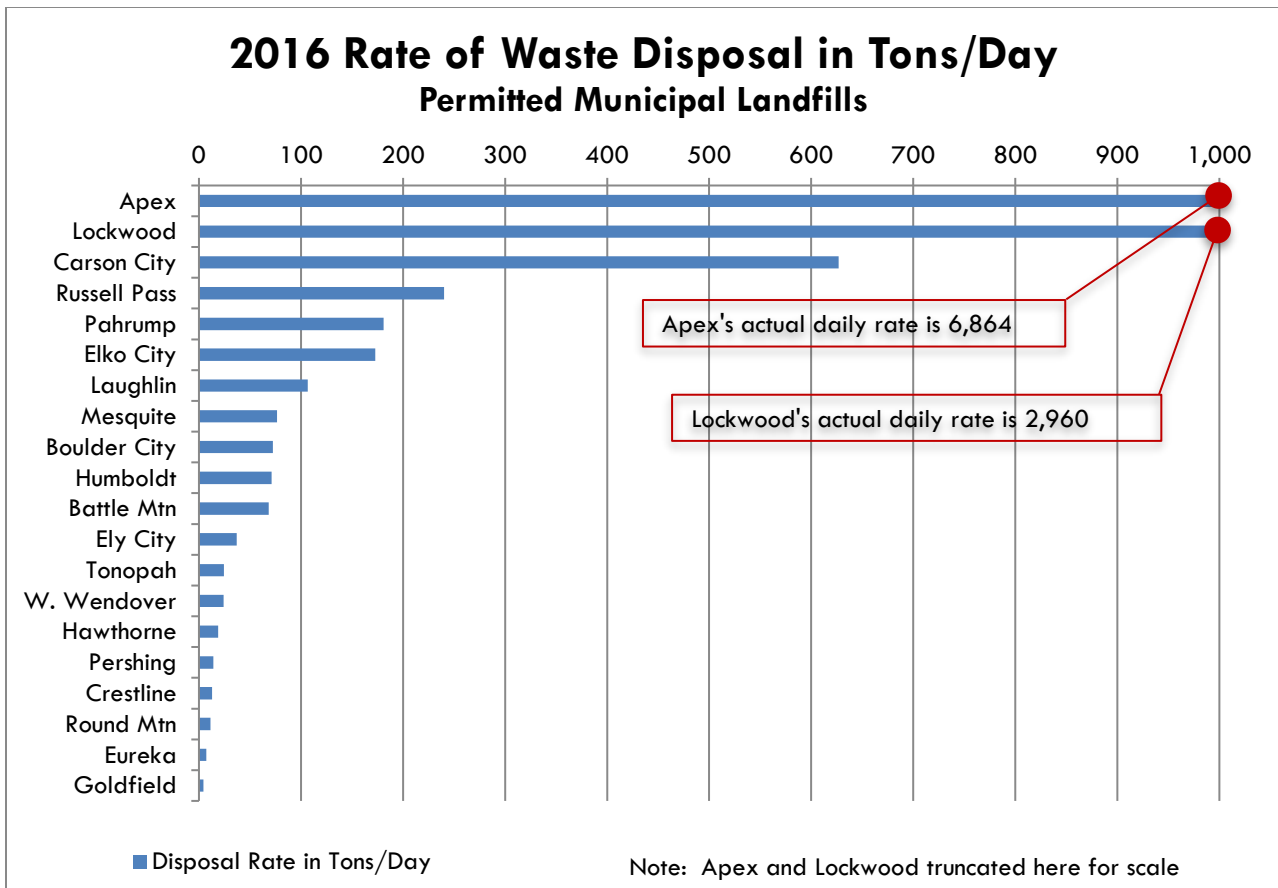


Figure 1. Daily disposal rate at Nevada’s permitted municipal landfills (averaged over 365 days).

Apex, Nevada’s largest landfill in Southern Nevada, ranks as one of the largest municipal landfills in the nation based on annual tonnage of solid waste received for disposal. According to 2016 data, Apex receives an average of over 6,800 tons of solid waste per day, while one of Nevada’s smallest landfills, Goldfield Landfill in Esmeralda County, receives an average of only about 4 tons of solid waste per day (population of 900 or fewer per the 2010 census data).

The disposal capacity of Nevada’s landfills is projected to be able to adequately accommodate Nevada’s solid waste needs well into the future. However, the NDEP encourages municipalities to plan for, and take measures to ensure adequate future landfill capacity. A summary of the active municipal waste landfills, including their capacities and projected closure years, is presented in Appendix 2.

2.2 Collection and Transportation

In response to the municipal recycling requirements adopted in 1991, Nevada’s solid waste collection has changed in two important respects. First is the trend toward bi-weekly recyclable collection

availability to single-family homes in Carson City, Clark and Washoe Counties pursuant to the 1991 municipal recycling program requirements. The second important change was the establishment of an extensive network of transfer stations and rural public waste (storage) bins from which waste is collected and hauled to the regional landfills, at minimum of weekly runs. Covered roll-off containers and waste transfer trucks are used to transport waste collected from transfer stations and public waste bins to the regional landfills. In more highly-populated areas such as Clark, Washoe and Storey Counties, some of the public waste storage bin sites are staffed by attendants who collect fees from the public for waste disposal; however, most public waste bin facilities are unattended. Public waste bins are maintained by the counties at their expense, either by the county itself or through contracted services. The state's transfer station and public waste bin locations are listed below by county and the communities they serve (See App. 4 for a map of this information).

Transfer Stations

Clark: Cheyenne (North Las Vegas), Henderson, Sloan
 Churchill: Fallon
 Douglas: Gardnerville
 Elko: Jackpot
 Lyon: Fernley, Smith Valley, Sutro (Dayton), Yerington
 Washoe: Incline Village, Reno, Stead

Public Waste Storage Bin Facilities

Clark: Searchlight, Sandy Valley, Mt. Charleston, Moapa
 Elko: Wells, Midas, Jarbidge, Montello, Carlin, Pilot Valley, Wendover
 Esmeralda: Dyer, Silver Peak
 Eureka: Crescent Valley
 Humboldt: Kings River, Orovada, Paradise Valley, Denio
 Lander: Kingston, Austin
 Lincoln: Rachel, Alamo, Hiko, Panaca, Pioche, Dry Valley, Caliente, Ursine, Mt. Wilson
 Lyon: Silver Springs
 Mineral: Mina-Luning
 Nye: Beatty, Amargosa Valley, Belmont, Manhattan
 Pershing: Grass Valley, Unionville, Imlay
 Storey: Virginia City
 Washoe: Gerlach, Empire

Transportation services vary widely, from waste collection services provided by large corporations in urban areas, to individuals self-hauling in sparsely populated rural area. Subject to franchise agreements negotiated with, and awarded by, the municipalities they serve, Waste Management, Inc., and Republic Services of Southern Nevada (Republic), collect and transport nearly all of the municipal

solid waste in the urban areas of Reno/Sparks/Carson City and greater Las Vegas area, respectively. About 15 small companies provide waste pickup service to the balance of the state's smaller communities, while the cities of Fallon, Gardnerville, Minden, Lovelock, and Caliente operate their own garbage collection services. In sparsely populated areas, such as Esmeralda County, residents must self-haul their waste to the nearest landfill or public waste bin.

2.3 Waste Generation and Recycling Rates

As depicted in Figure 2, the total volume of solid waste disposed in Nevada steadily decreased from 2007-2012. The state-wide recession caused a population reduction and an accompanying decrease in construction starts, both of which contributed to a marked down-turn in waste generation. It is interesting to note that in 2010, within this time period, industrial and "Special Waste" increased slightly due to a resurgence of residential/ commercial construction and road construction projects; however, the upward trend was short lived.

Between 2007 and 2010, the statewide recycling rate hovered between 20-22%. In 2011 the rate jumped to over 25%, and to nearly 29% in 2012. This significant increase is due to Clark County's recycling rate jumping up 4% in 2011. Data suggests that the implementation of single-stream recycling programs in Clark County was responsible for this substantial increase. While significant local variations exist in recycling rates, Douglas, Washoe, and Carson City Counties have shown steady improvement in their recycling rates, consistently meeting or exceeding the State-wide recycling goal of 25%.

After several years of discussion and revealing pilot studies in multiple communities, single-stream recycling is proving to be a powerful new component in Nevada's recycling program. All franchise agreements in Clark County now offer single-stream recycling services. Washoe County and the Cities of Reno and Sparks are also offering single-stream recycling to their residents. Nevada's recycling rate is certain to continue to increase owing to the fact that about 90% of state residents are now offered residential single-stream recycling.

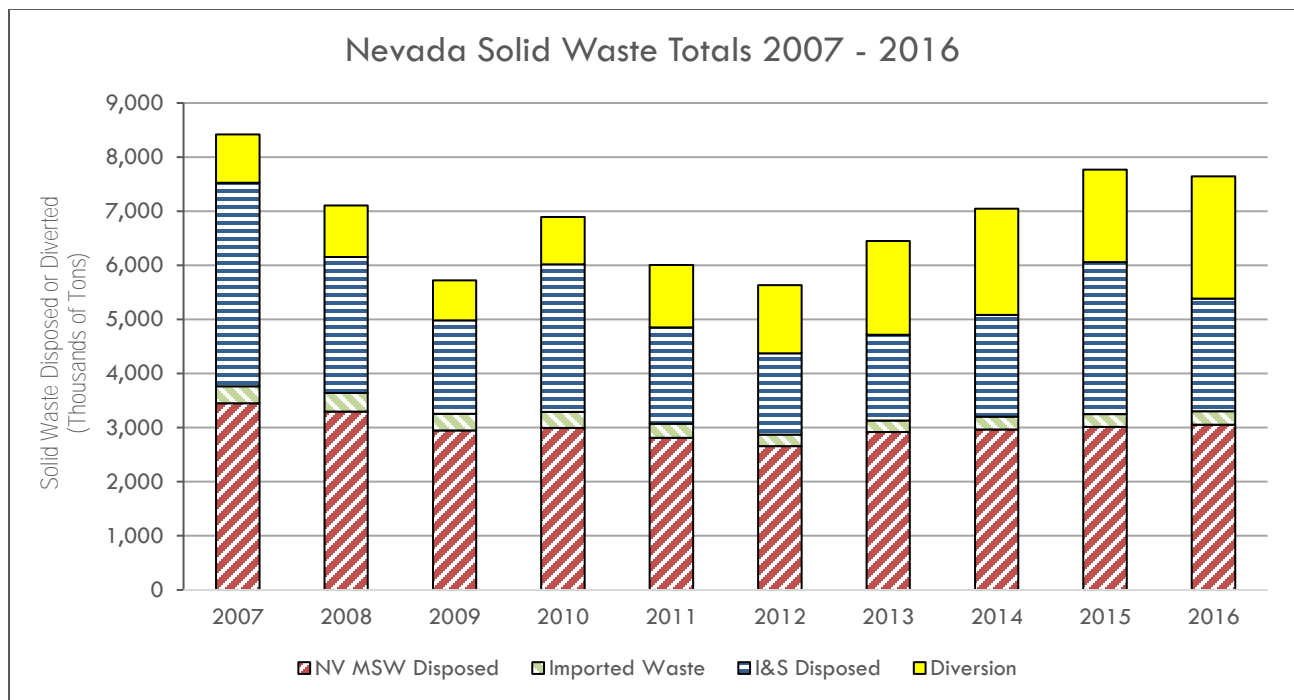


Figure 2. Total municipal solid waste plus industrial & special waste and imported waste disposed and diverted in Nevada.

2.4 Importation

The amount of solid waste imported from out-of-state sources decreased 20% due, in part, to the national recession. Of the total volume of solid waste imported into the State, the Lockwood Regional Landfill received greater than 94%. Lockwood, owned and operated by Waste Management, Inc., is the regional landfill for much of western Nevada (Washoe, Storey, Lyon, Douglas, and part of Churchill County), and also receives waste from several California regions including the Lake Tahoe Basin, and as far west as the City of Sacramento (Fig. 5). The volume of waste imported to Nevada presently accounts for about 7.5% of the municipal solid waste disposed in Nevada.

Although Apex is not currently receiving imported waste, the potential for increase solid waste importation is significant. This is due to the fact that it is privately-owned (Republic Services) and located along a rail line, and as such, is well-situated for future importation. Under its current permit, the estimated life of the Apex landfill is in excess of 100 years, and since Republic owns the land around the existing site, there is potential for its future expansion.

Another landfill poised for importation is Crestline Landfill. Located near Panaca in Lincoln County, Crestline is another privately-owned landfill situated on a rail line. The Class I MSWLF operating

permit was issued in December 2001 for the 660 acre parcel, which positioned them to receive a large volume of solid waste per day contingent on construction of lined disposal cells and demonstration of financial assurance to satisfy the landfill closure requirement. It remains to be seen when, or whether, the owners of the Crestline Landfill will obtain contracts for waste importation and disposal that would justify beginning operations at the Class I facility.

Other potential importation landfills include the Rawhide Landfill, located in Mineral County, and the Jungo Landfill in Humboldt County. Rawhide Landfill, owned by the Nevada Resource Recovery Group (NRRG) of Nevada, has not started operating as of this report, and may never open if a rail line is not extended to the site. In 2012, a Class I Landfill operating permit was issued for the Jungo Landfill project, but it too, is not operational. Jungo could receive solid waste imported from the San Francisco Bay area via railway.

Some municipal governments have shown interest in developing their own commercial waste disposal facilities for increased revenue. The City of Fallon recently increased its permitted disposal rate at the Russell Pass Landfill. The City of Elko and Humboldt County have also sought to expand their landfill capacities beyond the needs of the local communities.

These and other efforts to gain new or expand landfill capacities indicate an interest in the potential for significant importation of out-of-state waste for profit. Whether the potential for large-scale importation is realized or not depends on the regional market for solid waste disposal, the availability of disposal capacity in the region, and the feasibility of individual projects. Imported waste is generally what is referred to as “dead waste,” already stripped of any valuable reclaimable, reusable, recyclable waste materials before it gets to Nevada landfills. Whether perceived by Nevadans as an opportunity for economic development, or as an exploitation of Nevada resources by other states, waste importation is a viable economic enterprise. As such, waste importation must be included in the solid waste discussion.

2.5 Data Collection and Reporting

Reliable data on the quantities of solid waste disposed and recycled are necessary in order to conduct State and municipal waste management planning, to ensure future disposal capacity, and provide

Nevada’s citizens with a means to measure the success of local recycling and waste reduce efforts.

Terms used in the *Plan* include:

- *Municipal solid waste (MSW)*: solid waste from residential, commercial and institutional waste generators
- *Industrial waste*: non-hazardous solid waste generated at industrial plants; also includes construction and demolition debris
- *Special waste*: solid waste that requires special handling due to its physical, biological or chemical nature (e.g., medical waste, asbestos waste).
- *Recycling rate*:

$$\frac{\text{MSW recycled}}{\text{MSW disposed} + \text{MSW recycled}} \times 100\%$$

Waste imported from outside of Nevada is not counted in Nevada’s state recycling rate.

The data referred to in the above sections are useful for discussing trends and making comparisons, although there are areas where information is lacking or questionable. The following provides general comments on the quality and interpretation of the solid waste data.

2.5.1 Disposal Quantities and Per Capita Generation Rate

On a statewide basis Nevada’s solid waste disposal data is reliable. Quarterly, semi-annual or annual disposal reports are required from all landfills. The larger landfills weigh the incoming waste on scales, which captures over 95% of Nevada’s disposed waste. The smaller landfills, however, do not have scales and use volume estimates with conversion factors to calculate and report tonnage disposed. In the rural counties, wide variations in per capita generation rates, shown on Figure 3, highlight the inexact nature of volume estimates. For example, the anomalously low rate in Lander County is probably due to underestimating disposal volume. Figure 4 shows greater consistency in the disposal data gathered from landfills with scales. These data indicate a weighted average MSW generation rate of under 8.0 pounds/person/day.

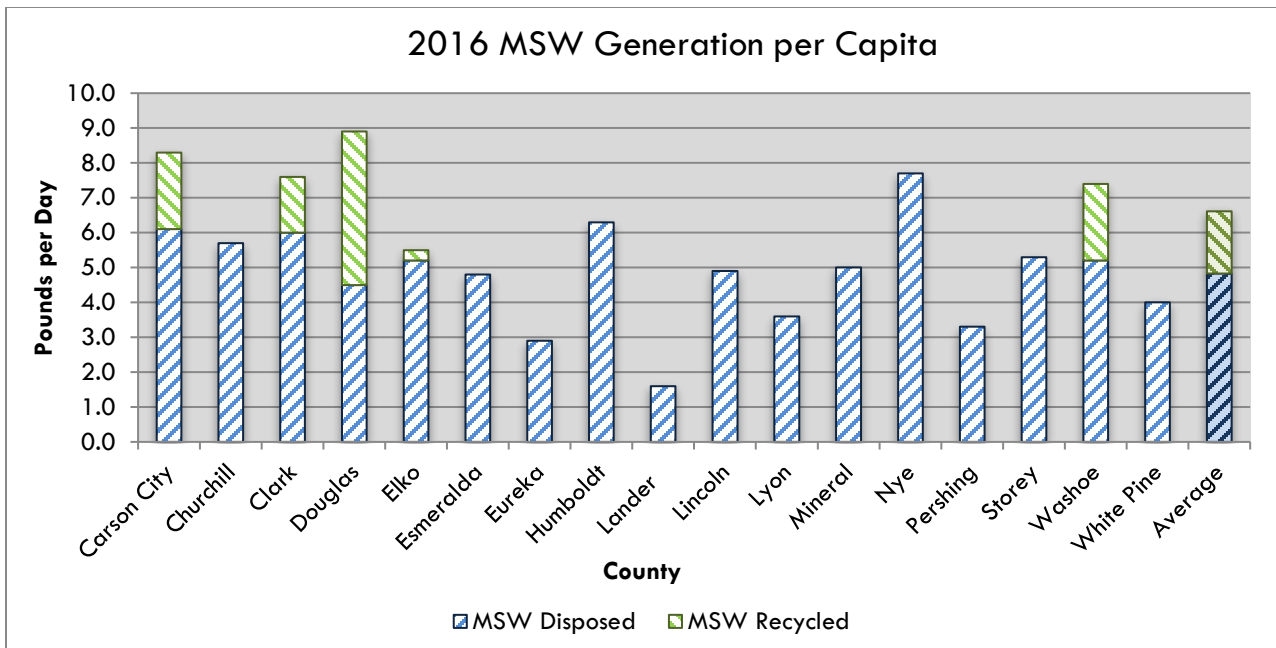


Figure 3. Municipal solid waste generated per capita for each County as reported by County. Esmeralda, Eureka, Lander, Lincoln, Mineral, Nye, Pershing, and White Pine weight is calculated from volume estimates. The generation rate in the figure represents landfilled or diverted MSW by County origin. The average represents the weighted average based on population. (The most current data compiled is calendar year 2016)

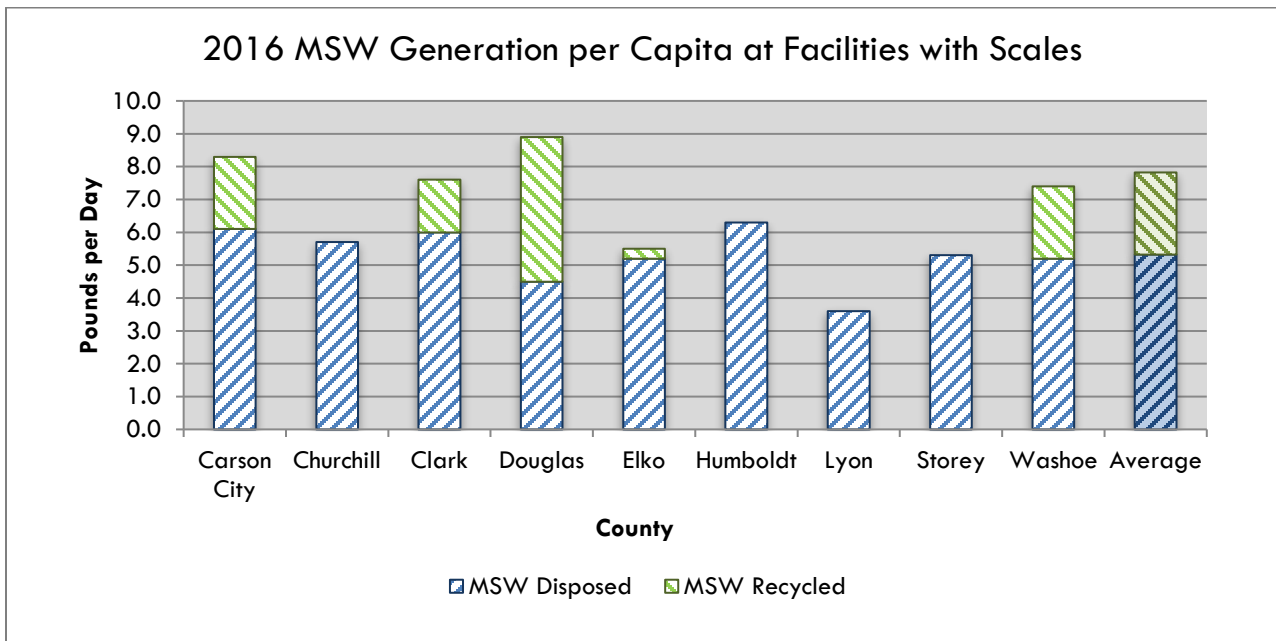


Figure 4. Municipal solid waste generated per capita for as reported by each county using scales at their disposal sites. The generation rate in the figure represents landfilled or diverted MSW by County origin. The average represents the weighted average based on population. (The most current data compiled is calendar year 2016)

It has been suggested that Nevada’s tourism economy affects its municipal waste generation rate. The Las Vegas Convention and Visitor’s Authority reported that over 42 million people visited the area during 2016. The visitor population, because it is considered a “transient” municipal solid waste

generating group, is not counted in with residential solid waste group. As such, per capita waste generation tends to be higher in the high-tourism areas than in non-tourism economies. A waste characterization study would be helpful to assess tourism waste generation patterns, and to better understand the variations in waste generation rates in Nevada's tourism affected municipalities.

2.5.2 Recycling Quantities

In 1991, the Nevada Legislature set a goal for 25% of the total solid waste generated in each municipality to be recycled. To assess Nevada's progress toward this goal, the NDEP conducts an annual survey of the counties to determine their recycling rates. While reporting the quantities of all the materials recycled each county seems pretty straight forward, it demands the combined efforts and cooperation of municipal governments, recycling centers, and disposal services to gather, record and report accurate data. In counties with populations greater than 45,000, the county recycling centers are required to submit a certified annual report of the types, and volume of materials recycled to their city/municipal government officials. The data is then compiled into the county's annual recycling rate and reported to the NDEP. As is often the case, the municipalities do not receive complete and/or accurate reports in a timely manner, requiring prompting and/or follow-up with the recycling centers. Although regulations require recycling centers to report, there are no penalty provisions for failure to submit.

The municipality must also take measures to ensure that double counting of materials is avoided. This happens when a recyclable material generator, and the receiving recycling center, both report it as recycled. NDEP conducts the final review of the municipal reports, checking the data to verify its accuracy. Any abnormal or inconsistent numbers are flagged, which then necessitates NDEP staff contacting the reporting county for additional information or clarification to resolve the discrepancies.

To answer the question, "*How well is Nevada recycling?*" the NDEP evaluates the county and statewide data in their biennial recycling and waste reduction reports. Comparing current data to that of past years verifies whether the State is making progress. A comparison of one county's recycling rate to that of another can provide useful information toward identifying whether the recycling measures or strategies being undertaken by higher recycling rate counties are worthy of duplication in lower rate counties. Yet caution must be used when attempting to draw conclusions. For example: In 2016, the urban municipality recycling rate varied between Clark County's rate of 20.5% in Nevada's

most densely populated county, to tiny Carson City's rate of 27.1%, and Washoe County's rate of 29.5%. These rates bring the data into question as to whether the differences are real, or simply a reflection of differing calculation methods.

It is incumbent upon the State and local governments to provide the recycling community with reliable and meaningful measures for recycling rate calculation. In order to build public confidence in the aforementioned reports, the data must also be verifiable. Simple, consistent terms and methodology must be applied uniformly across the recycling universe to ensure accuracy in recycling rate calculations. Furthermore, every element and result must be made available for public review. To this end, the SWMAs (NDEP, SNHD and WCHD) have agreed upon a standard set of reporting criteria, and are working with local governments and recyclers to improve the collection and reporting of recycling data.

NDEP and the SWMAs have partnered with U.S. EPA Region 9 in development of consistent recycling reporting data among the Pacific-Southwest states. This will help resolve recycling measurement issues by providing means to produce uniform, and hence, comparable data. In collecting and reporting data, the State and local governments will strive to clearly differentiate between solid waste types using U.S. EPA's definitions.

3. Profiles in Municipal Solid Waste Management Systems

Maps and corresponding one-page solid waste profiles for each county in Nevada are provided in Appendix 3. The maps provided a current "snapshot" of the existing solid waste management facilities and their locations (infrastructure), while their profiles provide specifics, such as,

- Name of the local solid waste planning authority
- Solid waste trends
- County population
- Active municipal solid waste landfills
- Solid waste and recyclables collection services
- Number of recycling drop-off sites
- Household hazardous waste collection services

Trends presented in the solid waste profiles are broken down into the following categories and defined as follows:

- **Municipal Solid Waste (MSW) generated:** solid waste generated from residential, commercial and institutional sources within the county’s borders.
- **Industrial/“Special Waste” disposed:** solid waste generated from industrial sources that do not have disposal facilities on-site. This type of waste may come from within, or from outside, the county. Examples are construction and demolition debris, waste tires, and sludges.
- **Imported waste disposed:** solid waste disposed in Nevada that was generated outside the State.
- **Recycling rate:** Recycling rates are for MSW only and are presented as historically reported. The “recycling rate” is calculated by the tons recycled divided by the tons generated.

4. Current Solid Waste Management Issues and Future Considerations

Since their adoption and implementation in 1991, Nevada’s disposal and recycling regulations have significantly changed the way solid waste is managed in Nevada. Our review of Nevada’s current solid waste management systems reveals the persistence of a few “old problems,” while new challenges have emerged. As Nevada’s ultimate solid waste authority, it is incumbent upon NDEP to ensure that the solid waste management systems in the State,

- Comply with applicable Federal and State standards,
- Protect public health and the environment,
- Conserve natural resources

As Nevada strives to create an effective statewide solid waste management system, regular assessment of the adequacy of solid waste laws and regulations is essential. In this section of the *Plan*, issues that require attention are identified, along with proposed strategies to address them as concerns the following topics: Landfills, Recycling and Waste Prevention, Importation of Solid Waste, “Special Waste” Management, Rural Solid Waste Management, Open Dumping and Open Burning, and State and Local Funding.

4.1 Landfills

Since their establishment in 1991, landfill researchers and operators have identified problems with the federal Resource Conservation and Recovery Act (RCRA) Subtitle D criteria and have proposed alternatives to address them. For example, in arid environments such as Nevada, the requirement for

landfill liners and criteria for alternative cover have come into question, as have the landfill leachate and gas containment requirements as they relate to recent proposals for development of super-sized commercial solid waste disposal facilities.

4.1.1 Liner Requirements

All municipal waste landfills in Nevada are required to conform to the federal standards adopted under RCRA Subtitle D. According to the federal regulations and the approved State regulations, a composite liner (composed of clay and a layer of plastic membrane) is required for all new or expanding landfills that receive an average of more than 20 tons of waste per day (i.e., a Class I landfill facility).

Landfill owners/operators may apply to the SWMA for approval of an alternative liner design if the landfill owners/operator can demonstrate that the alternative design is sufficiently protective of the waters of the State against degradation caused by the introduction of landfill pollutants and/or contaminants. The *Plan* recognizes that site-specific conditions should be taken into consideration as we plan for future development of our disposal infrastructure, and that, with attention to detail and careful oversight, alternative liner designs can provide surface and groundwater protection equal to, or even superior to the current standard.

4.1.2 Bioreactor Landfills

The standard approach to landfill design in Nevada is what is commonly known as “dry tomb” landfilling achieved by the exclusion of liquids from buried waste resulting in minimization of leachate generation. Dry tomb landfilling has been criticized by some researchers contending that, because it delays waste decomposition, the waste will *always* present a threat to groundwater. To address this threat, an alternative technology has emerged, the “bioreactor” landfill, and it is gaining the attention of the waste industry and government regulators.

Bioreactor landfills promote waste decomposition by recirculating the leachate inherently produced by the waste mass with controlled application of additional liquids. This technology is already in use in several other states; however, in Nevada, with its arid climate and its unique hydrogeologic conditions, whether bioreactor designs prove to be a safe and economical landfill alternative remains to be seen. Until such time as a bioreactor landfill is proposed and receives SWMA approval, dry tombing is likely to continue.

In March 2004 the US EPA revised its municipal landfill criteria to allow states to issue Research, Development and Demonstration (RD&D) permits with associated variances from the standard criteria and requirements (specifically those concerning landfill design, operation, final cover, and closure/post-closure care). With the flexibility offered by RD&D permits, a variety of innovative landfill designs are possible as long as they, “*include terms and conditions at least as protective*” as the standard municipal landfill design. By the same token, because of their high degree of flexibility, one of the requirements of an RD&D permit is data collection and reporting on the performance of alternate designs. The data gathered under an RD&D rule requirement will help federal and state regulators, and landfill owners, evaluate the performance of these designs under different climatic conditions.

In general, the US EPA envisioned that RD&D permits would be issued for a three (3) year period, and extendable up to a maximum of 12 years. In order for Nevada to be able to offer the flexibility to try new technologies such as the “bioreactor” landfill, the solid waste regulations would have to be amended to adopt the RD&D rule.

4.1.3 Post-closure Care Period

After landfill closure, owners are required to provide post-closure care for a 30-year period. In general, post-closure care involves, but is not limited to, the following activities: maintenance of the final cover, monitoring and management of explosive gas, groundwater monitoring, and maintenance and operation of the leachate collection system. Advocates for revision of the post-closure care criteria contend that the 30-year time period is arbitrary, and propose that the standard should instead be risk-based: post-closure care should continue until the waste no longer poses a groundwater and/or explosive gas threat. Another concern with all landfills, current and future, is with the long-term integrity of the final cover. Due to the action of natural forces (wind, rain, dry, cold/heat, geologic shifting), all final covers will eventually fail, potentially compromising the integrity of their waste containment systems.

While the 30-year post-closure period is the standard in Nevada regulations, SWMAs have the authority to alter the timeframe. A shorter period may be approved if the owner demonstrates that it is sufficient to protect the environment; a longer period may be required if the authority determines that it is necessary to protect the environment. In the absence of a universally accepted methodology for

making such demonstrations, the 30-year period was accepted as default by most states. As a result, post-closure care planning and cost estimates have historically been developed based on a 30-year care period. In order to inject post-closure care flexibility in the regulation, a methodology needs to be developed to evaluate landfill performance and environmental risk during the post-closure period. Such a methodology would provide regulatory agencies with the necessary criteria for approving owner post-closure care demonstrations, and would provide an incentive as well for landfill owners to design, operate, and close landfills in a manner that would shorten their post-closure care duration, and conceivably reduce their associated costs. The Environmental Research and Education Foundation (EREF) took the lead in development of such a methodology and published its progress in an on-line document entitled, *A Performance-Based Approach to Ending Post-Closure Care at Municipal Solid Waste Landfills.*

4.1.4 Final Cover Design

The current prescriptive standard for a municipal solid waste landfill cover consists of two elements: an “infiltration” layer which contains at least 18-inches of compacted clay, topped by a 6-inch erosion layer of soil capable of supporting vegetation. The purpose of the clay layer is to provide a moisture percolation barrier to impede water seepage into the waste mass. The final cover material must have a permeability less than, or equal to, the bottom liner/layer. However, landfill researchers have determined that atmospheric wetting-drying cycles cause cracks to develop in the clay layer, causing the current prescriptive cover to fail within only a few of these wetting-drying cycles.

While several alternative final cover (AFC) designs have been conceptualized, one alternative, the evapo-transpiration cover (ET cover), is showing the most promise for Nevada’s arid climate. Such covers can be designed to exceed the percolation reduction performance of conventional covers, and may offer other advantages such as ease of construction and increased long-term cover integrity. Nevada’s existing regulations allow Solid Waste Management Authorities to approve AFC designs that achieve an equivalent reduction in percolation as the prescriptive cover design; however, few of the landfill applications received to date have proposed incorporating AFC designs. The fact that little AFC design work is being done in Nevada may be due to lack of familiarity with AFCs in general, the absence of a standardized approach to equivalency demonstration, or an understandable reluctance on the part of applicants to be subjected to the likely delays associated with regulatory review of an innovative design.

As noted previously (Sect 4.1.2), US EPA's recent amendment of the federal landfill standards allows states to issue RD&D permits that authorize variations from certain of the criteria, including the final cover design. While the RD&D rule would require that any alternative cover be at least as protective as the prescriptive design, the owner/operator of the landfill would be required to demonstrate that no moisture would escape from the landfill to the surrounding surface and groundwater.

4.1.5 Landfill Gas

Since the federal municipal waste landfill criteria were adopted in 1991, landfill design and operation for the proper management of landfill gas in Nevada is a relatively new concept. Written primarily to prevent explosions at landfills caused by methane gas generation and migration, the federal regulations were initially thought to be inapplicable to Nevada based on the commonly held belief that landfills in arid regions do not generate significant quantities of landfill gas. As such, the need to address landfill gas was given low priority on the landfill management task list in Nevada. This belief was proved to be incorrect by the fact that both Lockwood Landfill, located in northwest Nevada, and Apex Landfill in southern Nevada, are collecting gas from their landfills, through gas-to-energy facilities located on their sites, and supplying electric power to the grid. Lockwood is currently producing 3.2 megawatts of renewable energy, providing enough power for approximately 1,800 homes, and has applied for a permit to expand this capacity. Apex's on-site gas-to-energy facility produces 11 megawatts of renewable energy, enough to service about 6,000 homes.

Due to changes in the federal Clean Air regulations, and information accumulated from on-going landfill research and operational data collection, landfill gas is beginning to be seen in a different light.

Three points deserve mention:

- In 1996 *New Source Performance Standards* (NSPS) and *Emission Guidelines* (EG) were adopted under provisions of the federal Clean Air Act to reduce emissions of air pollutants resulting from waste decomposition at municipal landfills. Six Nevada landfills are subject to NSPS or EG requirements because they exceed the permitted capacity threshold established in the federal rules.

In conjunction with these rules, US EPA established the *Landfill Methane Outreach Program* to promote gas collection and energy recovery development. Landfill gas projects may help Nevada's larger landfills meet their financial objectives while reducing air pollution, conserving energy, and complying with the air pollution standards. Data collected pursuant to these regulations may prove useful to designing better landfills, and improving their operation, monitoring, closure and post-closure care.

- The assumption that arid landfills do not produce gas was contradicted by the experience of our two largest landfills. Both Lockwood Landfill (in Storey County) and Apex Landfill (Clark

County) have been collecting gas for some time now. While it has been suggested that this apparent anomaly is due to an inherent higher moisture content in municipal waste, the HDPE liners impeding downward migration of the gas may well be a contributor.

- Landfill gas migration is now recognized as a potential source of groundwater contamination. Remediation investigations at arid landfills in Arizona, California and elsewhere suggest that the migration of volatile organic compounds (VOC) in the gas phase is a more likely mechanism of groundwater contamination at such sites than leachate migration.¹

4.1.6 Items for Future Consideration

1. SWMAs should conduct comprehensive, detailed engineering evaluations of landfill permit applications, whether new or proposed expansions to existing landfills, that propose to use alternative liner designs to ensure that they conclusively demonstrate that their proposed designs are sufficient to protect the waters of the State from contamination.
2. SWMAs should consider seeking NAC amendments that would allow them to issue RD&D permits for bioreactor landfills and alternative final covers in conformance with federal requirements (see App. 9, CFR 40 §258.4).
3. SWMAs should monitor the development of risk-based tools, methods and criteria (EREF and others) that can be used to establish the end of post-closure care based on landfill performance (e.g., determining when the landfill has ceased to pose a threat to human health and the environment).
4. For safety and energy generation reasons, SWMAs should continue to monitor and evaluate landfill gas detection and collection data from Nevada's municipal waste landfills and investigate the conditions of landfill gas generation.

4.2 Recycling and Waste Prevention

Every county in Nevada engages in recycling activities, and achieves some level of diversion from waste landfilling. Offered as a baseline, all rural municipalities divert scrap metal, white goods (large household appliances), and vehicle antifreeze and used motor oil from landfilling. As directed by NRS 444A population thresholds, only six of Nevada's 17 counties are required to establish recycling programs: Carson City, Clark, Douglas, Elko, Lyon and Washoe Counties. Lyon, the newcomer to the group, joined the ranks after the 2010 decennial census and is currently engaged in the planning and budgeting process. However, the County has yet to provide the State with a recycling program implementation schedule.

¹ Murray, R., Samorano, D., Masbruch, K., and Petersen, N. 1991. An Empirical Model for Vapor Transport in Arid Landfills. Seminar Presentation, 1991.

Since the 25% recycling goal was established by legislation adopted in 1991, Carson City, Douglas and Washoe counties have made significant progress toward increasing recycling participation in their counties. Their efforts exceeded the 25% goal early in this endeavor and are still successful. The 2016 recycling rates were: Carson City 27.1%, Douglas 49.6%, and Washoe 29.5%.

Clark County's recycling rate didn't exceed 22% until 2011, but then made an astonishing jump to over 27.5% in 2012. However, the increases in Clark County's rate were short lived: in 2013 the rate dropped to 22%, further down to 17.7% in 2015 before rebounding to 20.5% in 2016. These fluctuations are not easily explained. It may be due to a drop in commodity pricing, variability in the reporting process, or more likely a combination of several factors.

In 2012, the City of Elko implemented single-stream recycling in efforts to increase their recycling rate. Over the past 5 years, the Elko County recycling rate has hovered between 5-6% with the 2016 rate being 5.5%. Over the last several years, single-stream recycling has been implemented widely throughout Clark and most of Washoe County – equating to offering this service to over 90% of Nevadans. The greater Las Vegas area, owing to the fact that the majority of Nevada's population resides there, is foreseen as Nevada's greatest opportunity for further increasing our state recycling rate.

4.2.1 Improving Recycling in Clark County

Over the past several years Clark County's recycling rate rose at a slow but steady pace, and then jumped to 27.5% in 2012. The implementation of single-stream recycling in multiple municipalities was believed to be a reason behind the substantial improvement, but the rate dropped to 17.7% in 2015 before rebounding to 20.6% in 2016. In 2008, several pilot single-stream recycling programs started up and grew to include over 80,000 homes. The solid waste and recycling franchisee in the region, Republic Services, Inc., initially reported that their preliminary data predicted an increase in recycling of between 500-600%, which would have brought the pilot project diversion rate up to between 25-30%. The City of North Las Vegas was the first community to adopt single-stream recycling; followed by Clark County Unincorporated, and then recently the City of Henderson and the City of Las Vegas joined the ranks. The 2016 disposal data shows that Clark County generates about 60% of

all solid waste generated in Nevada. Increasing the volume of collected marketable recyclable materials could attract more recycling-oriented businesses to move into the Clark County area.

NDEP continues to promote and implement measures designed to increase recycling activities in Clark County. To this end, recycling education and outreach programs are seen as powerful approaches toward increasing recycling participation. The NDEP developed a free 12-week recycling education curriculum that can be teacher adapted to any K-12 classroom and student learning level. The Recycling & Waste Reduction curriculum is available free of charge via download from the NDEP's website (<http://nevadarecycles.nv.gov/curriculum>). Through an integrated teaching approach with ready-made, thought-provoking, and entertaining lessons and demonstrations, the Recycling & Waste Reduction curriculum also meets various science, math, language arts, and social studies objectives. The curriculum received certification and is listed as a professional development course for teachers by the Clark County School District. NDEP workshops are conducted to assist teachers with development of strategies to adapt the curriculum to various grade-level learners.

The NDEP Recycling Ambassadors Program is a recent endeavor that was initiated in the Clark County School District during spring 2012. Through this program, NDEP aims to continue educating young students on the value of resource conservation. By training motivated high school students to teach lessons in elementary school classrooms, they have the opportunity to gain community service hours, develop leadership and communication skills, and share their enthusiasm about recycling, reusing, and reducing. The program started with a small group of select students from Western High School. As of 2017, the program is still operating and has expanded to include additional high schools in Clark County.

4.2.2 Legislative Changes to Municipal Recycling Programs

NRS and NAC Chapter 444A established a 3-tiered structure for the provision of municipal recycling programs based on county population size: counties with populations greater than 100,000 are required to provide the highest level of services; smaller counties (populations between 45,000 and 100,000), a lesser level of services; while the small counties (less than 45,000 population) are exempt from the requirement to offer any recycling services. Clark and Washoe Counties occupy the upper, highest level tier; Carson City, Douglas, Elko and Lyon Counties occupy the second tier.

In recent years, a total of nine solid waste and recycling bills were adopted by the state legislature. A complete list of the bills, by year and bill number, is included in Appendix 1, with a brief summary of each. In the 2017 legislative session, no bills related to solid waste and recycling were passed.

4.2.3 Recycling at Public Buildings

Public buildings continue to present an untapped opportunity for waste reduction and increased recycling. AB 564, passed in 1999, amended several statutes related to recycling at public buildings, specifically the bill:

- Broadened requirements for the recycling programs in Clark and Washoe Counties to ensure the availability of recycling collection services at public buildings.
- Authorized appropriate rule-making bodies to prescribe procedures for the recycling of paper and other similar waste materials generated by the following governmental entities:
 - Courts
 - Legislature
 - State government offices
 - School Districts, and
 - University of Nevada and Community College System
- Assigned the responsibility for assisting State agencies in developing and carrying out recycling programs within State buildings to NDEP.

Pursuant to the amended statutes above, the SEC adopted NAC revisions to the municipal recycling program regulations (Ch. 444A), and the State agency recycling requirements (Ch. 232). In October 2001, the NDEP issued a model plan for public building recycling programs.

Although the legal authority to implement recycling programs has been significantly broadened, public building recycling programs to date have achieved only spotty success, even in urban areas where collection services should be established and readily available. The following provides possible improvements for consideration to expand recycling programs in public buildings:

- Increase the amount of space allotted for staging and use of recycling containers
- Include recycling provisions in contracts for janitorial services
- Provide information on the availability of collection services for recyclable materials
- Included collection of recyclable materials in franchise agreements with solid waste management service providers at public buildings

It is important to note that a waiver is included in the amended statutes for exemption from the requirements for paper and paper product recycling should the cost(s) be deemed unreasonable, or place an undue burden on agency operations.

4.2.4 Items for Future Consideration

1. Coordinate with the State Public Works Board and other agencies to promote space allocation and facilities for recycling in new public buildings.
2. Improve the submission of recycling center reports by seeking statutory changes that would establish penalties for non-reporting, and make submission of the report a condition of municipal business license renewal. Add a statutory provision for confidentiality to protect the interests of reporting businesses.
3. Improve accountability of municipalities with approved recycling programs by enforcing the existing requirement to conduct a periodic assessment of their recycling programs, including recommendations for inclusion in their SWMP.
4. Establish a program for State recognition of individuals, institutions and businesses for outstanding efforts to reduce waste and recycle.
5. Continue to investigate the feasibility of adoption of a State “Bottle Bill,” or beverage container redemption value.
6. Coordinate with State agencies on recycling within agency offices to conform to NAC 444A.500 (App. 8), and pursue expansion of the recycling efforts to include other recyclables such as bottles, cans, etc.
7. Encourage and support opportunities to develop organic materials composting and/or anaerobic digestion for green waste, wood waste, food waste, and food soiled paper.

4.3 Importation of Solid Waste

Waste importation has become a controversial issue nationally, especially in Eastern states where space is a premium and solid waste tends to “flow” across state lines from areas of higher to lower urbanization. In 1994, the US Supreme Court ruled that waste is an article of commerce, which means that no state or local government can establish rules that discriminate against disposal of waste based on its state of origin.

Federal landfill standards established in 1991 caused a trend toward regionalization of landfills. As previously noted, in addition to the large increases in waste importation over the last decade, both business interests and rural community development planners have begun to market existing, and

potential, Nevada disposal capacity to out-of-state customers (Fig. 5 - depicts the origin and disposition of Nevada's current waste importation).

Given this trend and the Supreme Court's prohibition against restrictions on the flow of waste, it appears as though Nevada is likely to remain a "net" waste importer (i.e., Nevada imports more solid waste than it exports out of state). Arguments can be made that solid waste importation provides an economic benefit to local communities by providing jobs and offsetting community solid waste management costs. Nevada should focus on preparing to manage the additional waste in a manner that continues to protect public health and the environment, while at the same time promoting waste reduction and resource conservation ethics.

While some may see the economic benefits of waste importation, there are also costs. With increased solid waste importation comes increased solid waste transportation (truck) traffic on Nevada roads and highways, and increased roadside litter along the routes to Nevada's landfills. Increased importation poses an increased regulatory burden as well: establishing new landfills, installation of additional transfer stations, and solid waste transportation services all require permits, with associated application reviews and facility inspections for the duration of the operating life of these facilities. Industrial and special wastes generated in other states and brought to Nevada would also bring new regulatory challenges.

Solid Waste Importation

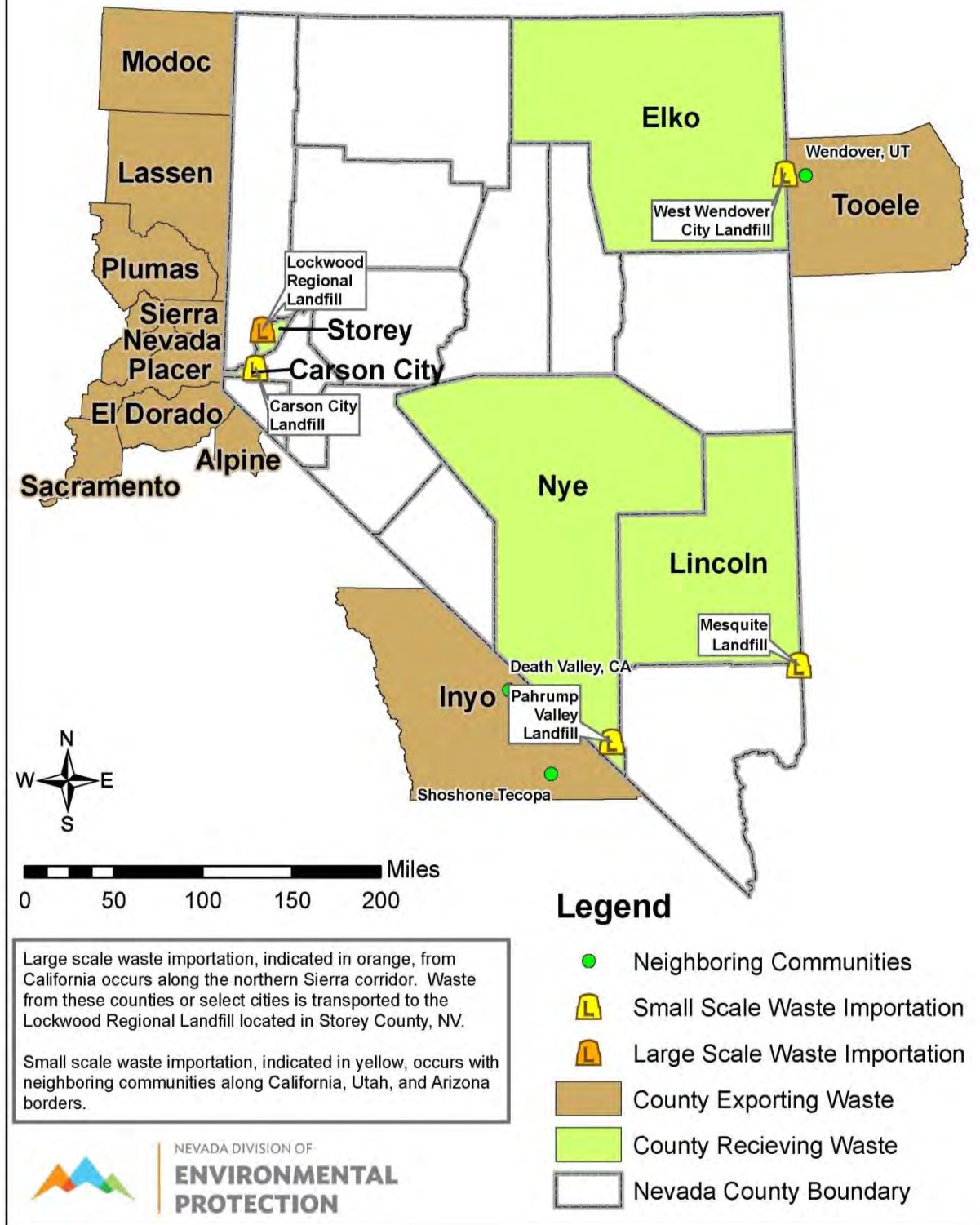


Figure 5. Solid waste importation into Nevada.

4.4 Special Waste Management

“Special wastes” are those that require special handling or disposal because of their physical, chemical, or biological characteristics. Examples of special waste types include waste vehicle tires, vehicle batteries, vehicle motor oil, household hazardous waste, medical (bio-hazardous) waste, liquid waste (septic pumping), petroleum contaminated soil, large appliances (white goods), junk automobiles, and electronic wastes (computers, monitors, etc.). For the most part, Nevada’s municipal waste programs have developed adequate procedures and facilities for management of these wastes; however, there are a few persistent, and new, emerging problems with special wastes as noted in the next sections.

4.4.1 Electronic Waste (E-waste)

This waste stream (televisions, home computers, cell phones and other electronic devices and equipment) is being generated in increasing quantities in homes, schools and businesses nationwide. Some of these wastes fail hazardous waste toxicity characteristic testing and must, therefore, be managed according to the hazardous wastes rules. Most notably, cathode ray tubes (a.k.a., CRTs, or the glass screen component of older TVs and computer monitors) typically contain several pounds of lead. There is a cost involved with proper disposal of a standard-sized monitor, or to have these items shipped to glass recycling facilities. Due to the costs associated with management of this type of waste, e-waste is often stored indefinitely in warehouses and garages.

The e-waste problem is not unique to Nevada. Twenty-five states have already adopted laws and regulations to identify the responsibilities for funding and building the infrastructure to manage this waste. In the 2005 Legislative Session, AB 65 was introduced to impose a ban on the landfilling of, “CRTs, laptop computers and similar video display devices,” and would have required the NDEP to establish a Statewide program to recycle these wastes; however, the bill died in committee. The 2007 Legislative Session introduced AB 471, which would have provided \$4,000,000 from the General Fund to The Blind Center, a non-profit organization in southern Nevada, to foster electronic waste reuse/recycling, but AB 471 also died in committee.

The 2009 Legislative Session introduced AB 426, which, through amendment, ultimately directed the NDEP to conduct a study of existing and proposed programs for the reuse and recycling of computers and other electronics. The report resulting from the study was submitted to the 2011 Legislative Session recommending that no legislative action be taken. “End-of-life” management of electronic

wastes is an issue that may become more pressing for Nevada unless a national program is established by Congressional action.

4.4.2 Household Hazardous Waste (HHW)

Solid wastes that have hazardous waste characteristics are exempt from hazardous waste regulation if generated by households. While household wastes such as solvents, cleaning compounds, and pesticides can be legally disposed in municipal landfills, many citizens and local governments are seeking environmentally preferable alternatives. NRS 444A.040 (App. 7) provides that municipalities with populations greater than 45,000 shall establish programs for HHW management. In Carson City, Clark, Douglas, and Elko Counties, comprehensive HHW drop-off services are available to residents at no charge. In the Reno-Sparks area of Washoe County, private companies (H2O Environmental and others) provide HHW management services (drop-off) for a fee. However, it is unlikely that it efficiently serves the purpose of diversion of HHW from the municipal waste stream. Residents are far less likely to use such a service if they have to pay. As is often the case, rural counties collect used vehicle batteries and oil for recycling, but few have established comprehensive HHW programs.

In recent years, elemental mercury originating from households received much media attention following several release incidents in Nevada. This attention raised awareness among Nevada residents causing many to inquire about proper disposal of elemental mercury perhaps discovered in containers in their garage among stored household items, or in mercury-containing devices such as thermostats and thermometers they'd replaced with newer digital models. As a result, the NDEP developed a webpage and informational brochure for the public regarding proper disposal of household waste mercury. It is important to point out that the local waste disposal companies, or Health Districts, remain the first points of contact for this type of information; however, NDEP is always ready to provide information and assistance in this regard.

4.4.3 Medical Waste

Services for collection and disposal of medical waste generated by health care and veterinary industries are available for a fee in Nevada. Home pick-up services are available in some areas to citizens with mobility issues. Sharps (needles, lancets, and other medical instruments) generated in the home are of particular concern because they can present a route of blood-borne pathogen infection to other household residents as well as to sanitation workers who manage household waste at municipal

waste facilities. While fully eliminating sharps from the municipal waste stream may not be possible, services that encourage separation from the municipal waste stream and increased use of sharps containers could further reduce the hazards to sanitation workers.

In 2015, the SNHD adopted new ordinances to provide for safer storage, handling, processing, and disposal of medical waste in Clark County. WCHD previously established comprehensive Biohazardous Waste ordinances to regulate medical waste, including sharps. According to WCHD's SWMP, there are three means of disposal for Washoe County residents including mail-in programs (subscription services), medical waste drop-off locations, and in-home care (collection) arrangements.

For the generation, storage, and transportation of medical waste, the NDEP defers to OSHA and DOT standards. However, once medical waste arrives at various disposal locations, NDEP retains oversight as to how the landfills manage it.

4.4.4 Pharmaceuticals and Personal Care Products

Formerly, the favored method for household disposal of unused pharmaceutical drugs was flushing down the sink or toilet. However recent studies show that common substances such as drugs and the chemical components of personal care products (e.g., plastic micro-beads in toothpaste and cosmetics) accumulate in surface and ground waters. While advances in chemical analysis have made it possible to detect even trace levels of these contaminants in drinking water sources, little is yet known about their potential to affect human health and the environment at any level. Although the potential for human health effects due to the presence of pharmaceutical wastes in drinking water is of concern, the effects on aquatic life and water-dependent organisms may be more pronounced due to their continuous exposure.

While the discharge of pharmaceuticals from manufacturing sources and the medical profession is already well-defined and controlled, quantities released from diffuse sources (e.g. household waste) are harder to estimate or control. Examples of "diffuse sources" include human excretion of ingested substances, drug disposal down sanitary sewer systems, and introduction of home septic systems seepage to the water table. It is recommended that Nevada solid waste managers monitor emerging data on pharmaceutical wastes and their impact on the environment so that they may develop effective management programs to address them. Currently, in some counties, there are community groups,

pharmacies and sheriff's departments that sponsor collection events for their residents' waste medicines and medical supplies. These are generally not regularly scheduled activities so you are encouraged to check with you pharmacy and your county sheriff's department for turn-in opportunities.

4.4.5 Waste Tires

Waste tire regulation in Nevada began with the passage of Assembly Bill 320 in 1991 which established disposal methods for waste tires and authorized the State Environmental Commission to begin adopting regulations governing waste tire handling and transportation. In March 2009, SB 186 passed setting the standards for the permitting and operation of facilities for the management of waste tires. The regulations provide for issuance of permits for the design, operation and closure of waste tire management facilities, registration of haulers, and transportation of waste tires.

In addition, SB 186 banned landfilling of tires in counties that have permitted waste tire management facilities. There are some exceptions dealing with unavailability of services and unintentional disposal. There are currently three permitted waste tire management facilities in Nevada: Lunas Construction Clean-up in Clark County, permitted by SNDH; Ray's Tire Exchange and Rubber Enterprises in Washoe County, permitted by WCHD; and GreeNu in Lyon County permitted by NDEP. Thus, the landfill ban currently affects only Clark County as there are no permitted landfills in Washoe County and the GreeNu site in Lyon County is not yet operating.

In Nevada's regulations a waste tire is defined as one that is not suitable for its intended purpose because of wear, damage or defect. Retreaded and serviceable tires are not considered waste tires as they will be reused as originally intended. As noted above, Nevada has limited restrictions on placing waste tires in landfills and most landfills in Nevada accept used tires from the public and commercial haulers. Because the cost to landfill waste tires is low, and the cost to recycle them is relatively high, recycling markets for waste tires are not fully developed in Nevada.

The goals of the state's waste tire management program are to minimize the threat to public health and the environment posed by improper storage and disposal of waste tires and to develop a program that balances the costs and benefits to protect public health and the environment.

NDEP supports conserving natural resources by promoting recycling and reusing/repurposing of waste

tires. Likewise, Nevada's waste tire management plan is predicated on the premise that despite their name, waste tires are actually a resource. This approach places the primary responsibility for developing uses for waste tires on the private sector. Regulatory actions taken by the State legislature are intended to encourage the private sector to develop uses and markets.

In August 2009, the NDEP conducted a statewide survey of tire dealers, tire re-treaders, landfill operators and mining operations in an effort to assess the status of waste tire disposal issues in Nevada. The results indicated that about one-third of waste tire generators self-haul their tires for disposal while the balance contract with disposal companies or registered tire haulers to transport their waste tires. Another 30% of waste tire generators send their tires to a processor, or to be retreaded. The balance is disposed of in landfills. The majority of landfill sites (39%) reported receipt of less than 500 tires per year, while 36% indicated receipt of 1,000 to 5,000 tires per year.

In urbanized counties such as Clark and Washoe, access to affordable recycling and/or reuse/repurposing alternatives are readily available. However, that is not the case in rural Nevada. For this reason, the only available option for many rural communities is to use a permitted landfill for waste tire disposal. Given the underdeveloped waste tire recycling market in Nevada, fewer waste tires are recycled or recovered in end-use markets. Also, landfills typically charge a low fee for tire disposal. Thus, the majority of waste tires are buried in landfills throughout the state. Notably, respondents and the Health Districts indicated that they are not aware of any existing waste tire stockpiles, in their jurisdictions.

NRS 444A.090 established the "Tire Fund" requiring that sellers of new tires collect a fee of \$1.00 per tire from purchasers. According to 2016 tax revenue generated, about 1.9 million new tires were purchased in Nevada. Data from the county solid waste recycling reports indicate approximately 1.1 million of those replaced tires, were recycled. During the same period, the solid waste disposal reports indicate 0.4 million tires were landfilled. The difference between the figures, 0.4 million tires, can be accounted for in the number of tires being reused and/or retreaded, plus a degree of estimation inaccuracy owing to the number of landfills that do not use scales.

Overall, the largest generator of waste tires in Nevada is tire retailers. However, businesses can not readily sell the waste tires they generate at their retail outlets. Despite the costs to retailers of

commercial handling, an almost equal amount of waste tires are hauled away by disposal services versus being self-hauled. Whether residentially or commercially generated, the following four waste tire management options are available to most Nevadans:

1. Self-haul to a permitted management or disposal facility
2. Contract with a registered waste tire hauler to transport them to a permitted management or disposal facility
3. Recycle or reuse/repurpose waste tires
4. Re-sell waste tires (if they have commercial value).

Although most permitted landfills charge a modest disposal fee per tire, these fees are believed to be the chief contributor to illegal dumping of waste tires in Nevada's desert areas. Open dumping, burning and stockpiling of waste tires are not acceptable alternatives to landfilling as they are prohibited by NRS 444.583. At most Nevada landfills, waste tires are mixed in with other municipal wastes in the landfill mass. When not mixed in, waste tires must be chipped or split to reduce their volume in the landfill mass, eliminate water collection and vector propagation potential.

For most landfills in Nevada, remaining space is not a limiting factor. However, because of their physical properties, landfilling waste tires is an extremely inefficient use of landfill space. Volume reduction of large quantities of tires is highly desirable to conserve landfill capacity. As a landfill management issue, waste tires will become increasingly important as available capacity decreases in existing landfills and new landfills become more difficult to site due to rising permitting and operating costs.

Some alternatives to landfilling waste tires are available. The U.S. Tire Manufacturers Association (USTMA) Scrap Tire Committee estimates 3,551.3 thousand tons of waste tires were generated nationwide in 2015¹. Uses other than landfill disposal include Tire Derived Fuel (TDF), ground rubber applications, civil engineering applications and exportation.

In 2015, an estimated 48.6% of all waste tires generated in the U.S. were used as an alternative fuel source over coal in industrial processes (cement kilns, paper mills, industrial utility boilers, etc.). Of

¹ U.S. Tire Manufacturers Association (USTMA), 2017, 2015 U.S. Scrap Tire Management Summary report

the balance, 25.8% were used in ground rubber applications, such as playground surfaces and sports field applications; 11.4% were landfilled and only 2.6% was exported. The civil engineering market used 7.0% in highway/roadway projects and the final 4.6% was used in miscellaneous uses.

Used whole, or shredded depending on the combustion device type, waste tires are used for fuel because of their high heating value, typically as a supplement to traditional fuels, such as coal or wood, in industrial applications. Unfortunately, Nevada's only two coal-fired power plants, Valmy and Reid-Gardner, employ ball-mill coal incineration preparation systems that do not lend themselves to waste tire fuel supplementation. Therefore, the capital costs necessary to modify these existing plants to be able to use whole tires or TDF, not to mention the costs associated with TDF production, render power production via waste tires as a fuel source a noncompetitive alternative to coal at the present time.

One common method for waste tire management is to recycle them into ground rubber (also called granulated, crumb or pelletized rubber). The crumb rubber is used as stock material for highway paving and other surface applications such as athletic/recreational surfaces. Although "asphalt-rubber" is a more expensive paving material due to the costs of adding an additional ingredient to asphalt blends and the specialized equipment required to manufacture and apply it, the addition of rubber to asphalt creates a far superior material to asphalt alone. It can be adapted to perform in a variety of environmental conditions (heat, cold, wet, dry, etc.). Applied to roads, asphalt-rubber dampens tire noise, is more durable than asphalt, thereby increasing the life-expectancy of pavement. Ground rubber has also proven to be a superior material in applications such as ground cover under playground equipment, competitive running tracks, ADA compliant trail systems, and is an integral component in synthetic sports-turf.

Exportation as a national waste tire management strategy is showing a marked reduction in recent years. In 2015, the volume of waste tires exported decreased about 43% over the 2013 reported volume. Another positive fact from the USTMA is that in 2015, over 93% of the waste tires that were stockpiled across the U.S. have been cleaned up.

4.4.6 Items for Future Consideration

1. **Waste Tires:** Continue to evaluate practices for effective landfilling methods (ex: whole vs quartered tires), associated hazards, and disposal costs of landfilling tires; investigate the potential use of TDF; seek out and promote new tire recycling markets in Nevada.
2. **Household Hazardous Waste:** Continue to offer household hazardous waste start-up grant funding especially to rural local governments willing to cover program maintenance costs.
3. **Elemental Mercury hazards mitigation:** Continue to promote and assist in efforts to collect elemental mercury from the public; continue to develop public educational programs and materials to explain the hazards of elemental mercury and the availability of non-hazardous alternative products.
4. **Medical Waste:** Promote development of community collection programs to address household-generated sharps; increase public hazard awareness associated with sharps; promote proper disposal of sharps by providing information on available local collection points and mail-in programs.
5. **E-waste:** Continue to provide support for e-waste collection events; continue to provide public education and outreach efforts to encourage public, residential and business (or manufacturer) take-back programs.

4.5 Rural Solid Waste Management

An effective solid waste management system depends upon adequate infrastructure, proper equipment, trained personnel, and good planning. Compared to urbanized areas, solid waste management programs in rural Nevada face unique challenges:

- Weaker economic base due to limited tax revenue
- Insufficient personnel resources
- Poor economy of scale
- Long transportation distances to resources = increased costs
- Lack of recycling infrastructure

With only a couple of exceptions, all of Nevada's rural landfills are owned by the local governments and operated by their public works departments. Although most are exempt from the federal requirements for engineered landfill liners and ground-water monitoring, they are subject to the federal standards as they apply to location, design, operation, closure/post-closure care, and financial assurance. Since implementation of the RCRA Subtitle D criteria, Nevada's rural solid waste infrastructure fundamentally shifted from a few "open" dump sites scattered across the state, to engineered regionalized landfills served by a network of satellite public waste storage bins and transfer

stations. With this shift came an increased need for landfill equipment (bins for storage, trucks for hauling, bulldozers, compactors, and earthmovers) and demand for new skills in landfill operations, solid waste planning, and environmental compliance. Responsible for meeting these new demands and holding up their ends in the new infrastructure model, rural counties often fell into non-compliance, unable to meet the required elements of the solid waste regulations due to their economic difficulties and staffing short-falls.

4.5.1 Items for Future Consideration

1. Coordinate solid waste planning with land use master planning; investigate the use of the State Land Use Planning Advisory Council as a solid waste planning forum.
2. Enhance existing, or establish new, training programs to help rural landfill operators meet certification requirements.
3. Provide grants to support rural local governments with solid waste planning, equipment acquisition, and illegal dump site clean-up activities.

4.6 Illegal Dumping and Open Burning

Nevada's rural and urbanized areas alike suffer from one common, and persistent problem: illegal, or open, dumping. Because it is fundamentally local in nature, planning at the municipal solid waste management level is seen as best suited to address this problem. The first condition for reducing illegal dumping is the establishment of a local system that provides convenient, and reasonably priced, solid waste services. Once that system is in place, the municipal government can begin to address illegal dumping through a two-pronged approach: providing public information as a preventive measure (e.g., where to properly dispose of trash and various recyclables, advising that open dumping is an illegal, punishable offense), while enforcing the laws against it through local authorities. NRS 444.621 through 444.645 (App. 5) provides municipal governments with the authority to prosecute and penalize illegal dumpers.

It is recommended that local solid waste planners consider whether the following measures would help to control illegal dumping in their communities:

- Increase the convenience and/or decrease the costs associated with use of authorized disposal services and facilities
- Encourage full enforcement of the laws against illegal dumpers in small communities

- Promote coordination among local peace officers, prosecutors, and courts to address illegal dumping problems

Progress toward controlling illegal dumping activity depends upon the citizens and their elected municipal officials putting a high priority on having a clean community.

The City of Elko is an outstanding example of a rural Nevada community that has embraced this concept. The City of Elko has led a concerted effort to reduce illegal dumping by involving its citizens and civic leaders in community cleanup events, free dump days and single stream recycling. In Clark County, the SNHD holds regular public meetings for the purpose of hearing solid waste violation cases, most of which are illegal dumping.

Open burning of household garbage and non-vegetation refuse is not only illegal, and a public nuisance, but it also presents a threat to public health and the environment due to toxic substance emissions. The US EPA determined that open burning constitutes the largest source of dioxins released to the environment in the United States, far exceeding emissions from commercial waste incinerators. Dioxins are carcinogenic (cancer-causing) substances that persist in the environment and can be taken up into the food chain. Exposure routes for dioxins include inhalation, and absorption by ingestion of dioxin contaminated food. Fire smoke can carry and drop dioxins onto crops where they are absorbed by the plants, and ultimately consumed by animals and humans.

In 2004 the NDEP Bureau of Air Quality tried to address this problem by proposing new regulations limiting the open burning of solid wastes. As a result of opposition expressed to this change, especially from certain rural areas, it was determined that additional public information and education is needed before this issue will be resolved statewide. The proposed amendments were withdrawn, but some local ordinances were adopted to address this issue.

4.6.1 Items for Future Consideration

1. Provide assistance to rural local government elected officials and staff that want to address illegal dumping problems, including the following:
 - Public information and education
 - The use of State grants to improve rural solid waste infrastructure
 - On-site workshops to develop local strategies that include all entities and personnel that can influence open dumping
2. Local governments, in jurisdictions where illegal dumping has become a commercial enterprise, should consider adoption of a “generator responsibility” ordinance.
3. Conduct public outreach and education about the risks of open burning and build support for burn restrictions in rural communities.

4.7 State and Local Funding

4.7.1 Solid Waste Management Authorities (SWMAs)

Nevada’s three SWMAs are statutorily approved to collect fees and fines through permitting, as well as compliance and enforcement actions involving solid waste management. In 1991, State Legislature authorized a bill that approved a \$1 fee (Tire Fee) per retail tire sold, which became the solid waste management account. Funds from the tire fee must be used exclusively for solid waste management, in accordance with statute.

The Tire Fund partially funds the solid waste management programs of the three SWMAs and is collected by the State Department of Taxation. Sellers of new tires are required to submit 95% of each tire fee to Taxation and are authorized to keep the other 5% to offset their administrative burdens. The revenue collected by Taxation is distributed among the three SWMAs, on a quarterly basis, as follows:

NV Division of Environmental Protection:	44.5%
Southern Nevada Health District (SNHD):	30%
Washoe County Health District (WCHD):	25%
NV Department of Taxation:	0.5%

Figure 6 shows tire fee revenue by fiscal year from 2007 through 2016. Except for 2009, which recorded a loss of over 20%, revenue has only fluctuated about 5% from year to year. The huge 2009 drop can be attributed to the national recession that began in late 2008.

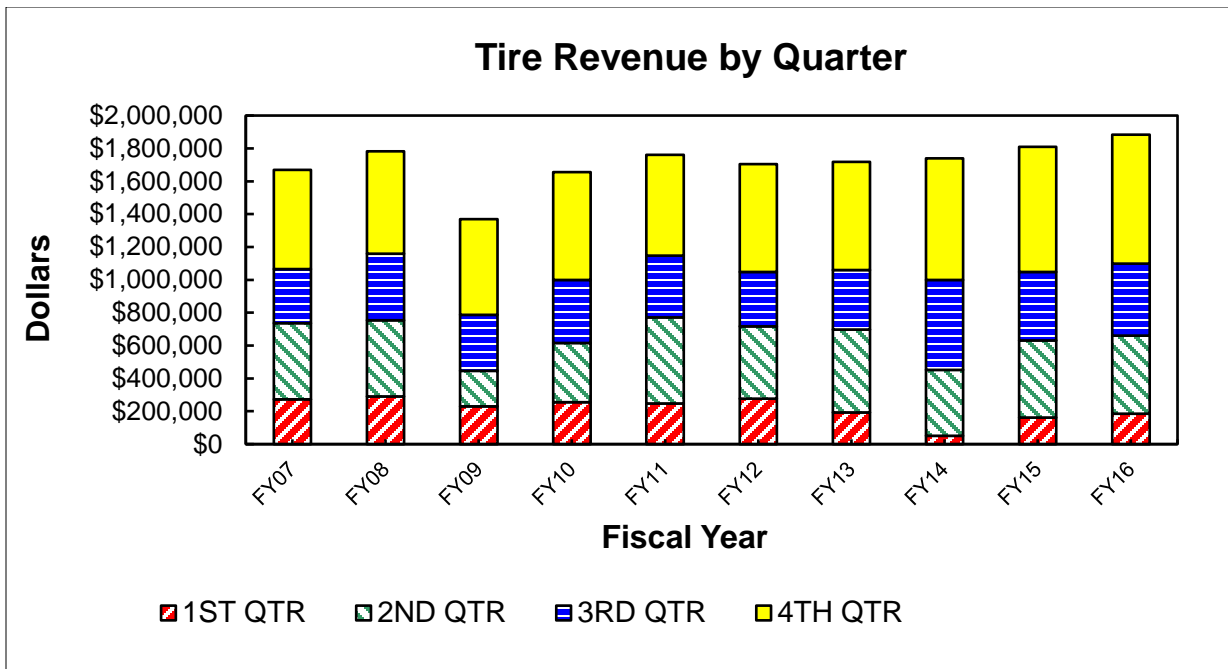


Figure 6: Revenue collected from tire fee for fiscal years 2007-2016.

This revenue source is not directly related to the regulatory workload of the Solid Waste program; while the number and complexity of regulated solid waste management facilities has increased, tire fees have remained flat and proved to be inadequate to support program needs.

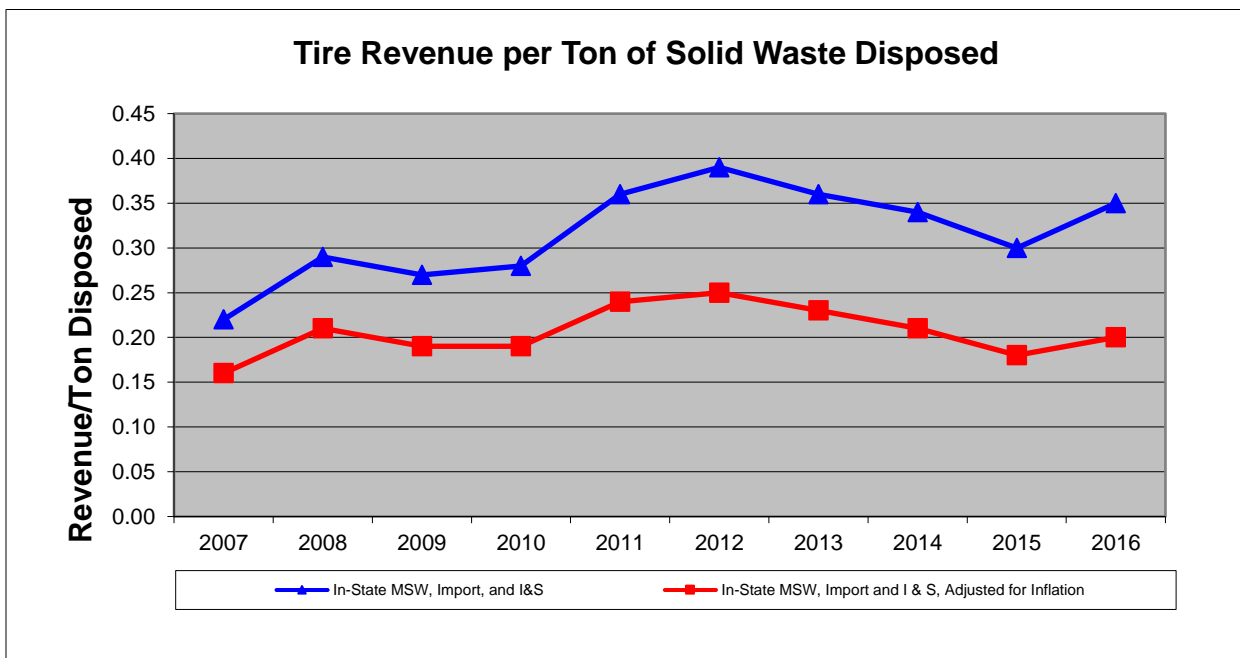


Figure 7: Trend of revenue collected for each ton of solid waste disposed. The red line is deflated pursuant to the average inflation rate of 1.9 for years 2007-2016 (U.S. Department of Labor, Bureau of Labor Statistics, not seasonally adjusted, west urban, all items)

In 2007, Tire Fee revenue brought in about 22¢/ton of waste disposed; nine years later (2016) it amounted to 35¢/ton (Fig. 7). The upper curve in Figure 7 shows the change in ratio of Tire Fee revenue per ton of waste disposed. The lower curve is the same ratio adjusted for an average inflation rate of 1.9% annually showing 17¢/ton in 2007 increasing to 20¢/ton in 2016. In 2016, the revenue was 11.4% higher than 2007 as the tons of waste disposed dropped 28.5%.

In October, 2014, the SEC adopted a schedule of fees (applicable to facilities under the authority of NDEP only) for the issuance of permits and other approvals for the operation of solid waste management facilities. These include annual operating fees, post-closure fees, and permit modification fees (NAC 444.6395, see Appendix 6). The schedule of fees is based on a volume threshold to capture our largest Class I Municipal, and Class III Industrial, landfills. Historically, permits for large facilities demand more time and effort to review and maintain, as well to ensure facility compliance through reporting which requires regulatory staff review, and inspections conducted by regulatory staff.

The new schedule of solid waste management permitting fees will provide a supplemental source of revenue that is directly tied to the regulatory workload. In addition, the new fees will enable the Division to offset certain expenses currently funded by hazardous waste fees to help address recent revenue shortfalls in the Hazardous Waste Management Fund.

4.7.2 Local Government

Local government has responsibilities for municipal solid waste planning, recycling program development and implementation, as well as providing public information and education for prevention of illegal dumping. Additionally, most of Nevada's rural governmental entities own and operate their community disposal sites. Local solid waste management activities may be funded through disposal fees collected at the landfill gate, property tax assessments, general funds, or a combination of any of these methods.

Due to the high cost of operating a municipal landfill in compliance with State and Federal regulations, many of Nevada's rural landfills have been driven to closure, leaving remote communities faced with a dilemma to either build a landfill themselves, or pay for long-distance waste transportation services. Budget shortages in some of Nevada's sparsely populated counties have led to

inadequate staffing, lack of training, equipment, and insufficient operating funds for landfills. These conditions have contributed to rural landfills operating in violation of regulations and permit requirements.

As a strategy for revenue generation, several rural governments are exploring waste importation, not only as part of their regular solid waste management programs, but also as general fund enhancement. At present, these are two options under consideration: municipalities can either establish and operate commercial landfills themselves, or, negotiate a “host” fee with existing private landfills (based on tons of waste received at the landfill, a percentage of the disposal fees paid is returned to the county/municipality in which the landfill is located).

4.7.3 Items for Future Consideration

1. Evaluate each rural county’s costs and funding sources for solid waste management to determine whether local governments are in need of financial assistance.
2. Increase the current tire tax (\$1 on each new tire sold) to defray NDEP’s costs to manage and regulate solid waste in Nevada. This revenue source could also fund grants for solid waste management projects statewide.
3. Establish a State tipping fee on each ton of solid waste disposed in landfills statewide. This revenue source could be used to fund grants for solid waste management projects statewide.

Appendix 1

Amendments to the Nevada Revised Statutes
and Administrative Code

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LEGISLATIVE SOLID WASTE HISTORY SINCE 1993

YEAR	BILL #	SUMMARY	NRS #
1995	AB 449	Raised the county population threshold for requirement to offer curbside collection of recyclables from 40,000 to 100,000.	444A.040
1999	AB 564	Clark & Washoe to offer curbside collection of recyclables at public buildings; NDEP to assist State agencies to recycle; school districts to recycle paper.	Various
2001	AB 650	Changed the county population threshold for requirement to offer recycling drop-off centers from 25,000 to 40,000.	444A.040
2001	SB 424	Illegal dumping: authorities, enforcement, penalties. Clark Health District may establish a hearing officer to adjudicate alleged solid waste violations.	444.621- 444.640
2005	SB 396	Allows SEC to establish a fee schedule for solid waste disposal sites within areas of NDEP jurisdiction.	444.560
2005	SB 396	Limits the authority of NDEP personnel to conduct an inspection without a search warrant.	444.570
2005	SB 396	Counties of 100,000 or greater must make information on recycling opportunities available to businesses at time of business license application.	444A.040
2005	SB 396	Counties of 40,000 or greater must review/propose changes at least every two (2) years; submit a report to the NDEP by July 30 of each even-numbered year.	444A.050
2005	SB 396	Gives authority to NDEP to award grants to specific entities for projects that enhance solid waste and recycling.	444A.110
2007	SB 331	Requires NDEP to encourage the NV System of Higher Education to research and develop methods for reduction/reclamation/conversion of solid waste.	444A.110
2007	AB 178	A county whose population is over 400,000 shall establish a pilot program for collecting and separating recyclable material with a potential as a source of renewable energy or renewable fuel.	444A.120
2009	AB 426	Requires the NDEP to conduct an electronic waste study. The study will include an inventory of existing programs, an evaluation of same and a report of the results with recommendations to legislation.	N/A
2009	SB 137	Municipalities with curbside recycling must offer the service to multi-family dwellings (as defined in NRS444A), and for approval, plans for construction or major renovation of an MFD must provide space for collecting recyclables on the premises. Authorizes the System of Higher Education to use proceeds from recycling programs to support said programs. These moneys must be accounted for separately.	444A, 268, 278
2009	SB 186	Requires solid waste management authorities to permit facilities for the management of waste tires. Said facilities must obtain a permit to operate prior to commencing operations. Once a permit is issued a tire disposal ban is to be implemented in the county where located. Requires penalties for non-compliance and provides for specific exemptions to the disposal ban.	Various

LEGISLATIVE SOLID WASTE HISTORY SINCE 1993 (continued)

YEAR	BILL #	SUMMARY	NRS #
2011	AB 427	Appointed a committee to conduct an interim study concerning the establishment of a program for requiring the payment and refund of deposits on recyclable products sold in this State. The study must include, without limitation: (1) Consider recyclable commodities to be included in the program. (2) An analysis of the process for payment and refund of deposits on recyclable commodities, including, without limitation, the creation of redemption centers. May include consideration of other methods of encouraging recycling. (3) Submit a report of results and recommendations.	N/A
2011	AB 545	Increased the population threshold for availability of recycling programs. Changed the 40,000 threshold to 45,000.	444A.040
2011	SB 417	Revise the requirement concerning the adoption of regulations by the Commission and the Division for the separation of recyclable material at the source to require those regulations to include provisions for the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.	444A.020 & .030
2013	AB 44	This bill restricts the authority of an association of a planned community to regulate the storage of trash and recycling containers on the premises of attached or detached residential units with curbside trash and recycling collection.	116
2013	SB 449	Existing law sets forth penalties for a person who is found guilty of illegally disposing of solid waste, sewage or certain other similar materials three or more times during a period of 2 years. This bill increases from 2 years to 4 years the period during which a third or subsequent offense involving the illegal disposal of any cesspool or septic tank effluent or solid waste subjects the offender to those penalties.	444.630
2013	SB 123	This bill requires a plan be submitted to the PUC for the retirement or elimination of coal-fired electric generating capacity in Clark County and that the eliminated capacity be replaced with renewable energy facilities under a schedule specified in the bill. The bill does specify that remediation and reuse of coal-fired generation sites is under the jurisdiction of NDEP.	444.495
2015	SB 110	New requirement to accept recreational vehicles for disposal in certain circumstances. A municipal solid waste landfill shall accept a recreational vehicle for disposal if: 1. The person disposing of the recreational vehicle pays any applicable fee and provides the title to the recreational vehicle, indicating that he or she is the owner. 2. Accepting the recreational vehicle for disposal does not violate any applicable federal or state law or regulation relating to the operation of the municipal solid waste landfill.	444.559

NEVADA STATE ENVIRONMENTAL COMMISSION
SOLID WASTE REGULATORY DEVELOPMENT MILESTONES

PETITION	LCB #	PETITION SUMMARY	SEC ADOPTED	EFFECTIVE DATE	NAC CHAPTER
NA	R-183-91	Tire surcharge fees (Tire Fee)	12/05/1991	01/02/1992	444
NA	R-103-92	Solid Waste landfill regs for approved Subtitle D program	07/23/1992	09/02/1992	444
NA	R-168-92	Minimum standards for solid waste reduction and recycling programs	09/30/1992	11/10/1992	444A
93008	R-051-93	Solid Waste landfill permitting program amendments	09/22/1993	11/08/1992	444
9300B	R-043-93	Solid Wastes fees out-of-state	09/22/1996	10/29/1993	444
94001	R-051-93	Solid waste facilities management deadline extensions	09/22/1993	11/08/1993	444
94006	R-208-93	Solid Waste landfill technical amendments to R-051-93	01/20/1994	03/01/1994	444
94018	R-115-94	Solid Waste addition of "inert waste" definition & standard (withdrawn)	NA	NA	
94019	R-116-94	Solid Waste addition waste tire recycling regulations	11/09/1994	12/16/1994	444A
95008	R-030-95	Solid Waste Financial Assurance date extension	10/03/1995	11/09/1995	444
95013	R-035-95	Solid Waste Class II landfill two year time extension	10/03/1995	11/09/1995	444
96011	R-071-96	Recycling thresholds & waste tire hauler manifests changes	09/10/1996	10/03/1996	444A
96012	R-072-96	Class II landfill sites exempt from groundwater monitoring	09/10/1996	10/03/1996	444
97001	N/A	Class II landfills (federal "rifle-shot reforms for rural landfills": daily cover, final cover, gas monitoring)	03/06/1997	3/10/1997	444
98003	R-034-98	Transfer station standards and application requirements, 24-hr. landfill operating day, small landfill flexibility, Class III Site revisions	03/25/1998	4/17/1998	444
2000-02	R-173-99	Materials Recovery Facility standards and application requirements	12/16/1999	2/9/2000	444
2001-03	R-038-01	Recycling at public buildings	09/18/2001	10/25/2001	444A
2001-03	R-39-01	Recycling by State agencies-procedures	09/18/2001	10/25/2001	444A
2002-12	R-105-02	-Remote open burning of yard waste & extended waste storage -Public Waste Bin facility modifications -MSWLF 5-year capacity survey -Compost Plant permit requirements	9/11/2002	10/18/2002	444
2005-09	R176-05	Procedures for grants to enhance Solid Waste Management Systems and promote the efficient use of resources.	03/08/2006	05/04/2006	444A
2012-02	R123-11	Amends NAC 444.748 to clarify the jurisdictional responsibilities associated with appeals concerning the management and disposition of solid waste by Nevada's three Solid Waste Management Authorities.	02/15/2012	05/30/2012	444
NA	R037-13	Authorizes NDEP to collect solid waste management fees.	10/08/2014	10/24/2014	444

Appendix 1 (continued): Amendments to Nevada Revised Statutes and Administrative Codes Related to Solid Waste Management

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Appendix 2

Estimated Capacities of
Active Landfills in Nevada

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COUNTY	FACILITY NAME	OWNER	OPERATOR	CAPACITY CUBIC YDS	YEAR PERMIT ISSUED	PROJECTED CLOSURE
Carson City	Carson City Class I & III	Carson City	Carson City	18,982,442 ³	1997	2069
Churchill	Russell Pass Class I	City of Fallon	City of Fallon	16,205,960 ³	1998	2267
Clark	Apex Regional Class I	Republic Services	Republic Services	865,000,000 ³	1994	2482
	Boulder City Class I	Boulder City	Boulder City	1,200,000 ¹	1996	2048
	Laughlin Class I	Republic Services	Republic Services	2,551,018 ³	1994	2033
	Reid Gardner Class III	Nevada Power Company	Nevada Power Company	4,520,000	1986	2020
	Timet Class III	Timet Metals Corp.	Timet Metals Corp.	370,000	1991	2023
	Wells Cargo Class III	Wells Cargo	Wells Cargo	40,880,000 ¹	1996	2042
Elko	Elko Class I	City of Elko	City of Elko	24,181,000 ³	1995	2112
	West Wendover Class I & III	City of West Wendover	City of West Wendover	50,766 ³	1999	2048
Esmeralda	Goldfield Class II	Esmeralda County	Esmeralda County	293,627 ³	1997	2143
Eureka	Eureka Class II	Eureka County	Eureka County	1,197,300 ³	1996	2118
	TS Power Plant Class III	Newmont/NV Energy	Newmont/NV Energy	2,467,617 ³	2005	2092
Humboldt	Humboldt Regional Class I	Humboldt County	DeLong Construction	1,100,821 ³	1996	2030
	North Valmy Station Class III	NV Energy	NV Energy	19,644,197 ³	2001	2320
	Jungo Regional Class I	Recology Inc.	Recology Inc.	111,000,000 ¹	2012	Not Operating
Lander	Battle Mountain Class II	Lander County	Lander County	1,320,000 ³	1998	2080
Lincoln	BEDROC Class I	BEDROC Limited LLC	BEDROC Limited LLC	18,300,000 ¹	2014	Not Operating
	Crestline Class II	Recology Inc.	Recology Inc.	437,103 ³	1998	2038
	Crestline Class I	Recology Inc.	Recology Inc.	140,531,121 ¹	2001	Not Operating
	Mesquite Class I	City of Mesquite	City of Mesquite	1,319,751 ³	1994	2027
	Western Elite Class III	Western Elite, Inc.	Western Elite, Inc.	9,471,438 ³	2004	2070
Mineral	Hawthorne Class I	Mineral County	Mineral County	730,000 ³	1997	2041
	Hawthorne Army Depot Class III	U.S. Army	Contracting Officer	449,450 ³	1997	2057
	Rawhide Landfill Class I	Nevada Res. Rec. Group, LLC	Nevada Res. Rec. Group, LLC	298,100,000 ¹	1996	Not Operating
Nye	Pahrump Valley Class I	Nye County	Nye County	1,590,000 ³	1997	2045
	Round Mountain Class II	Nye County	Nye County	263,896 ³	2001	2031
	Tonopah Landfill Class II	Nye County	Nye County	89,306 ³	2002	2017 ⁴
Pershing	Pershing County Landfill Class II	Pershing County	Pershing County	900,000 ³	1998	2063
Storey	Lockwood Regional Class I	Disposal Services	Disposal Services	267,729,875 ³	1995	2150
White Pine	Ely Regional Class I	City of Ely	City of Ely	1,644,567 ³	1998	2050

Appendix 2: Estimated capacities of permitted landfills in Nevada

¹ Permitted total capacity (waste and cover material)

² Current engineering design or design change on file

³ Current capacity reports on file

⁴ Date indicates completion of Phase I at the Tonopah landfill. Phase II has been approved in the operating permit, but prior to starting operations a detailed Phase II development sequence must be submitted to NDEP.

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Appendix 3

Nevada Counties
Solid Waste Infrastructure
Maps and Profiles

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Carson City Environmental Health Department

Plan Date: August 25, 2014

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	55,441	54,668	54,772	55,098	55,576	
MSW disposed in County (tons)	64,541	66,294	68,439	67,665	90,114	
Industrial/special disposed (tons)	68,262	65,601	98,978	107,077	138,649	
Imported MSW disposed (tons)	8	1	11	13	8,198	
MSW generated in County (tons)*	73,726	80,350	84,268	81,812	83,917	
MSW recycled (tons)	18,392	22,432	24,621	23,281	22,710	
MSW generated/capita (lbs./day)	7.3	8.1	8.6	8.2	8.3	

	2006	2007	2008	2009	2010	2011
Population	57,701	57,723	57,600	56,506	55,850	56,066
MSW disposed in County (tons)	87,271	81,169	79,942	66,567	69,349	79,109
Industrial/special disposed (tons)	176,032	211,398	137,540	80,038	88,884	98,278
Imported MSW disposed (tons)	181	205	215	13	10	22
MSW generated in County (tons)*	117,363	117,434	90,503	80,443	101,576	88,322
MSW recycled (tons)	41,776	47,353	23,743	23,823	42,294	21,105
MSW generated/capita (lbs./day)	11.2	11.2	8.6	7.8	10.0	8.6

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Carson City Landfill	Carson City	I & III	627	2054

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Carson City	Capital Sanitation	Yes	No	weekly	bi-weekly

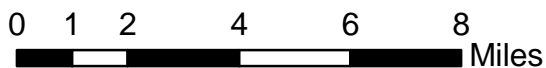
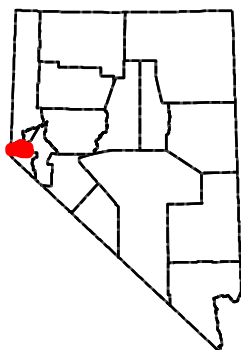
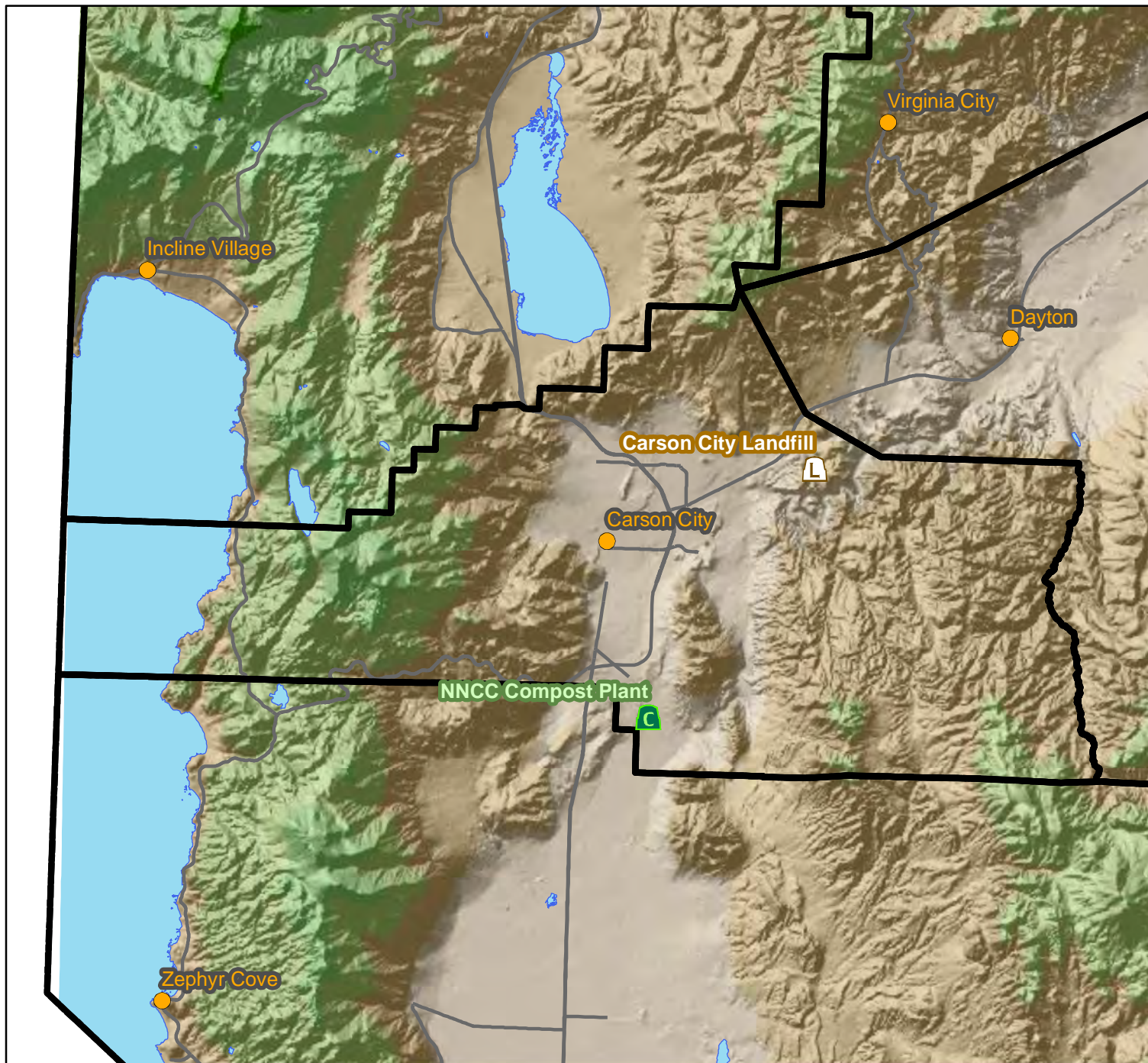
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
2	3	4	3	2	2	1	10	5

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Carson City/Env. Control	Drop-off by appointment	Used Oil, Paint, Pesticides, etc.
Carson City/Ormsby LF	Drop-off during business hours	Oil, Antifreeze, Vehicle batteries

Carson City Solid Waste Facilities



Legend

- | | | | | | |
|--|----------------------------|--|--------------------|--|-------------------|
| | Landfills Class I | | Proposed Landfills | | County Boundaries |
| | Landfills Class II | | Transfer Stations | | Major Roads |
| | Landfills Class III | | Waste Bin | | Lakes NHD (2010) |
| | Landfills Class I and III | | Compost Facility | | Cities |
| | Landfills Class II and III | | | | |

Churchill County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Churchill County

Plan Date: March 30, 2015

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	25,238	25,322	25,461	25,665	25,901	
MSW disposed in County (tons)	18,653	22,207	22,270	22,573	26,895	
Industrial/special disposed (tons)	4,456	6,977	18,039	44,227	62,775	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	18,653	22,207	22,270	22,573	26,896	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	4.1	4.7	4.9	4.9	5.7	

	2006	2007	2008	2009	2010	2011
Population	27,371	27,190	26,981	26,859	26,360	25,136
MSW disposed in County (tons)	8,238	9,890	8,007	13,037	15,091	18,900
Industrial/special disposed (tons)	83,617	76,151	90,075	58,153	8,541	15,267
Imported MSW disposed (tons)	0	417	0	0	0	0
MSW generated in County (tons)*	19,882	14,205	8,012	13,040	15,091	18,900
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	4.0	2.9	1.6	2.7	3.1	4.1

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Russell Pass Landfill	City of Fallon	I	240	2267

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Fallon	City of Fallon	n/a	Yes	Weekly	None
Churchill County	A&J Disposal	No	No	Weekly	None
	Fernandes Disposal	No	No	Weekly	None
	Waste Management, Inc.	No	No	Weekly	None

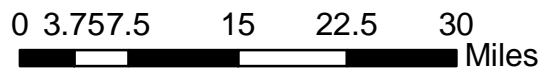
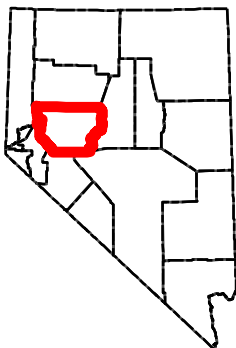
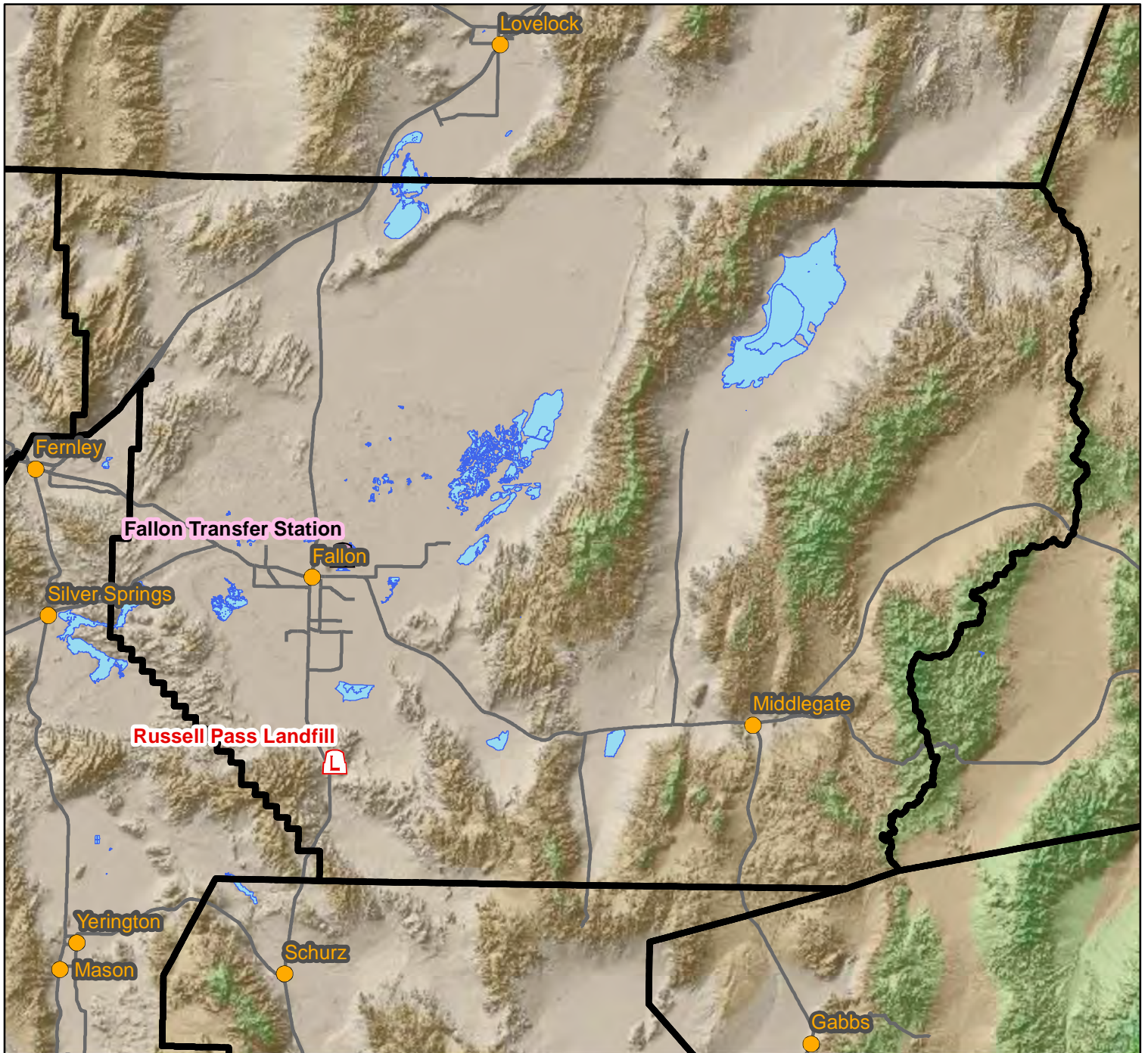
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
1	1	1	3	0	0	0	4	0














HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
City of Fallon	Drop-off during business hours	Vehicle batteries

Churchill Solid Waste Facilities



Legend

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|--|--|---|
|  Landfills Class I |  Proposed Landfills |  County Boundaries |
|  Landfills Class II |  Transfer Stations |  Major Roads |
|  Landfills Class III |  Waste Bin |  Lakes NHD (2010) |
|  Landfills Class I and III |  Compost Facility | |
|  Landfills Class II and III |  Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Clark County Health District

Plan Date: May 23, 2013

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016
Population	1,988,195	2,031,723	2,051,946	2,069,967	2,085,920
MSW disposed in County (tons)	1,878,966	2,104,157	2,163,746	2,228,899	2,273,052
Industrial/special disposed (tons)	832,956	702,429	985,710	1,824,239	900,861
Imported MSW disposed (tons)	0	0	0	0	0
MSW generated in County (tons)*	2,626,248	2,728,944	2,755,463	2,740,816	2,891,916
MSW recycled (tons)	723,396	599,632	566,332	486,237	592,645
MSW generated/capita (lbs./day)	7.2	7.4	7.3	7.2	7.6

	2006	2007	2008	2009	2010	2011
Population	1,874,837	1,954,319	1,967,716	1,952,040	1,968,831	1,967,722
MSW disposed in County (tons)	2,562,183	2,461,962	2,416,861	2,155,545	2,182,537	1,993,409
Industrial/special disposed (tons)	2,347,362	2,173,700	1,440,325	1,165,931	3,166,473	1,122,371
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	3,067,306	3,097,318	3,023,586	2,641,984	2,657,773	2,596,884
MSW recycled (tons)	471,621	600,646	573,708	460,262	475,236	580,215
MSW generated/capita (lbs./day)	9.0	8.7	8.4	7.4	7.4	7.2

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Apex Landfill	Republic Services	I	6,864	2388
Boulder City Landfill	Boulder City Disposal	I	72	2223
Laughlin Landfill	Clark County/Republic Services	I	107	2022

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Clark County	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
North Las Vegas	Republic Services	Yes	Yes	weekly	weekly
Henderson	Republic Services	Yes	Yes	weekly	weekly
Boulder City	Boulder City Disposal	Yes	Yes	semi-weekly	weekly
Laughlin	Republic Services	Yes	Yes	weekly	weekly
Mesquite	Virgin Valley Disposal	Yes	Yes	weekly	monthly

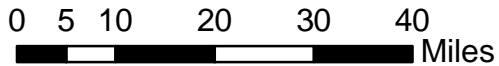
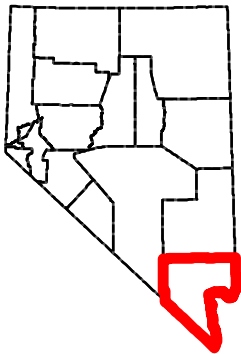
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
18	20	18	18	6	20	4	93	17

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Republic Services	Drop-off Tues-Sat at recycle center or at Henderson transfer station alternating weeks	Used Oil, Paint, Pesticides, etc.
Boulder City	Drop off Mon-Sat at landfill.	Used Oil, Paint, Pesticides, etc.

Clark Solid Waste Facilities



Legend

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|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

Douglas County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Douglas County

Plan Date: April 9, 2014

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	48,015	48,478	48,208	48,003	47,877	
MSW disposed in County (tons)	0	0	0	0	0	
Industrial/special disposed (tons)	0	0	0	0	0	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	80,564	84,465	84,344	103,634	77,640	
MSW recycled (tons)	43,941	48,425	46,831	64,574	38,541	
MSW generated/capita (lbs./day)	9.2	9.5	9.5	11.8	8.9	

	2006	2007	2008	2009	2010	2011
Population	51,770	52,386	52,131	51,390	49,242	47,661
MSW disposed in County (tons)	0	0	0	0	0	0
Industrial/special disposed (tons)	0	0	0	0	0	0
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	122,782	110,491	65,433	57,576	60,578	80,744
MSW recycled (tons)	21,738	55,763	23,385	19,638	23,491	43,408
MSW generated/capita (lbs./day)	13.0	11.6	6.9	6.1	6.7	9.3

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
No landfills in this County				

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Douglas Co.	Douglas Disposal	Yes	No	Weekly	None
Gardnerville	Town of Gardnerville	NA	Yes	Weekly	Yard Waste
Minden	Town of Minden	NA	Yes	Weekly	Yard Waste

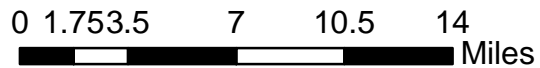
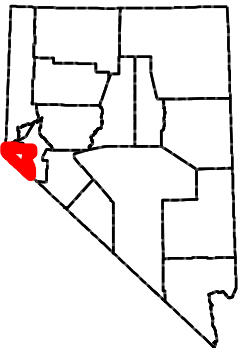
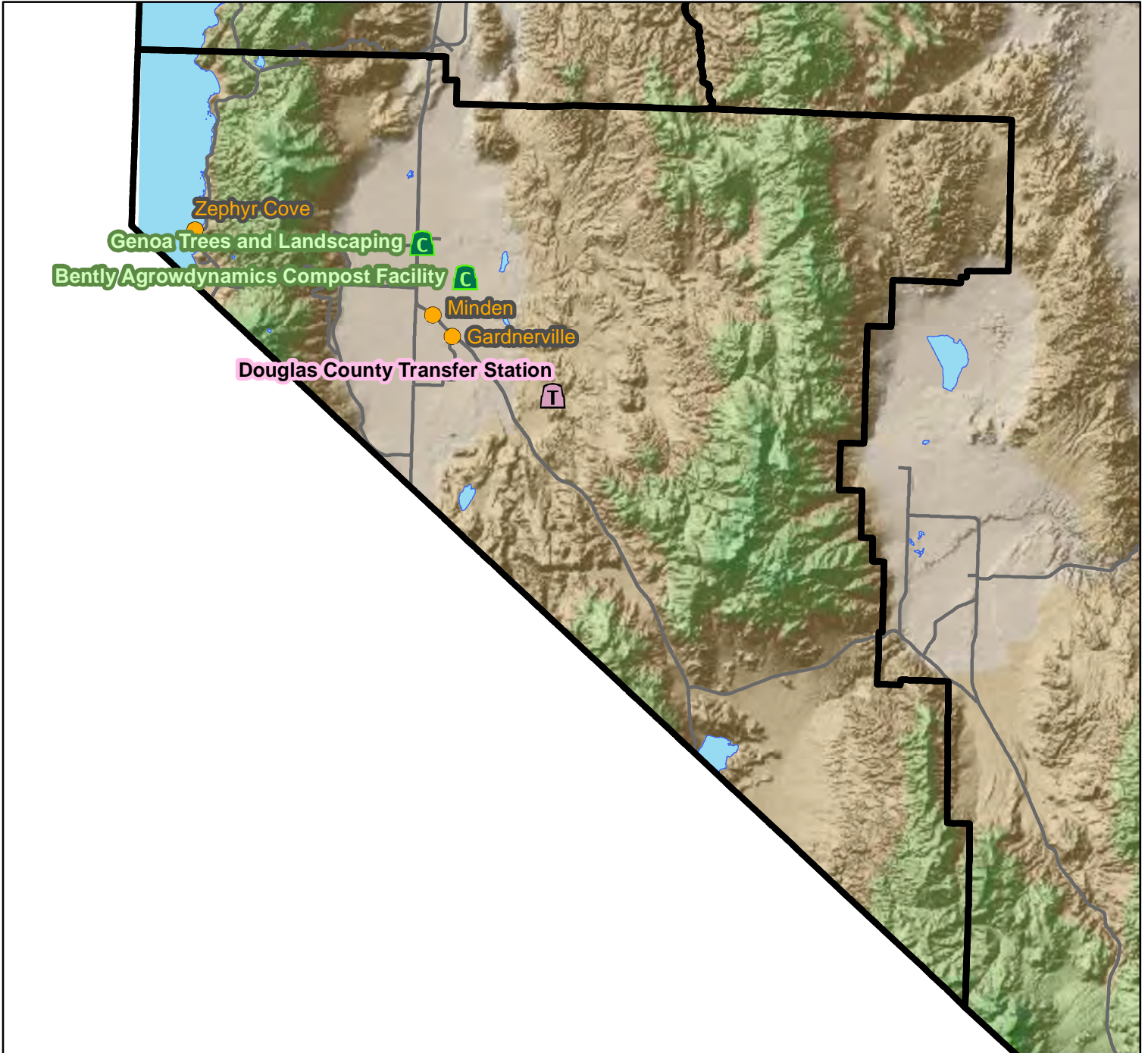
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
1	1	2	7	6	6	4	6	1













HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Douglas Disposal, Inc.	Drop-off by appointment	Used Oil, Paint, Pesticides, etc.
Tahoe/Douglas FPD	Drop-off by appointment	Used Oil, Paint, Pesticides, etc.

Douglas Solid Waste Facilities



Legend

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|--|--|---|
|  Landfills Class I |  Proposed Landfills |  County Boundaries |
|  Landfills Class II |  Transfer Stations |  Major Roads |
|  Landfills Class III |  Waste Bin |  Lakes NHD (2010) |
|  Landfills Class I and III |  Compost Facility | |
|  Landfills Class II and III |  Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Elko County

Plan Date: January 11, 2017

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	51,771	53,384	54,301	54,993	55,527	
MSW disposed in County (tons)	70,089	66,731	65,171	52,161	54,593	
Industrial/special disposed (tons)	15,388	14,413	8,982	18,008	17,308	
Imported MSW disposed (tons)	1,233	1,165	1,062	1,139	1,070	
MSW generated in County (tons)*	72,264	67,467	67,678	52,355	55,340	
MSW recycled (tons)	3,688	2,219	4,019	922	3,051	
MSW generated/capita (lbs./day)	7.7	6.9	7.0	5.3	5.5	

	2006	2007	2008	2009	2010	2011
Population	48,339	50,434	50,561	51,325	52,097	49,861
MSW disposed in County (tons)	61,451	66,792	63,710	68,974	66,472	69,881
Industrial/special disposed (tons)	15,412	15,787	17,627	13,597	7,812	9,163
Imported MSW disposed (tons)	1,205	1,231	1,152	1,178	1,180	1,230
MSW generated in County (tons)*	60,246	70,684	67,680	67,605	65,158	68,246
MSW recycled (tons)	No Report	5,123	5,123	No Report	No Report	No Report
MSW generated/capita (lbs./day)	6.8	7.7	7.3	7.2	6.9	7.5

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Elko Regional Landfill	City of Elko	I	173	2112
West Wendover LF	City of West Wendover	I & III	24	2048

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Elko	Elko Sanitation	No	No	Weekly	None

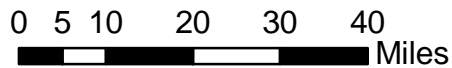
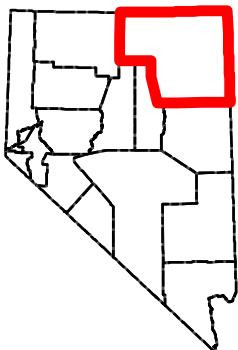
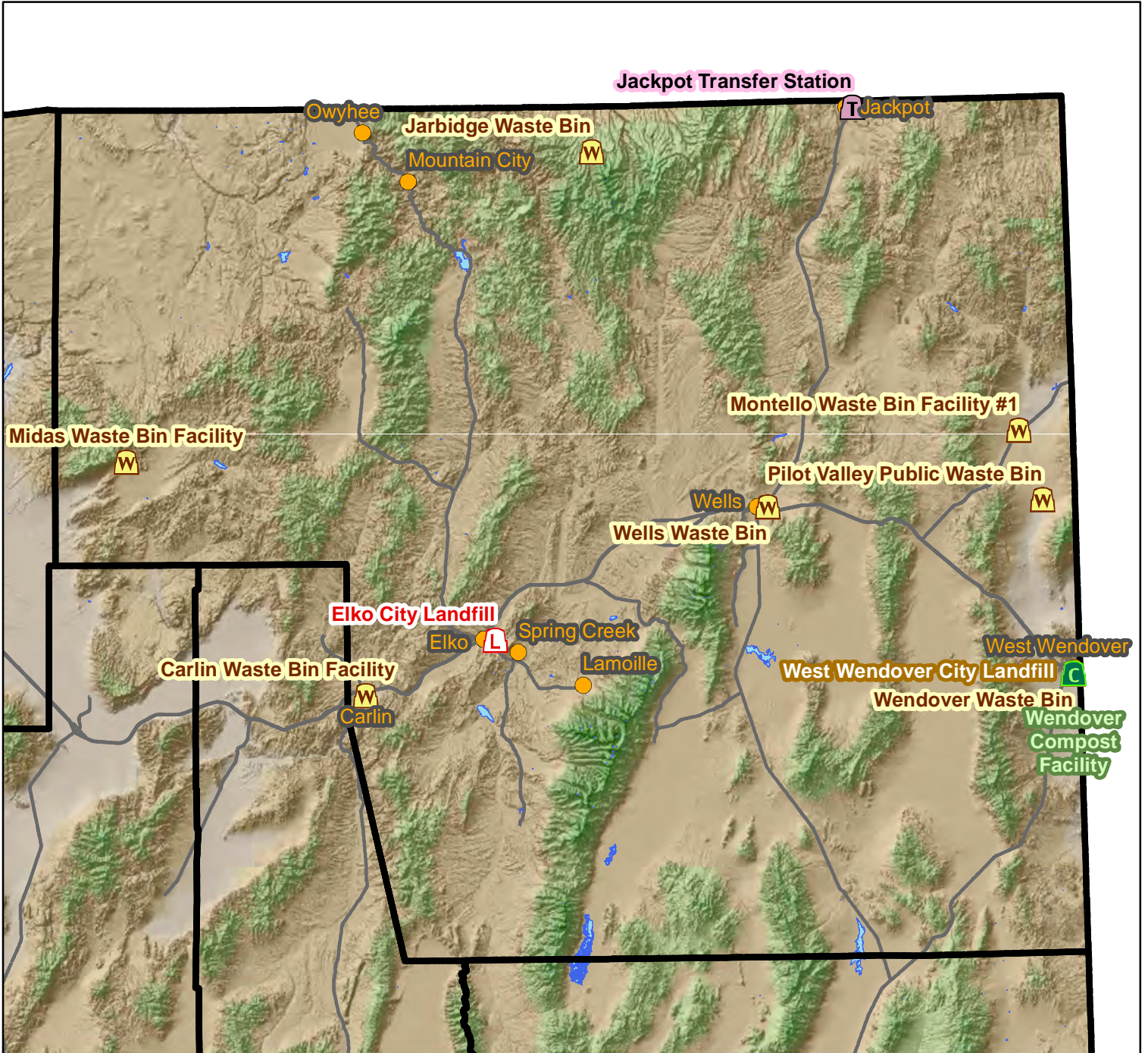
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	3	0	2	0	0	0	3	1

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
City of Elko LF	Drop-off during business hours	Oil, Antifreeze, Vehicle batteries

Elko Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Esmeralda County

Plan Date: May 19, 2017

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	860	858	912	959	997	
MSW disposed in County (tons)	1,211	1,377	1,118	883	866	
Industrial/special disposed (tons)	95	226	17	215	762	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	1,211	1,377	1,118	883	866	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	7.7	9.3	6.6	5.0	4.8	

	2006	2007	2008	2009	2010	2011
Population	1,262	1,236	1,240	1,187	1,145	825
MSW disposed in County (tons)	726	1,075	1,051	1,143	1,176	1,002
Industrial/special disposed (tons)	189	306	189	228	473	88
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	726	1,075	1,051	1,143	1,176	1,002
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	3.2	4.8	4.6	5.3	5.6	6.7

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Goldfield Landfill	Esmeralda County	II	4	2139

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
None in this County					

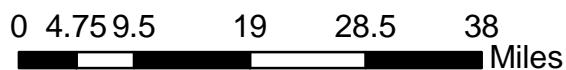
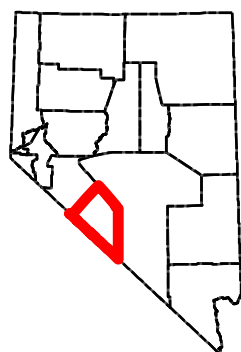
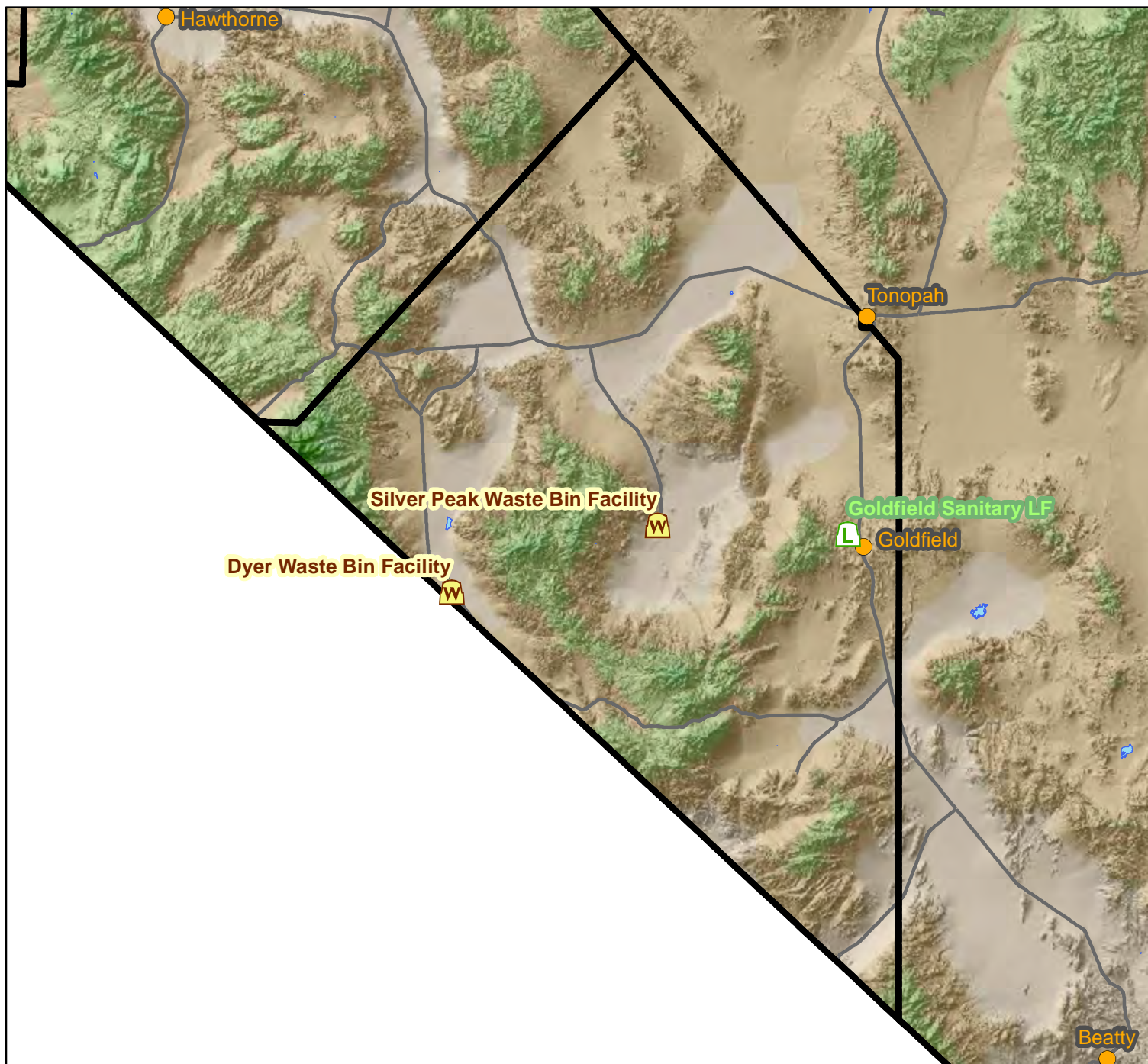
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	0	0	0	0	0	2	0













HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Esmeralda Solid Waste Facilities



Legend

- | | | | | | |
|---|----------------------------|---|--------------------|---|-------------------|
|  | Landfills Class I |  | Proposed Landfills |  | County Boundaries |
|  | Landfills Class II |  | Transfer Stations |  | Major Roads |
|  | Landfills Class III |  | Waste Bin |  | Lakes NHD (2010) |
|  | Landfills Class I and III |  | Compost Facility | | |
|  | Landfills Class II and III |  | Cities | | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Eureka County

Plan Date: August 28, 2012

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	2,011	2,024	2,056	2,069	2,073	
MSW disposed in County (tons)	1,007	1,108	1,191	1,089	1,084	
Industrial/special disposed (tons)	29,217	8,188	11,339	3,964	7,533	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	1,007	1,108	1,191	1,089	1,084	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	2.7	2.9	3.4	3.1	2.9	

	2006	2007	2008	2009	2010	2011
Population	1,460	1,458	1,553	1,562	1,987	1,994
MSW disposed in County (tons)	1,143	1,106	1,148	1,193	1,162	1,136
Industrial/special disposed (tons)	1,969	1,296	1,641	28,759	57,202	58,750
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	1,143	1,106	1,148	1,193	1,162	1,136
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	4.3	4.2	4.1	4.2	3.2	3.1

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Eureka County LF	Eureka County	II	7	2118

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Eureka	Diamond Disposal	No	No	Weekly	No

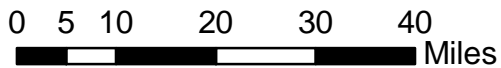
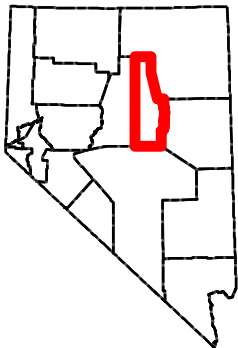
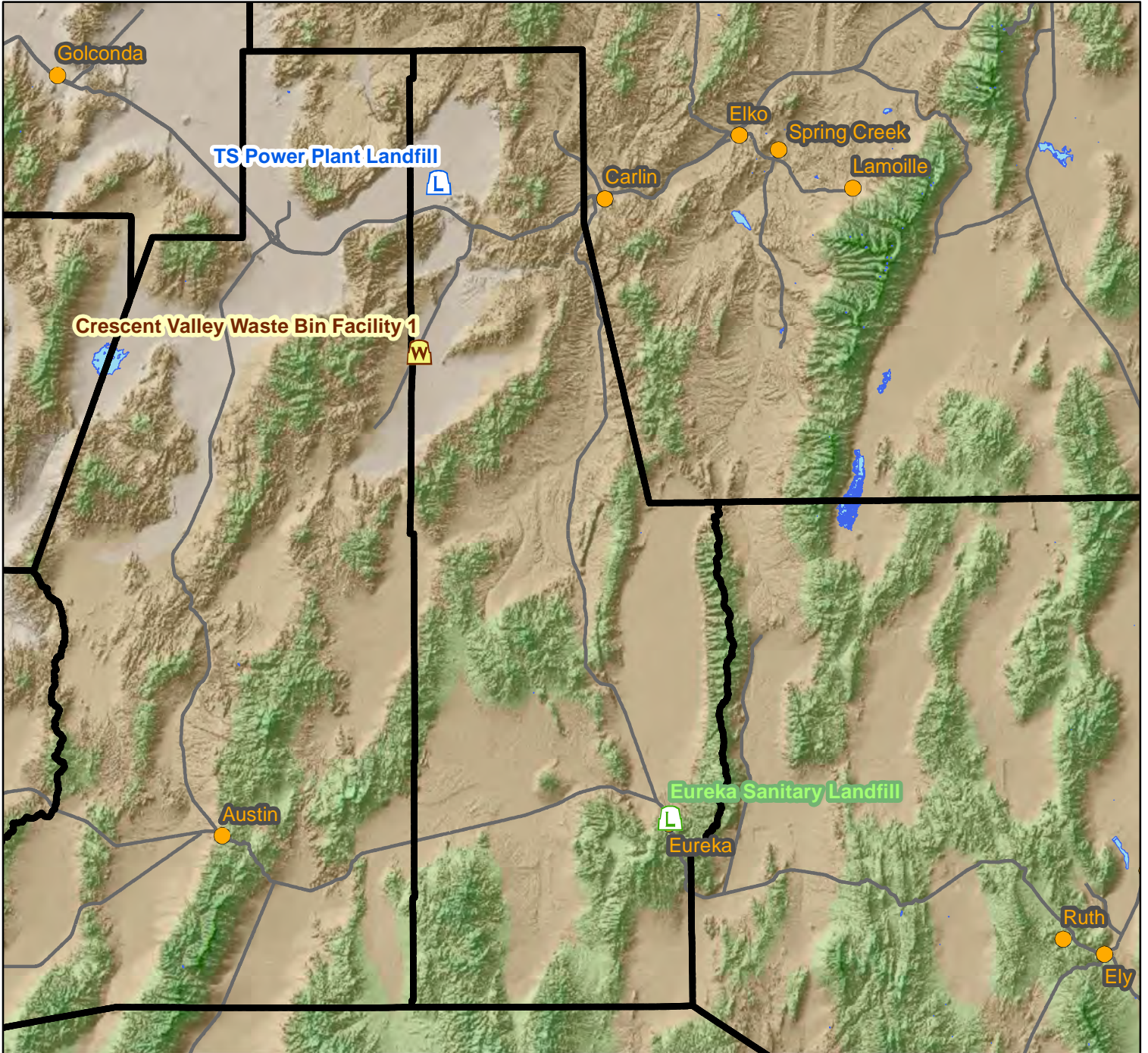
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	0	0	0	0	0	1	0

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Eureka County	Drop-off during business hours	Used Oil, Paint, Pesticides, etc.

Eureka Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Humboldt County

Plan Date: April 25, 2016

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	17,384	17,457	17,909	18,248	18,492	
MSW disposed in County (tons)	19,746	21,139	21,173	21,818	21,284	
Industrial/special disposed (tons)	56,997	131,850	138,050	116,266	103,354	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	19,746	21,139	21,173	21,407	21,116	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	6.2	6.5	6.7	6.6	6.3	

	2006	2007	2008	2009	2010	2011
Population	17,751	18,052	18,014	17,690	18,364	17,135
MSW disposed in County (tons)	18,155	19,009	19,467	22,565	19,988	21,562
Industrial/special disposed (tons)	133,405	118,782	121,409	113,168	106,859	109,299
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	18,155	19,009	19,467	22,565	19,988	21,562
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	5.6	5.8	5.9	7.0	6.0	7.0

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Humboldt Regional LF	Humboldt Co/DeLong Construction	I	71	2030

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Humboldt Co.	Desert Disposal	No	No	Weekly	None
Humboldt Co.	Hoss Disposal	No	No	Weekly	None
Winnemucca	Desert Disposal	No	No	Weekly	None

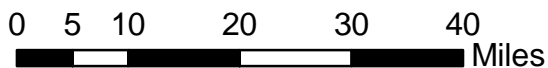
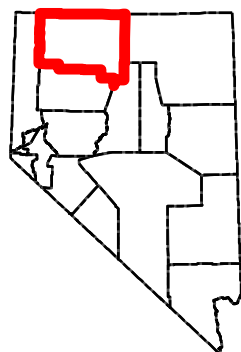
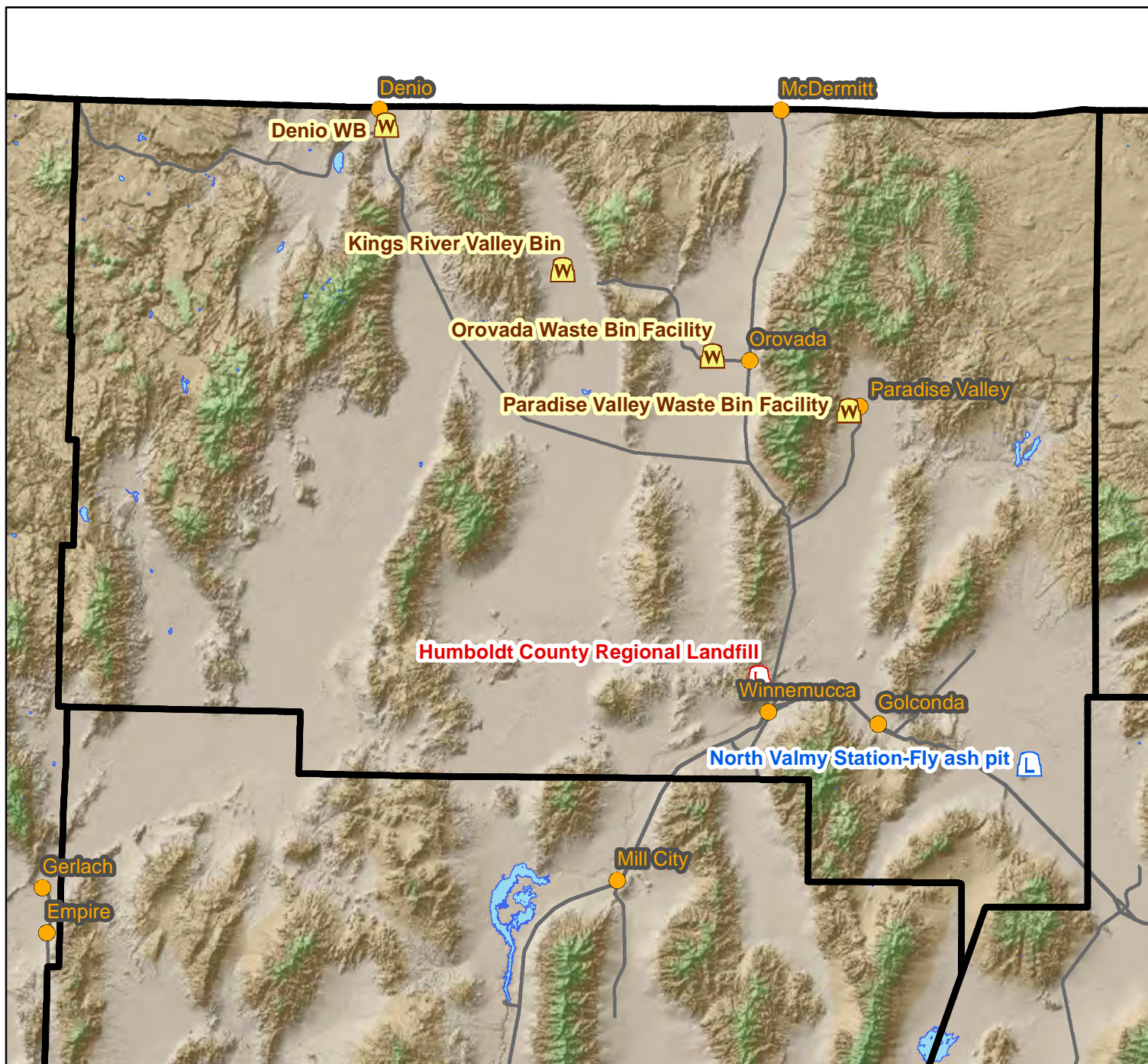
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	1	0	1	0	1	0	6	2

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Humboldt Co. LF	Drop-off during business hours	Used Oil, Paint, Pesticides, etc.

Humboldt Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Lander County

Plan Date: April 16, 2015

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	6,221	6,343	6,569	6,708	6,775	
MSW disposed in County (tons)	1,967	2,036	1,887	1,808	1,946	
Industrial/special disposed (tons)	27,667	22,774	21,561	26,972	22,963	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	1,967	2,036	1,887	1,808	1,946	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	1.7	1.7	1.6	1.5	1.6	

	2006	2007	2008	2009	2010	2011
Population	5,655	5,747	5,891	6,003	5,992	5,988
MSW disposed in County (tons)	1,961	1,901	1,927	1,765	1,923	1,930
Industrial/special disposed (tons)	17,831	20,729	61,500	44,129	94,396	80,148
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	1,961	1,901	1,927	1,765	1,923	1,930
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	1.9	1.8	1.8	1.6	1.8	1.8

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Battle Mountain LF	Lander County	II	68	2080

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Battle Mountain	Hoss Disposal	No	No	Weekly	None

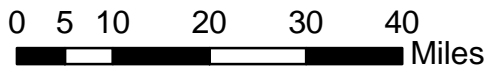
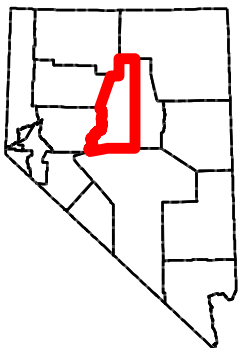
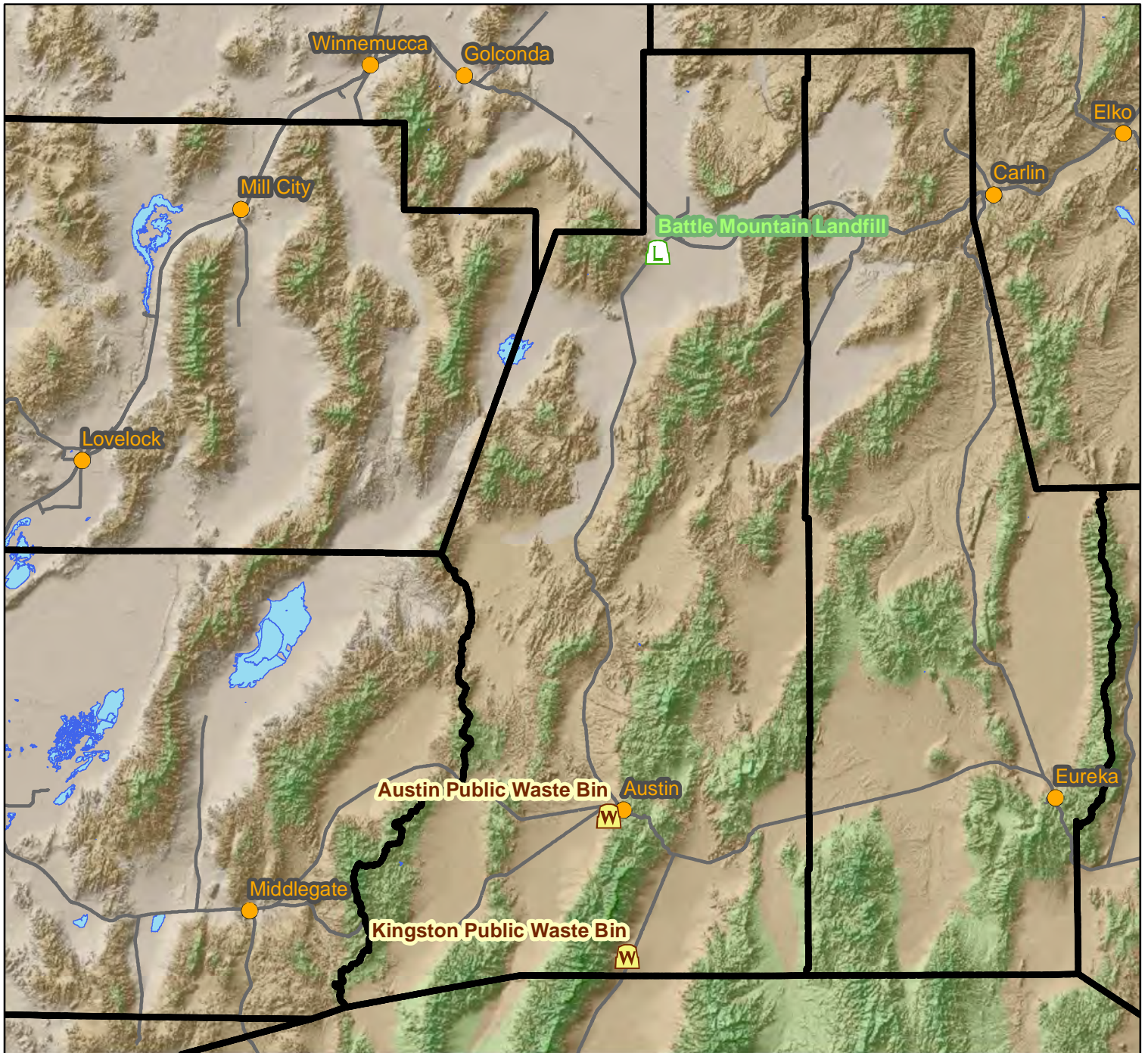
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	0	1	0	0	0	3	0











HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Lander Solid Waste Facilities



Legend

- | | | |
|--|--|---|
|  Landfills Class I |  Proposed Landfills |  County Boundaries |
|  Landfills Class II |  Transfer Stations |  Major Roads |
|  Landfills Class III |  Waste Bin |  Lakes NHD (2010) |
|  Landfills Class I and III |  Compost Facility | |
|  Landfills Class II and III |  Cities | |

Lincoln County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Lincoln County

Plan Date: April 4, 2017

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016
Population	5,100	5,020	5,075	5,117	5,148
MSW disposed in County (tons)	29,842	31,135	31,168	31,519	32,260
Industrial/special disposed (tons)	285,516	355,967	344,944	388,634	436,839
Imported MSW disposed (tons)	1,190	1,187	1,338	1,329	1,460
MSW generated in County (tons)*	4,766	4,837	4,445	4,508	4,580
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	5.1	4.8	4.9	4.9	4.9

	2006	2007	2008	2009	2010	2011
Population	3,987	4,184	4,352	4,317	4,631	5,284
MSW disposed in County (tons)	39,625	41,867	43,152	31,911	32,443	29,411
Industrial/special disposed (tons)	270,364	549,026	299,873	230,204	217,427	202,289
Imported MSW disposed (tons)	1,678	1,979	1,721	1,243	1,382	1,452
MSW generated in County (tons)*	4,444	5,178	6,029	4,491	4,976	4,699
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	6.1	6.8	7.6	5.7	5.9	4.9

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Crestline Landfill	Lincoln County	II	13	2038
Mesquite Landfill	City of Mesquite	I	77	2027

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Caliente	City of Caliente	NA	Yes	Weekly	None
Lincoln County*	NORCAL Waste Systems	Yes	No	NA	None

* - Commercial only; no residential pickup, waste bins for general public

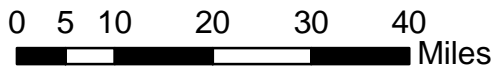
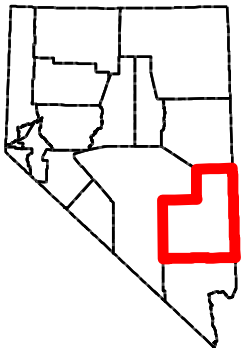
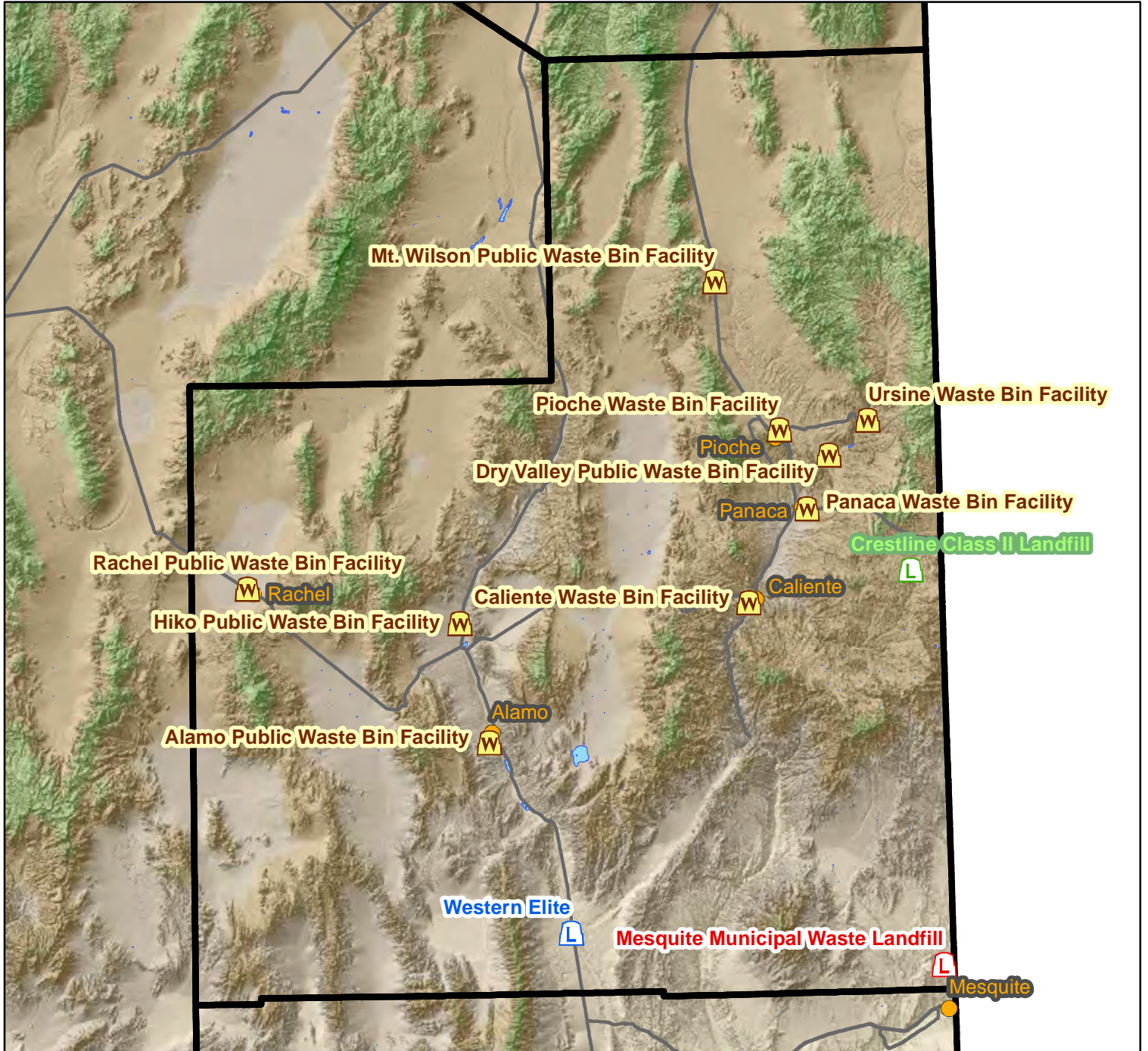
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	0	0	0	0	0	2	1

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Lincoln Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Lyon County

Plan Date: October 8, 2003

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	52,245	52,960	53,331	53,639	54,216	
MSW disposed in County (tons)	0	0	0	0	0	
Industrial/special disposed (tons)	0	0	0	0	0	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	39,648	43,428	43,716	37,662	35,573	
MSW recycled (tons)	0	0	0	0	54	
MSW generated/capita (lbs./day)	4.1	4.4	4.5	3.9	3.6	

	2006	2007	2008	2009	2010	2011
Population	54,031	55,903	55,820	53,825	52,334	52,443
MSW disposed in County (tons)	0	0	0	0	0	0
Industrial/special disposed (tons)	0	0	0	0	0	0
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	42,828	42,748	42,560	28,365	40,243	39,927
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	4.3	4.2	4.2	2.9	4.2	4.2

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
None in this County				

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Dayton	Capital Sanitation	Yes	No	Weekly	NA
Fernley	Fernley Disposal	Yes	No	Weekly	NA
Silver Springs	Fernley Disposal	Yes	No	Weekly	NA
Yerington	D&S Waste Disposal	Yes	No	Weekly	NA

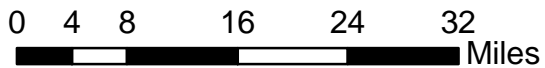
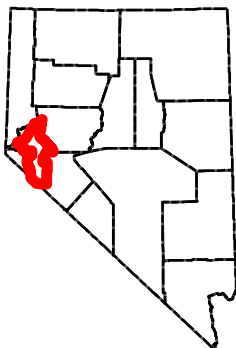
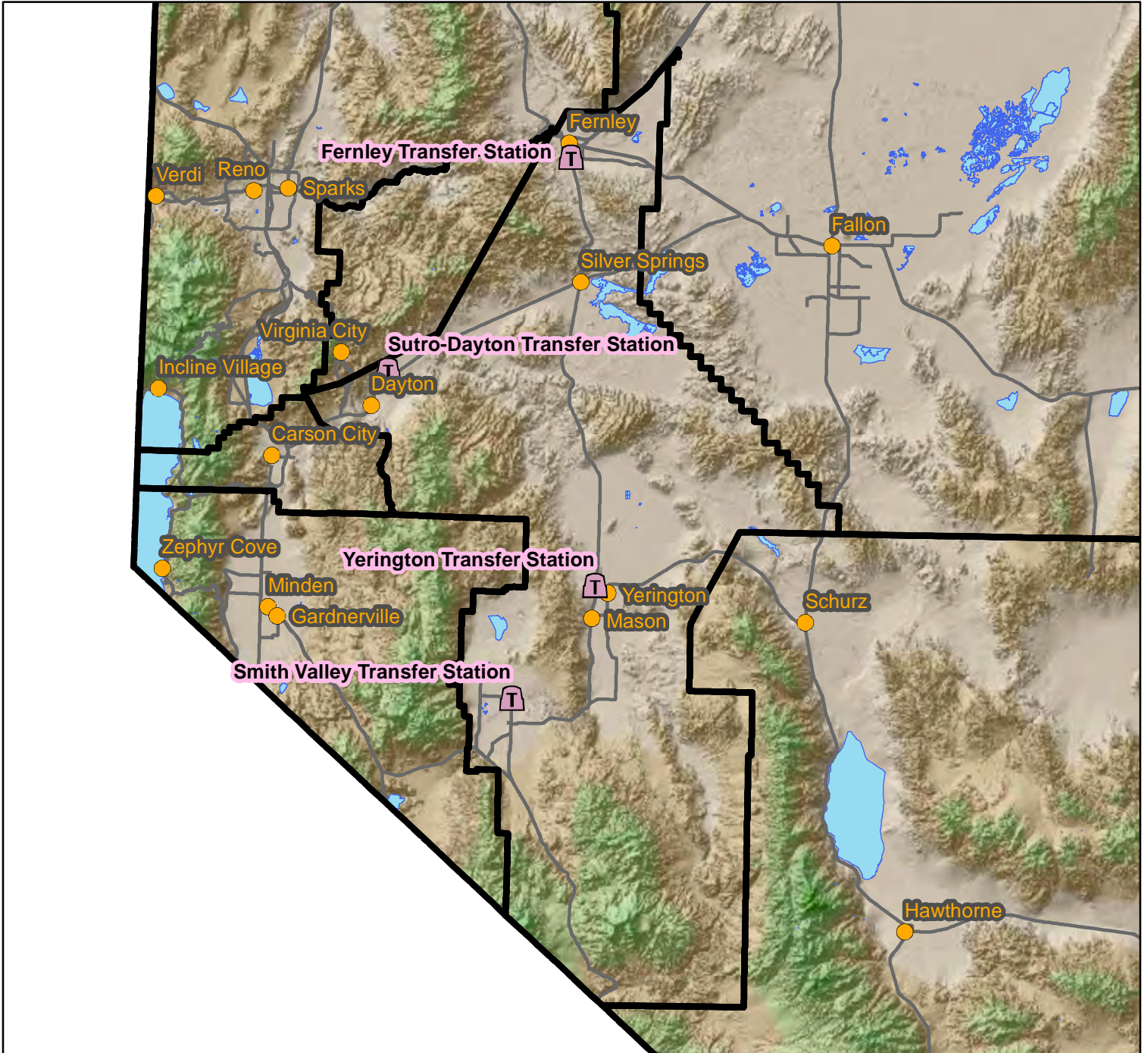
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
1	1	0	2	2	2	0	5	0

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Lyon Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

Mineral County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Mineral County

Plan Date: January 5, 2017

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016
Population	4,679	4,662	4,486	4,356	4,258
MSW disposed in County (tons)	3,619	3,749	3,857	3,662	3,835
Industrial/special disposed (tons)	7,953	6,402	6,569	5,058	4,480
Imported MSW disposed (tons)	0	0	0	0	0
MSW generated in County (tons)*	3,619	3,749	3,857	3,662	3,835
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	4.3	4.3	4.6	4.4	5.0

	2006	2007	2008	2009	2010	2011
Population	4,399	4,377	4,401	4,474	4,471	4,601
MSW disposed in County (tons)	4,109	4,584	4,768	4,918	4,508	3,464
Industrial/special disposed (tons)	4,575	4,829	5,183	2,744	2,998	5,736
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	4,109	4,584	4,768	4,918	4,508	3,464
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	5.1	5.7	5.9	6.0	5.5	4.1

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Hawthorne Landfill	Mineral County/Hawthorne Utilities	I	19	2041

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Hawthorne	Hawthorne Utilities	NA	No	Weekly	None
Mineral County	Walker Lake Disposal	No	No	Weekly	None

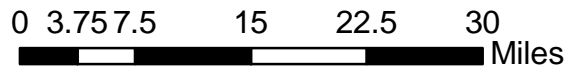
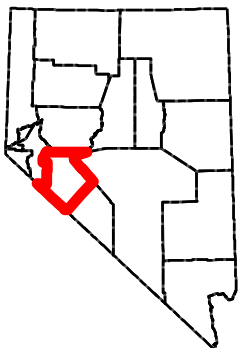
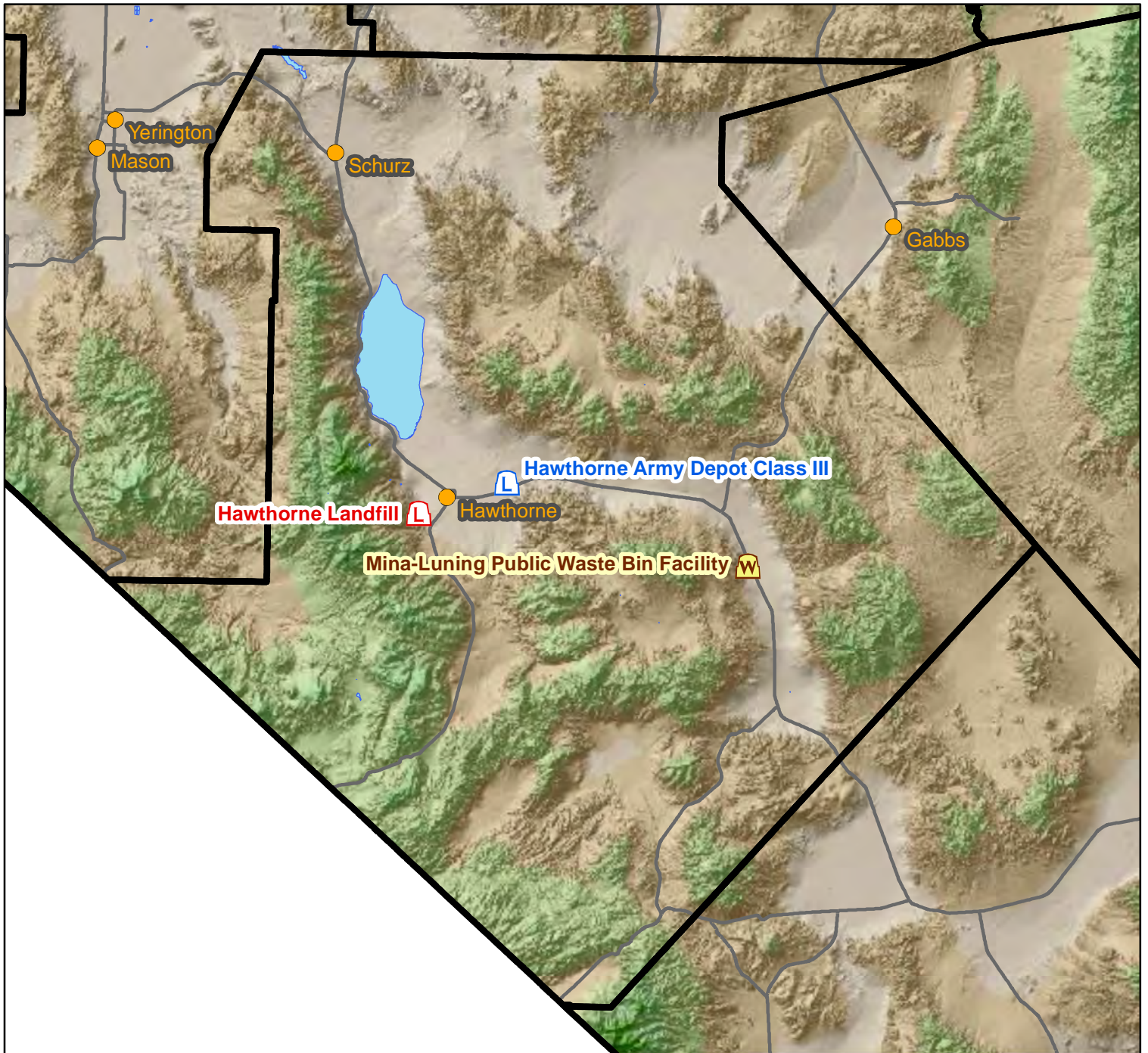
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	0	0	0	0	0	1	0

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Mineral County LF	Drop-off during business hours	Used Oil, Vehicle batteries

Mineral Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Nye County

Plan Date: October 16, 2014

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	44,292	44,749	44,919	45,081	45,258	
MSW disposed in County (tons)	56,007	60,683	66,216	63,865	65,605	
Industrial/special disposed (tons)	9,688	15,820	10,764	16,959	15,925	
Imported MSW disposed (tons)	2,782	3,286	1,817	2,189	1,816	
MSW generated in County (tons)*	53,225	53,408	59,174	61,676	63,735	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	6.6	6.2	7.1	7.4	7.7	

	2006	2007	2008	2009	2010	2011
Population	44,795	46,308	47,370	46,360	45,459	44,513
MSW disposed in County (tons)	75,731	67,496	68,795	65,188	64,215	72,268
Industrial/special disposed (tons)	18,951	15,998	17,586	15,435	10,239	12,364
Imported MSW disposed (tons)	1,792	2,194	2,260	2,484	2,400	11,426
MSW generated in County (tons)*	73,939	65,302	66,535	62,704	61,815	60,842
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	9.0	7.7	7.7	7.4	7.5	7.5

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Pahrump Valley LF	Nye County	I	181	2045
Round Mountain LF	Nye County/Smokey Valley Service	II	11	2031
Tonopah Landfill	Nye County	II	24	2017
Tonopah Test Range *	Nye County	II	1	n/a

* - Facility not open to the general public

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Beatty	Beatty Disposal	Yes	No	Weekly	No
Pahrump	Pahrump Valley Disposal	Yes	No	Weekly	No
Amargosa Valley	Pahrump Valley Disposal	Yes	No	Weekly	No
Lathrop Wells	Pahrump Valley Disposal	Yes	No	Weekly	No
Crystal	Pahrump Valley Disposal	Yes	No	Weekly	No
Tonopah	Hoss Disposal	Yes	No	Weekly	No

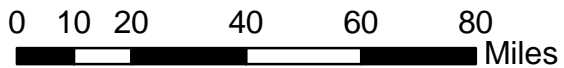
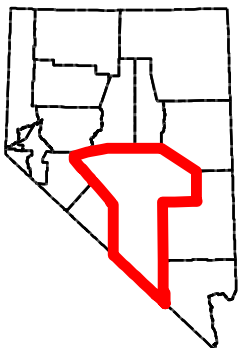
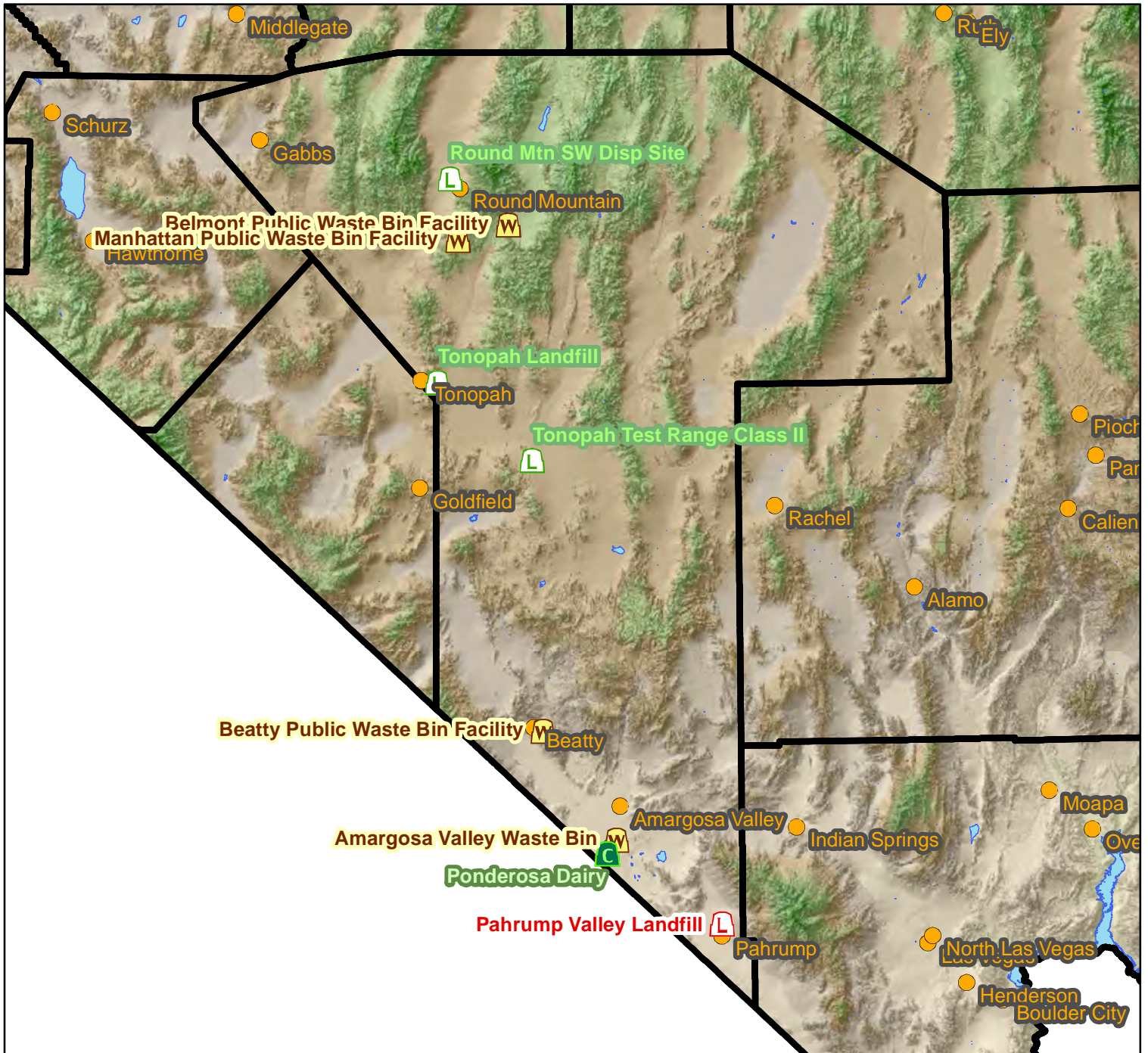
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	4	4	7	4	6	0	4	0

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Nye Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

Pershing County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Pershing County

Plan Date: October 8, 2014

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	7,013	6,882	6,977	7,031	7,047	
MSW disposed in County (tons)	5,514	3,628	3,878	3,944	4,253	
Industrial/special disposed (tons)	1,861	2,507	1,604	1,271	878	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	5,514	3,628	3,878	3,944	4,268	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	4.3	2.8	3.2	3.2	3.3	

	2006	2007	2008	2009	2010	2011
Population	6,955	7,074	7,192	7,149	7,133	6,847
MSW disposed in County (tons)	2,377	2,837	2,841	2,802	4,886	6,297
Industrial/special disposed (tons)	1,376	430	400	400	3,493	1,752
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	2,377	2,837	2,841	2,802	4,886	6,297
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	1.9	2.2	2.2	2.2	3.8	5.0

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Pershing County LF	Pershing County	II	14	2063

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Lovelock	City of Lovelock	NA	No	Weekly	None

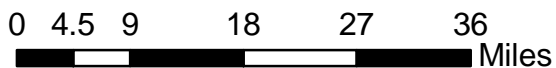
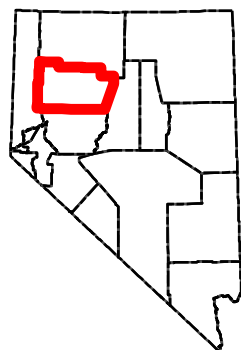
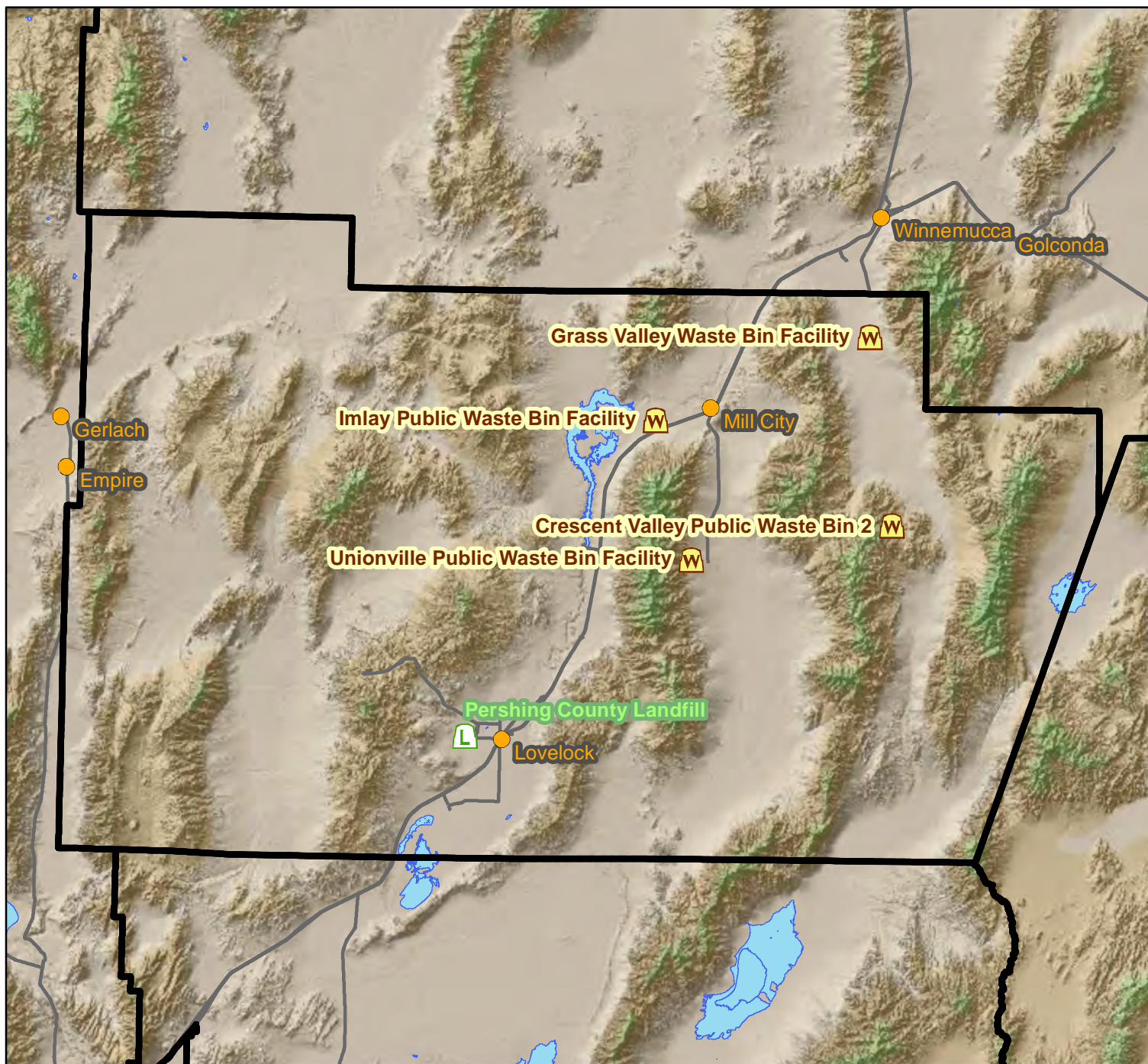
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
1	0	1	1	1	1	0	0	0

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

Pershing Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

Storey County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Storey County

Plan Date: January 24, 2011

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	4,103	4,017	4,030	4,037	4,052	
MSW disposed in County (tons)	709,077	741,484	742,140	743,118	720,742	
Industrial/special disposed (tons)	223,019	245,965	226,531	248,936	359,538	
Imported MSW disposed (tons)	202,175	207,621	227,140	232,925	235,783	
MSW generated in County (tons)*	3,374	3,731	3,602	3,815	3,908	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	4.5	4.6	5.0	5.3	5.3	

	2006	2007	2008	2009	2010	2011
Population	4,110	4,293	4,384	4,317	4,234	4,123
MSW disposed in County (tons)	1,091,221	996,274	920,026	812,074	821,306	763,946
Industrial/special disposed (tons)	1,009,992	561,814	383,122	259,464	233,642	206,748
Imported MSW disposed (tons)	306,294	308,009	337,611	303,205	292,041	246,428
MSW generated in County (tons)*	7,841	5,385	4,639	3,997	3,753	3,556
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	10.5	6.9	5.8	5.1	4.9	4.7

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Lockwood Regional LF	Waste Management, Inc.	I & III	2,960	2150

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
None in this County					

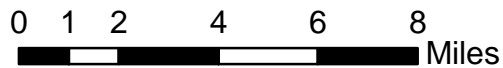
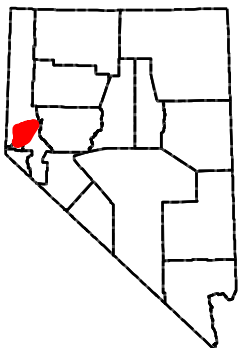
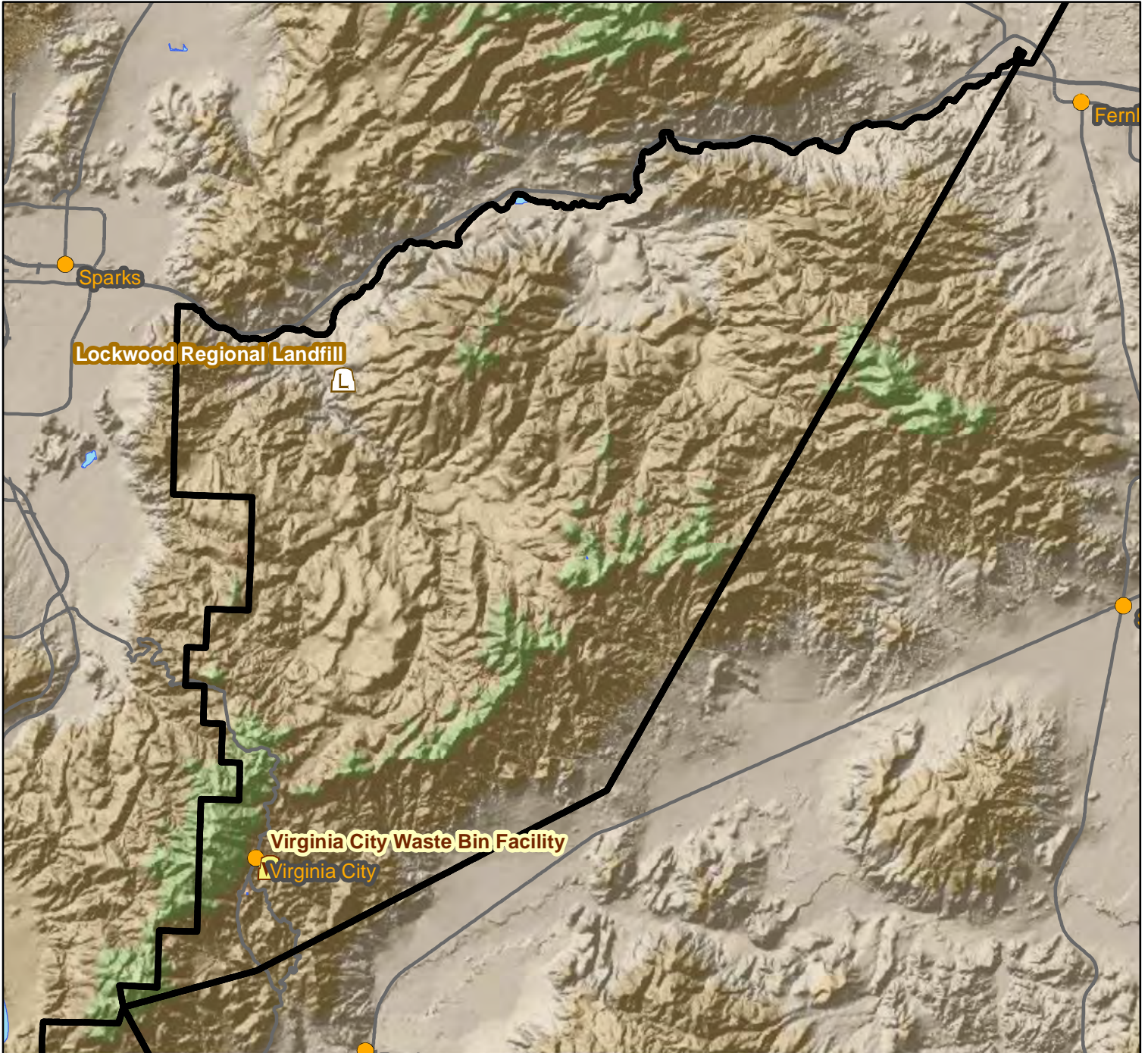
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
0	0	1	1	1	1	0	1	0














HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Waste Management, Inc.	Drop-off during business hours	Used Oil, Antifreeze, Vehicle batteries

Storey Solid Waste Facilities



Legend

- | | | |
|--|--|---|
|  Landfills Class I |  Proposed Landfills |  County Boundaries |
|  Landfills Class II |  Transfer Stations |  Major Roads |
|  Landfills Class III |  Waste Bin |  Lakes NHD (2010) |
|  Landfills Class I and III |  Compost Facility | |
|  Landfills Class II and III |  Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Washoe County District Health District

Plan Date: March 8, 2017

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	427,704	432,324	437,580	443,745	450,687	
MSW disposed in County (tons)	0	0	0	0	0	
Industrial/special disposed (tons)	0	0	0	0	0	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	652,061	723,214	660,338	639,247	605,790	
MSW recycled (tons)	219,211	264,178	221,390	200,470	178,650	
MSW generated/capita (lbs./day)	8.4	9.2	8.3	7.9	7.4	

	2006	2007	2008	2009	2010	2011
Population	409,085	418,061	423,833	416,632	417,379	421,593
MSW disposed in County (tons)	0	0	0	0	0	0
Industrial/special disposed (tons)	0	0	0	0	0	0
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	817,163	744,322	746,627	638,892	625,546	696,713
MSW recycled (tons)	184,089	185,768	240,498	190,393	169,447	248,146
MSW generated/capita (lbs./day)	10.9	9.8	9.7	8.4	8.2	9.1

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
None in this County				

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Reno/Sparks	Waste Management, Inc.	Yes	Yes	Weekly	Bi-weekly
Incline Village	Waste Management, Inc.	Yes	Yes	Weekly	Bi-weekly
Unincorporated	Waste Management, Inc.	Yes	Yes	Weekly	Bi-weekly

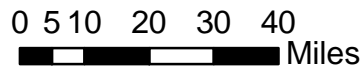
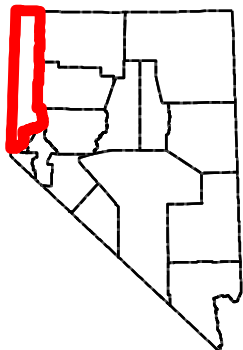
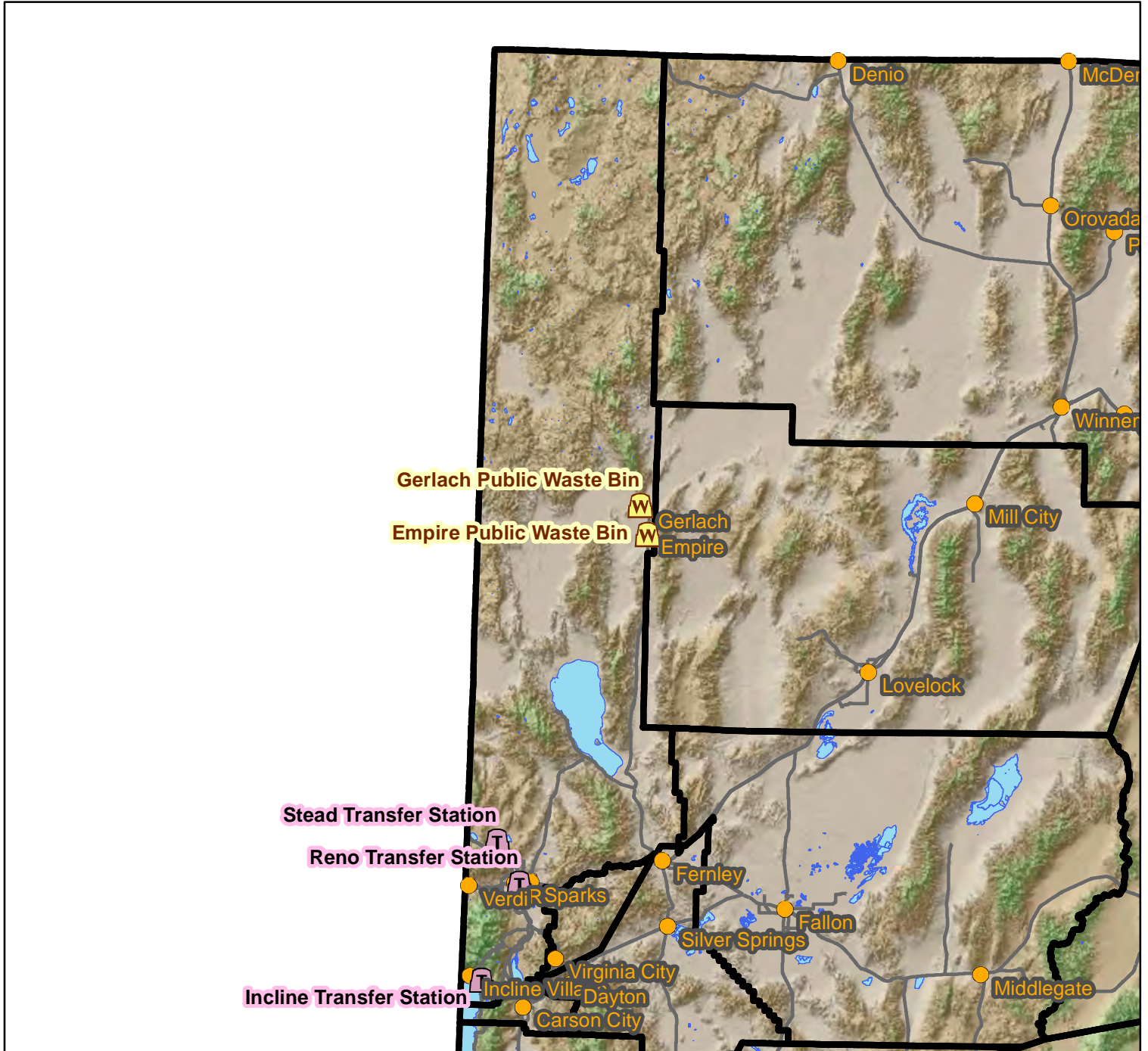
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
11	10	11	17	9	9	2	41	26

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Safety-Kleen, Inc.	Commercial drop-off during business hours	Used Oil, Paint, Pesticides, etc.
IVGID/WasteNot	By appointment	Used Oil, Paint, Pesticides, etc.
H2O Environmental	Commercial drop-off during business hours	Used Oil, Paint, Pesticides, etc.

Washoe Solid Waste Facilities



Legend

- | | | |
|----------------------------|--------------------|-------------------|
| Landfills Class I | Proposed Landfills | County Boundaries |
| Landfills Class II | Transfer Stations | Major Roads |
| Landfills Class III | Waste Bin | Lakes NHD (2010) |
| Landfills Class I and III | Compost Facility | |
| Landfills Class II and III | Cities | |

LOCAL SOLID WASTE PLANNING:

Responsible Agency: White Pine County

Plan Date: August 23, 2006

POPULATION AND SOLID WASTE TRENDS:

	2012	2013	2014	2015	2016	
Population	9,945	10,095	10,262	10,345	10,365	
MSW disposed in County (tons)	8,170	8,575	7,814	7,770	7,580	
Industrial/special disposed (tons)	9,564	5,914	7,441	6,626	5,979	
Imported MSW disposed (tons)	0	0	0	0	0	
MSW generated in County (tons)*	8,170	7,717	7,814	7,770	7,580	
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	
MSW generated/capita (lbs./day)	4.5	3.8	4.2	4.1	4.0	

	2006	2007	2008	2009	2010	2011
Population	9,542	9,590	9,694	9,570	9,503	10,002
MSW disposed in County (tons)	11,237	9,875	11,270	7,905	8,125	8,224
Industrial/special disposed (tons)	4,086	7,382	6,843	6,187	5,447	9,964
Imported MSW disposed (tons)	0	0	0	0	0	0
MSW generated in County (tons)*	11,237	9,875	11,270	7,905	8,125	8,224
MSW recycled (tons)	n/a	n/a	n/a	n/a	n/a	n/a
MSW generated/capita (lbs./day)	6.5	5.6	6.4	4.5	4.7	4.5

* - Total MSW generated in the County, including the tons recycled.

Notes: Data in tons per year as reported to NDEP, population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Class	Tons/Day (2016)	Estimated Closure
Ely Regional Landfill	City of Ely	I & III	37	2050

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Hauler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Ely	Ely Disposal	Yes	No	Weekly	None
White Pine Co.	Ely Disposal	No	No	Weekly	None

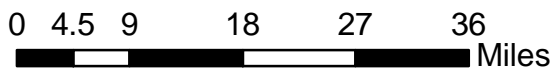
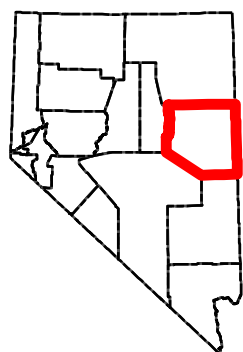
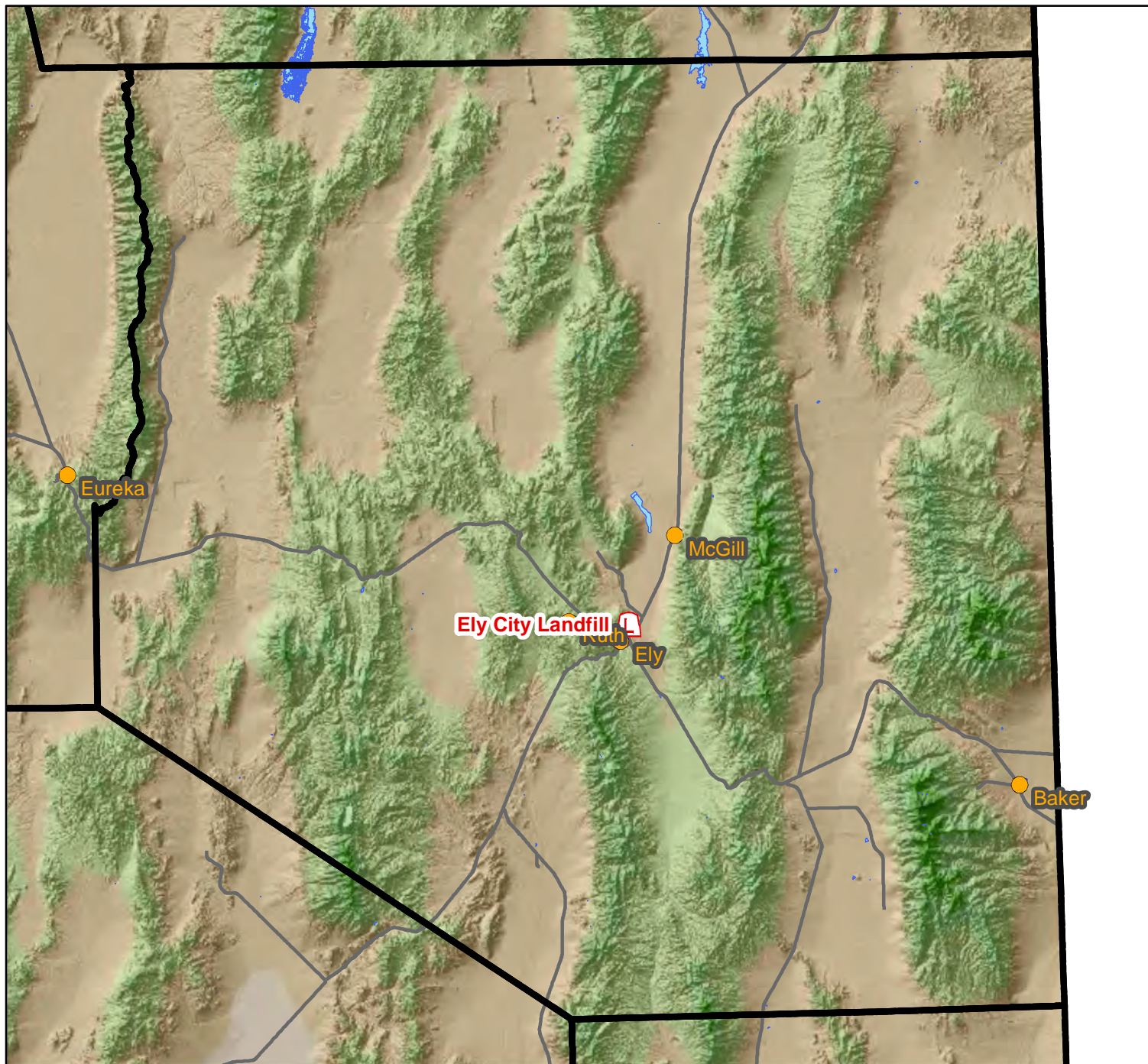
NUMBER of RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Glass	Plastic Btl. only	Yard Waste	Used Oil	E-Waste
1	1	0	2	0	1	1	2	1














HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
None in this County		

White Pine Solid Waste Facilities



Legend

- | | | | | | |
|---|----------------------------|---|--------------------|---|-------------------|
|  | Landfills Class I |  | Proposed Landfills |  | County Boundaries |
|  | Landfills Class II |  | Transfer Stations |  | Major Roads |
|  | Landfills Class III |  | Waste Bin |  | Lakes NHD (2010) |
|  | Landfills Class I and III |  | Compost Facility | | |
|  | Landfills Class II and III |  | Cities | | |

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Appendix 4

Map of Active
Solid Waste Facilities in Nevada

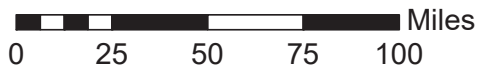
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Nevada Solid Waste Facilities



Legend

- Landfills Class I
- Landfills Class II
- Landfills Class III
- Landfills Class I and III
- Landfills Class II and III
- Transfer Stations
- Waste Bin
- Compost Facility
- County
- Major Routes
- Highways



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

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Appendix 5

Solid Waste
Nevada Revised Statutes
444.440 – 444.645

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NEVADA REVISED STATUTE, CHAPTER 444,

COLLECTION AND DISPOSAL OF SOLID WASTE

NRS 444.440	Declaration of state policy.
NRS 444.450	Definitions.
NRS 444.460	“Disposal site” defined.
NRS 444.463	“Facility for the management of waste tires” defined.
NRS 444.465	“Municipal solid waste landfill” defined.
NRS 444.470	“Municipality” defined.
NRS 444.475	“Passenger car” defined.
NRS 444.480	“Person” defined.
NRS 444.490	“Solid waste” defined.
NRS 444.495	“Solid waste management authority” defined.
NRS 444.500	“Solid waste management system” defined.
NRS 444.501	“Waste tire” defined.
NRS 444.505	Management and disposal of waste tires: Regulations for issuance of permits to operate facility and for program of recycling and reuse.
NRS 444.507	Management and disposal of waste tires: Permit required to operate facility; penalties for violation.
NRS 444.509	Management and disposal of waste tires: Unlawful to dispose of waste tire in solid waste landfill if permit issued for operation of facility in health district or county; exceptions.
NRS 444.510	Municipal solid waste management systems: Development, revision and approval of plans; cooperative agreements.
NRS 444.520	Municipal solid waste management systems: Additional fees and charges; unpaid fees and charges constitute lien against property; lien not effective until notice given.
NRS 444.530	Municipal solid waste management systems: Regulations for operation.
NRS 444.540	Municipal solid waste management systems: Acceptance and use of grants or appropriations.
NRS 444.550	Municipal solid waste management systems: Authority to acquire land, machinery, equipment or facilities.
NRS 444.553	Permits to operate disposal sites: Issuance; requirements.
NRS 444.555	Use of certain disposal sites established by municipality restricted; penalty.
NRS 444.556	Municipal solid waste landfills: Permit required; conditions of permit; disclosure of records regarding application for permit; powers of solid waste management authority.
NRS 444.557	Municipal solid waste landfills: Program to monitor compliance with permits, laws and regulations; allowance of intervention.
NRS 444.558	Municipal solid waste landfills: Regulations for program of issuing permits.
NRS 444.559	Municipal solid waste landfills: Requirement to accept recreational vehicle for disposal in certain circumstances.
NRS 444.560	Regulations of State Environmental Commission: Adoption; fees; violation prohibited after reasonable time.
NRS 444.570	Duties of State Department of Conservation and Natural Resources and State Environmental Commission; inspections.
NRS 444.580	Authority of district board of health or municipality to adopt regulations and issue permits.
NRS 444.583	Unlawful disposal of motor vehicle battery, motor vehicle tire or motor oil; penalty; plan for appropriate disposal; exemption.
NRS 444.585	Ownership of recyclable materials; unauthorized collection of recyclable materials prohibited; penalty; civil remedy.
NRS 444.590	Designation of State Department of Conservation and Natural Resources as state agency for participation in federal program; extent of authority.
NRS 444.592	Solid waste management authority: Powers of protection and enforcement.
NRS 444.594	Solid waste management authority: Contents of orders for protection or enforcement.
NRS 444.596	Solid waste management authority: Recovery of civil penalties for violations.
NRS 444.598	Solid waste management authority: Recovery of damages resulting from violations.
NRS 444.600	Injunctive relief.
NRS 444.605	Issuance and enforcement of subpoenas.
NRS 444.610	Unlawful acts; penalties.
NRS 444.615	Solid Waste Management Account: Creation; deposits.
NRS 444.616	Solid Waste Management Account: Distribution and use.
NRS 444.620	Applicability of plans and provisions.

UNLAWFUL DISPOSAL OF SOLID WASTE OR SEWAGE

NRS 444.621	Definitions.
NRS 444.623	“Dump site” defined.
NRS 444.625	“Solid waste” defined.
NRS 444.627	“Solid waste management authority” defined.
NRS 444.629	Program for control of unlawful dumping; Establishment; administration; required elements; delegation of certain powers from solid waste management authority to hearing officer or board.
NRS 444.630	Prohibited acts; criminal penalty; clean up of dump site; community service; timing of commencement of clean up; proof of lawful disposal; revocation of business license or registration; identification of violator; persons required to enforce provisions; issuance of citation; request for and provision of information.
NRS 444.635	Civil penalties: Liability upon each conviction; increase of penalty for subsequent conviction; payment in installments; collection; disposition and use of money collected.
NRS 444.637	Performance of certain functions by nonprofit organization.
NRS 444.639	Issuance and enforcement of subpoenas.
NRS 444.640	Reward for information leading to arrest and conviction of violator; regulations.
NRS 444.645	Notice of provision of NRS 444.555 or 444.630 to be posted; offer of reward.

COLLECTION AND DISPOSAL OF SOLID WASTE

NRS 444.440 Declaration of state policy. It is hereby declared to be the policy of this State to regulate the collection and disposal of solid waste in a manner that will:

1. Protect public health and welfare.
2. Prevent water or air pollution.
3. Prevent the spread of disease and the creation of nuisances.
4. Conserve natural resources.
5. Enhance the beauty and quality of the environment.

(Added to NRS by [1971, 1178](#))

NRS 444.450 Definitions. As used in [NRS 444.440](#) to [444.620](#), inclusive, unless the context otherwise requires, the words and terms defined in [NRS 444.460](#) to [444.501](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NRS by [1971, 1178](#); A [1987, 1491](#); [1991, 1672](#), [2191](#); [1993, 14](#); [2009, 1080](#); [2015, 1520](#))

NRS 444.460 “Disposal site” defined. “Disposal site” means any place at which solid waste is dumped, abandoned or accepted or disposed of by incineration, land filling, composting or any other method. The term includes a municipal solid waste landfill.

(Added to NRS by [1971, 1178](#); A [1993, 14](#))

NRS 444.463 “Facility for the management of waste tires” defined. “Facility for the management of waste tires” means a site at which waste tires are deposited for processing, recycling or use as a fuel and which has been issued a permit for that purpose pursuant to the regulations adopted pursuant to [NRS 444.505](#).

(Added to NRS by [2009, 1078](#))

NRS 444.465 “Municipal solid waste landfill” defined. “Municipal solid waste landfill” has the meaning ascribed to it in the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto.

(Added to NRS by [1993, 10](#))

NRS 444.470 “Municipality” defined. “Municipality” means any county and any city or town, whether incorporated or unincorporated, and Carson City.

(Added to NRS by [1971, 1178](#))

NRS 444.475 “Passenger car” defined. “Passenger car” has the meaning ascribed to it in [NRS 482.087](#).

(Added to NRS by [2009, 1078](#))

NRS 444.480 “Person” defined. “Person” includes any state or federal agency.

(Added to NRS by [1971, 1178](#); A [1985, 516](#))

NRS 444.490 “Solid waste” defined.

1. “Solid waste” means all putrescible and nonputrescible refuse in solid or semisolid form, including, but not limited to, garbage, rubbish, junk vehicles, ashes or incinerator residue, street refuse, dead animals, demolition waste, construction waste, solid or semisolid commercial and industrial waste.

2. The term does not include:

(a) Hazardous waste managed pursuant to [NRS 459.400](#) to [459.600](#), inclusive.

(b) A vehicle described in subparagraph (2) of paragraph (b) of subsection 1 of [NRS 444.620](#).

(Added to NRS by [1971, 1178](#); A [1981, 888](#); [2015, 339](#))

NRS 444.495 “Solid waste management authority” defined. “Solid waste management authority” means:

1. Except as otherwise provided in subsection 2, the district board of health in any area in which a health district has been created pursuant to [NRS 439.362](#) or [439.370](#) and in any area over which the board has authority pursuant to an interlocal agreement, if the board has adopted all regulations that are necessary to carry out the provisions of [NRS 444.440](#) to [444.620](#), inclusive.

2. In all other areas of the State and pursuant to [NRS 704.7318](#), at any site previously used for the production of electricity from a coal-fired electric generating plant in this State, the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NRS by [1993, 10](#); A [2005, 2468](#); [2009, 1080](#); [2013, 3086](#))

NRS 444.500 “Solid waste management system” defined. “Solid waste management system” means the entire process of storage, collection, transportation, processing, recycling and disposal of solid waste. The term includes plans and programs for the reduction of waste and public education.

(Added to NRS by [1971, 1178](#); A [1981, 858](#); [1993, 14](#))

NRS 444.501 “Waste tire” defined. “Waste tire” means a passenger car tire that is not suitable for its intended purpose because of wear, damage or defect.

(Added to NRS by [2009, 1078](#))

NRS 444.505 Management and disposal of waste tires: Regulations for issuance of permits to operate facility and for program of recycling and reuse.

1. The district board of health of a health district created pursuant to [NRS 439.362](#) or [439.370](#) shall, in a timely manner, adopt regulations:

(a) For the issuance of a permit to operate a facility for the management of waste tires in the health district and in any area over which the board has authority pursuant to an interlocal agreement;

(b) If the district board of health issues a permit to operate a facility for the management of waste tires, prohibiting the disposal of waste tires in any municipal solid waste landfill in the health district and in any area over which the board has authority pursuant to an interlocal agreement by a retail seller of new motor vehicles tires or a wholesale seller of new motor vehicle tires; and

(c) To establish and carry out a program for the recycling and reuse of waste tires in the health district and in any area over which the board has authority pursuant to an interlocal agreement.

2. The regulations adopted pursuant to subsection 1 must:

(a) Provide for acceptable alternatives to the disposal of a waste tire in a municipal solid waste landfill;

(b) Provide for the inspection of a facility for the management of waste tires to ensure that the operator of the facility complies with those regulations;

(c) Prohibit a facility for the management of waste tires from refusing to accept a waste tire offered for disposal, except in accordance with the provisions of the permit issued to the operator of the facility;

(d) Establish requirements concerning the transportation and storage of waste tires prior to disposal;

(e) Establish a procedure for applications for exemptions or waivers from any of those regulations;

(f) Provide for an exemption from any penalty imposed pursuant to those regulations for any person who inadvertently or unintentionally disposes of a waste tire in a municipal solid waste landfill in violation of those regulations;

(g) Not prohibit the lawful disposal of a waste tire outside of the health district; and

(h) In addition to the penalties described in [NRS 444.507](#) and [444.509](#), provide for a penalty for a violation of any of those regulations.

3. In a county in which a health district has not been created pursuant to [NRS 439.362](#) or [439.370](#), the State Environmental Commission may adopt regulations:

(a) Authorizing the Division of Environmental Protection of the State Department of Conservation and Natural Resources to issue a permit for the operation of a facility for the management of waste tires in the county;

(b) If a facility for the management of waste tires has been issued a permit in the county, prohibiting the disposal of waste tires in a municipal solid waste landfill in the county; and

(c) To establish and carry out a program for the recycling and reuse of waste tires in the county.

4. Any regulation adopted pursuant to this section which prohibits the disposal of a waste tire in a municipal solid waste landfill does not apply to the disposal of a waste tire if the unavailability of a facility for the management of waste tires makes disposal at such a facility impracticable. The provisions of this subsection do not exempt a person from any other regulation adopted pursuant to this section.

5. The regulations adopted by a district board of health pursuant to this section must not conflict with regulations adopted by the State Environmental Commission.

(Added to NRS by [2009, 1078](#))

NRS 444.507 Management and disposal of waste tires: Permit required to operate facility; penalties for violation.

1. A person shall not operate a facility for the management of waste tires unless the operator:

(a) Holds a permit to operate the facility for the management of waste tires issued by the district board of health or the Division of Environmental Protection of the State Department of Conservation and Natural Resources in accordance with the regulations adopted pursuant to [NRS 444.505](#); and

(b) Complies with the terms and conditions of the permit.

2. A person who violates the provisions of subsection 1 is guilty of a misdemeanor.

3. Each day or part of a day during which the violation is continued or repeated constitutes a separate offense.

4. Except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive:

(a) A person convicted of violating subsection 1 is, in addition to any criminal penalty imposed, liable for a civil penalty upon each such conviction; and

(b) A court before whom a defendant is convicted of a violation of subsection 1 shall, for each violation, order the defendant to pay a civil penalty of at least \$500 but not more than \$5,000.

(Added to NRS by [2009, 1079](#))

NRS 444.509 Management and disposal of waste tires: Unlawful to dispose of waste tire in solid waste landfill if permit issued for operation of facility in health district or county; exceptions.

1. Except as otherwise provided in subsection 2, in any health district created pursuant to [NRS 439.362](#) or [439.370](#) and any area over which the district board of health has authority pursuant to an interlocal agreement or any county in which a permit for the operation of a facility for the management of waste tires has been issued pursuant to [NRS 444.505](#), a person who willfully disposes of a waste tire generated in that health district or county in any municipal solid waste landfill in this State is guilty of a misdemeanor and, except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive, shall be punished by a fine of not less than \$100 per violation. Each waste tire disposed of in violation of the provisions of this section constitutes a separate violation.

2. The provisions of subsection 1 do not apply:

(a) To a person who inadvertently or unintentionally disposes of a waste tire in a municipal solid waste landfill in violation of the provisions of subsection 1; or

(b) If the unavailability of a facility for the management of waste tires makes disposal of a waste tire at a site other than a municipal solid waste landfill impracticable.

(Added to NRS by [2009, 1080](#))

NRS 444.510 Municipal solid waste management systems: Development, revision and approval of plans; cooperative agreements.

1. The governing body of every municipality or district board of health created pursuant to [NRS 439.362](#) or [439.370](#) shall develop a plan to provide for a solid waste management system which adequately provides for the management and disposal of solid waste within the boundaries of the municipality or within the area to be served by the system, whether generated within or outside of the boundaries of the area.

2. The plan may include ordinances adopted pursuant to [NRS 444.520](#) and [444.530](#).

3. Such a governing body may enter into agreements with governing bodies of other municipalities, or with any person, or with a combination thereof, to carry out or develop portions of the plan provided for in subsection 1, or both, and to provide a solid waste management system, or any part thereof.

4. Any plan developed by the governing body of a municipality or district board of health created pursuant to [NRS 439.362](#) or [439.370](#) must be submitted to the State Department of Conservation and Natural Resources for approval according to a schedule established by the State Environmental Commission. No action may be taken by that governing body or district board of health until the plan has been approved. The Department shall determine the adequacy of the plan within 90 days after receiving the plan. If the Department does not respond to the plan within 90 days, the plan shall be deemed approved and becomes effective immediately.

5. An approved plan remains in effect until the plan is revised and the revised plan is approved. A plan must not conflict with the statewide plan adopted by the State Environmental Commission pursuant to [NRS 444.570](#). Plans must be revised to reflect proposed changes in the solid waste management system, and changes in applicable regulations.

(Added to NRS by [1971, 1178](#); A [1975, 1401](#); [1977, 1138](#); [1983, 1261](#); [1991, 2191](#); [1993, 14](#); [2005, 2468](#))

NRS 444.520 Municipal solid waste management systems: Additional fees and charges; unpaid fees and charges constitute lien against property; lien not effective until notice given.

1. The governing body of any municipality which has an approved plan for the management of solid waste may, by ordinance, provide for the levy and collection of other or additional fees and charges and require such licenses as may be appropriate and necessary to meet the requirements of [NRS 444.460](#) to [444.610](#), inclusive.

2. The fees authorized by this section are not subject to the limit on the maximum allowable revenue from fees established pursuant to [NRS 354.5989](#).

3. Until paid, any fee or charge levied pursuant to subsection 1 constitutes a perpetual lien against the property served, superior to all liens, claims and titles other than liens for general taxes and special assessments. The lien is not extinguished by the sale of any property on account of nonpayment of any other lien, claim or title, except liens for general taxes and special assessments. The lien may be foreclosed in the same manner as provided for the foreclosure of mechanics' liens.

4. A lien against the property served is not effective until a notice of the lien, separately prepared for each lot affected, is:

(a) Mailed to the last known owner at the owner's last known address according to the records of the county in which the property is located;

(b) Delivered to the office of the county recorder of the county in which the property is located;

(c) Recorded by the county recorder in a book kept for the purpose of recording instruments encumbering land; and

(d) Indexed in the real estate index as deeds and other conveyances are required by law to be indexed.

(Added to NRS by [1971, 1179](#); A [1991, 1672](#); [2005, 809](#))

NRS 444.530 Municipal solid waste management systems: Regulations for operation. The governing body of a municipality having a solid waste management system within its boundaries shall, by ordinance, establish regulations for the operation of such system. No such ordinance shall be in conflict with any regulation adopted by the State Environmental Commission.

(Added to NRS by [1971, 1179](#); A [1975, 1401](#))

NRS 444.540 Municipal solid waste management systems: Acceptance and use of grants or appropriations. The governing body of a municipality may accept and disburse funds derived from grants from any person or appropriation from the general fund in the State Treasury for the installation and operation of a solid waste management system, or any part thereof.

(Added to NRS by [1971, 1179](#))

NRS 444.550 Municipal solid waste management systems: Authority to acquire land, machinery, equipment or facilities.

1. The governing body of any municipality may contract for the lease or purchase of land, facilities, vehicles, machinery or any other thing necessary to the installation or operation of a solid waste management system.

2. The authority provided for in subsection 1 may also be exercised in combination with another person or governing body of a municipality.

(Added to NRS by [1971, 1179](#))

NRS 444.553 Permits to operate disposal sites: Issuance; requirements.

1. The solid waste management authority shall, in accordance with the regulations of the State Environmental Commission adopted pursuant to [NRS 444.560](#), issue permits to operate disposal sites.

2. A person shall not operate or authorize the operation of a disposal site unless the operator:

(a) Holds a permit to operate the disposal site issued by the solid waste management authority; and

(b) Complies with the terms and conditions of the permit.

(Added to NRS by [1993, 12](#))

NRS 444.555 Use of certain disposal sites established by municipality restricted; penalty. A disposal site established by a municipality for which no person is employed to control access to and use of the site may be used only for the disposal of solid waste by:

1. The residents of the municipality; or

2. Tourists in the area for noncommercial reasons.

↪ Any person violating the provisions of this section is guilty of a misdemeanor.

(Added to NRS by [1987, 1491](#))

NRS 444.556 Municipal solid waste landfills: Permit required; conditions of permit; disclosure of records regarding application for permit; powers of solid waste management authority.

1. Before constructing or operating a municipal solid waste landfill, the owner or operator of the landfill shall obtain a permit issued by the solid waste management authority.

2. A permit for the construction or operation of a municipal solid waste landfill is subject to the general conditions of the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto.

3. Any documents submitted in connection with an application for a permit, including any modifications requested by the solid waste management authority that require corrective action to the proposed construction or operation, are public records and must be made available for public comment. The final determinations made by the solid waste management authority on an application for a permit are public records.

4. A permit issued by a solid waste management authority must be conditioned upon all requirements that are necessary to ensure continuing compliance with:

(a) The requirements of the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto, which describe:

- (1) General standards for a municipal solid waste landfill;
- (2) Restrictions on the location of such a landfill;
- (3) Criteria for the operation of such a landfill;
- (4) Criteria for the design of such a landfill;
- (5) Requirements for monitoring groundwater and standards for corrective actions related thereto;

(6) Standards of care related to the closure of such a landfill; and

(7) Financial requirements for the owners or operators of such landfills;

(b) The applicable regulations of the State Environmental Commission; and

(c) The applicable laws of this State.

5. A solid waste management authority may:

(a) Obtain, and the owner or operator of a municipal waste landfill shall deliver upon request, any information necessary to determine whether the owner or operator is or has been in compliance with the terms and conditions of the permit, the regulations of the State Environmental Commission, the applicable laws of this State and the provisions of the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto;

(b) Conduct monitoring or testing to ensure that the owner or operator is or has been in compliance with the terms and conditions of the permit; and

(c) Enter any site or premises subject to the permit, during normal business hours, on which records relevant to the municipal solid waste landfill are kept in order to inspect those records.

(Added to NRS by [1993, 11](#))

NRS 444.557 Municipal solid waste landfills: Program to monitor compliance with permits, laws and regulations; allowance of intervention.

1. A solid waste management authority shall establish a program to monitor the compliance of a municipal solid waste landfill with the terms and conditions of the permit issued for that landfill, the regulations of the State Environmental Commission, the applicable laws of this state and the provisions of the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto. The program must include procedures to:

(a) Verify the accuracy of any information submitted by the owner or operator of the landfill to the authority;

(b) Verify the adequacy of sampling procedures and analytical methods used by the owner or operator of the landfill; and

(c) Require the owner or operator to produce all evidence which would be admissible in a proceeding to enforce compliance.

2. The solid waste management authority shall receive and give appropriate consideration to any information submitted by members of the public regarding the continuing compliance of an owner or operator with the permit issued by the authority.

3. In the administration of any permit issued by a solid waste management authority, the authority shall establish procedures that permit intervention pursuant to [Rule 24](#) of the Nevada Rules of Civil Procedure. The authority shall not oppose intervention on the ground that the applicant's interest is adequately represented by the authority.

(Added to NRS by [1993, 12](#))

NRS 444.558 Municipal solid waste landfills: Regulations for program of issuing permits.

1. The State Environmental Commission and the district board of health of a health district created pursuant to [NRS 439.362](#) or [439.370](#) shall, in a timely manner, adopt all regulations that are necessary to establish and carry out a program of issuing permits for municipal solid waste landfills. The program must ensure compliance with the Resource Conservation and Recovery Act of 1976, Subtitle D, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto, and carry out the purpose and intent of this section.

2. The regulations adopted by a district board of health pursuant to this section must not conflict with regulations adopted by the State Environmental Commission.

(Added to NRS by [1993, 11](#); A [2005, 2468](#))

NRS 444.559 Municipal solid waste landfills: Requirement to accept recreational vehicle for disposal in certain circumstances. A municipal solid waste landfill shall accept a recreational vehicle for disposal if:

1. The person disposing of the recreational vehicle pays any applicable fee and provides the title to the recreational vehicle, indicating that he or she is the owner.

2. Accepting the recreational vehicle for disposal does not violate any applicable federal or state law or regulation relating to the operation of the municipal solid waste landfill.

(Added to NRS by [2015, 1519](#))

NRS 444.560 Regulations of State Environmental Commission: Adoption; fees; violation prohibited after reasonable time.

1. The State Environmental Commission shall adopt regulations concerning solid waste management systems, or any part thereof, including regulations establishing standards for the issuance, renewal, modification, suspension, revocation and denial of, and for the imposition of terms and conditions for, a permit to construct or operate a disposal site.

2. The State Environmental Commission may establish a schedule of fees for the disposal of solid waste in areas subject to the jurisdiction of the State Department of Conservation and Natural Resources in accordance with [NRS 444.495](#) or for the issuance of permits or other approvals by the Department for the operation of solid waste management facilities. The Department may use the money collected under the schedule to defray the cost of managing and regulating solid waste.

3. Notice of the intention to adopt and the adoption of any regulation or schedule of fees must be given to the clerk of the governing board of all municipalities in this State.

4. Within a reasonable time, as fixed by the State Environmental Commission, after the adoption of any regulation, no governing board of a municipality or person may operate or permit an operation in violation of the regulation.

(Added to NRS by [1971, 1179](#); A [1975, 1401](#); [1977, 68](#); [1983, 1261](#); [1993, 15](#); [2005, 1498](#))

NRS 444.570 Duties of State Department of Conservation and Natural Resources and State Environmental Commission; inspections.

1. The State Department of Conservation and Natural Resources shall:

(a) Advise, consult and cooperate with other agencies and commissions of the State, other states, the Federal Government, municipalities and persons in the formulation of plans for and the establishment of any solid waste management system.

(b) Accept and administer loans and grants from any person that may be available for the planning, construction and operation of solid waste management systems.

(c) Enforce the provisions of [NRS 444.440](#) to [444.560](#), inclusive, and any regulation adopted by the State Environmental Commission pursuant thereto.

(d) Periodically review the programs of other solid waste management authorities in the State for issuing permits pursuant to [NRS 444.505](#), [444.553](#) and [444.556](#) and ensuring compliance with the terms and conditions of such permits, the regulations of the State Environmental Commission, the laws of this State and the provisions of the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6941 et seq., and the regulations adopted pursuant thereto. The Director of the State Department of Conservation and Natural Resources shall review the adequacy of such programs in accordance with the standards adopted by the United States Environmental Protection Agency to review the adequacy of the state program. If the Director determines that a program is inadequate, the Department shall act as the solid waste management authority until the deficiency is corrected. A finding by the Director that a program is inadequate is not final until reviewed by the State Environmental Commission. This paragraph does not limit the authority or responsibility of a district board of health to issue permits for disposal sites and enforce the laws of this State regarding solid waste management systems.

(e) Make such investigations and inspections and conduct such monitoring and testing as may be necessary to require compliance with [NRS 444.450](#) to [444.560](#), inclusive, and any regulation adopted by the State Environmental Commission.

2. The State Environmental Commission shall:

(a) In cooperation with governing bodies of municipalities, develop a statewide solid waste management system plan, and review and revise the plan every 5 years.

(b) Examine and approve or disapprove plans for solid waste management systems.

(c) Review any determination by the Director of the State Department of Conservation and Natural Resources that a program for issuing permits administered by a solid waste management authority is inadequate. The Commission may affirm, modify or reverse the findings of the Director.

3. Employees of the State Department of Conservation and Natural Resources or its authorized representatives may, during the normal hours of operation of a facility subject to the provisions of [NRS 444.440](#) to [444.620](#), inclusive, enter and inspect areas of the facility where:

(a) Solid waste may have been generated, stored, transported, treated or disposed; or

(b) Records are kept, and may inspect and copy any records, reports, information or test results relating to the management of the solid waste.

(Added to NRS by [1971, 1179](#); A [1973, 1406](#); [1975, 1402](#); [1977, 1139](#); [1993, 15](#); [2005, 1499](#); [2009, 1080](#))

NRS 444.580 Authority of district board of health or municipality to adopt regulations and issue permits. Except as otherwise provided in [NRS 444.559](#):

1. Any district board of health created pursuant to [NRS 439.362](#) or [439.370](#) and any governing body of a municipality may adopt standards and regulations for the location, design, construction, operation and maintenance of solid waste disposal sites and solid waste management systems or any part thereof more restrictive than those adopted by the State Environmental Commission, and any district board of health may issue permits thereunder.

2. Any district board of health created pursuant to [NRS 439.362](#) or [439.370](#) may adopt such other regulations as are necessary to carry out the provisions of [NRS 444.440](#) to [444.620](#), inclusive. Such regulations must not conflict with regulations adopted by the State Environmental Commission.

(Added to NRS by [1971, 1180](#); A [1975, 1402](#); [1993, 16](#); [2005, 2469](#); [2009, 1081](#); [2015, 1520](#))

NRS 444.583 Unlawful disposal of motor vehicle battery, motor vehicle tire or motor oil; penalty; plan for appropriate disposal; exemption.

1. Except as otherwise provided in subsection 5 and [NRS 444.509](#), it is unlawful willfully to:

(a) Dispose of, abandon or dump a motor vehicle battery, motor vehicle tire or motor oil at any site which has not been issued a permit for that purpose by the solid waste management authority;

(b) Dispose of, abandon or dump a motor vehicle battery, motor vehicle tire or motor oil at a sanitary landfill or other disposal site established by a municipality which has not been issued a permit for that purpose by the solid waste management authority; or

(c) Incinerate a motor vehicle battery or motor vehicle tire as a means of ultimate disposal, unless the incineration is approved by the solid waste management authority for the recovery of energy or other appropriate use.

2. A person who violates the provisions of subsection 1 is guilty of a misdemeanor and except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive, shall be punished by a fine of not less than \$100 per violation.

3. The State Department of Conservation and Natural Resources shall establish a plan for the appropriate disposal of used or waste motor vehicle batteries, motor vehicle tires and motor oil. The plan must include the issuance of permits to approved sites or facilities for the disposal of those items by the public. The plan may include education of the public regarding the necessity of disposing of these items properly and recycling them.

4. The State Department of Conservation and Natural Resources shall encourage the voluntary establishment of authorized sites which are open to the public for the deposit of used or waste motor vehicle batteries, motor vehicle tires and motor oil.

5. The provisions of subsections 1 and 2 do not apply to the disposal of used or waste motor vehicle batteries or motor vehicle tires if the unavailability of a site that has been issued a permit by the solid waste management authority makes disposal at such a site impracticable. The provisions of this subsection do not exempt a person from any other regulation of the solid waste management authority concerning the disposal of used or waste motor vehicle batteries or motor vehicle tires.

(Added to NRS by [1991, 1671](#); A [1997, 1078](#); [2005, 1500](#); [2009, 1082](#))

NRS 444.585 Ownership of recyclable materials; unauthorized collection of recyclable materials prohibited; penalty; civil remedy.

1. From the time recyclable materials are placed in a container provided by a private recycling business or the person designated by the county or other municipality to collect recyclable materials:

(a) At curbside for collection; or

(b) At any other appropriate site designated for collection,

↳ the recyclable materials are the property of the private recycling business or person designated by the county or other municipality to collect them, as appropriate.

2. Any person engaged in the unauthorized collection of recyclable materials is guilty of a misdemeanor. Each such unauthorized collection constitutes a separate and distinct offense.

3. As an alternative to the criminal penalty set forth in subsection 2, the county or other municipality, the private recycling business and the person designated to collect the recyclable materials may independently enforce the provisions of this section in a civil action. Except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive, a person who engages in the unauthorized collection of recyclable

materials is liable to the private recycling business or the person designated to make such collections, as appropriate, for three times the damages caused by the unauthorized collection.

(Added to NRS by [1991, 1671](#); A [1997, 1079](#))

NRS 444.590 Designation of State Department of Conservation and Natural Resources as state agency for participation in federal program; extent of authority.

1. The State Department of Conservation and Natural Resources is hereby designated the state agency for such purposes as are required by the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6941 et seq., except that:

(a) The State Environmental Commission has the exclusive authority to adopt regulations pursuant to [NRS 444.440](#) to [444.620](#), inclusive; and

(b) The district boards of health of health districts created pursuant to [NRS 439.362](#) or [439.370](#) retain the authority to issue permits and adopt regulations pursuant to [NRS 444.580](#).

2. The State Department of Conservation and Natural Resources may take any action necessary and appropriate to secure the benefits of any federal law relating to solid waste.

(Added to NRS by [1971, 1180](#); A [1975, 1402](#); [1977, 1139](#); [1993, 17](#); [2005, 2469](#))

NRS 444.592 Solid waste management authority: Powers of protection and enforcement. If the solid waste management authority receives information that the handling, storage, recycling, transportation, treatment or disposal of any solid waste presents or may present a threat to human health, public safety or the environment, or is in violation of a term or condition of a permit issued pursuant to [NRS 444.505](#), [444.553](#) or [444.556](#), a statute, a regulation or an order issued pursuant to [NRS 444.594](#), the authority may, in addition to any other remedy provided in [NRS 444.440](#) to [444.620](#), inclusive:

1. Issue an order directing the owner or operator of the disposal site or any other site where the handling, storage, recycling, transportation, treatment or disposal has occurred or may occur, or any other person who has custody of the solid waste, to take such steps as are necessary to prevent the act or eliminate the practice which constitutes the threat or violation.

2. Commence an action in a court of competent jurisdiction to enjoin the act or practice which constitutes the threat or violation in accordance with the provisions of [NRS 444.600](#).

3. Take any other action designed to reduce or eliminate the threat or violation.

(Added to NRS by [1993, 12](#); A [2005, 1500](#); [2009, 1082](#))

NRS 444.594 Solid waste management authority: Contents of orders for protection or enforcement.

1. An order issued by a solid waste management authority must:

(a) Specify the term or condition of a permit issued pursuant to [NRS 444.505](#), [444.553](#) or [444.556](#), or the statute or regulation, which is alleged to have been violated or which is about to be violated, or the threat to human health, public safety or the environment;

(b) Set forth the facts alleged to constitute the violation or threat; and

(c) Prescribe any corrective action which must be taken and a reasonable time within which it must be taken.

2. The order may require the person to whom the order is directed to appear before the solid waste management authority, its authorized representative or a hearing officer appointed by the authority, to show cause why an action should not be commenced against the person in a court of competent jurisdiction requesting appropriate relief.

(Added to NRS by [1993, 13](#); A [2009, 1083](#))

NRS 444.596 Solid waste management authority: Recovery of civil penalties for violations.

The solid waste management authority may bring an action in a court of competent jurisdiction to recover from a person or municipality which violates any statute or regulation, any term or condition of a permit issued pursuant to [NRS 444.505](#), [444.553](#) or [444.556](#), or any order issued pursuant to [NRS 444.592](#), a civil penalty of not more than \$5,000 for each day on which the violation occurs. This penalty is in addition to any other penalty provided in [NRS 444.440](#) to [444.620](#), inclusive.

(Added to NRS by [1993, 13](#); A [1993, 1421](#); [2009, 1083](#))

NRS 444.598 Solid waste management authority: Recovery of damages resulting from violations. The solid waste management authority may bring an action in a court of competent jurisdiction to recover actual damages which result from a violation of a statute or regulation, any term or condition of a permit issued pursuant to [NRS 444.505](#), [444.553](#) or [444.556](#), or any order issued pursuant to [NRS 444.592](#). The damages may include expenses incurred by the authority in testing for and removing, correcting or terminating any adverse effects which resulted from the violation and costs and attorney's fees, including those incurred in administrative proceedings. This remedy is in addition to any other remedy provided in [NRS 444.440](#) to [444.620](#), inclusive.

(Added to NRS by [1993, 13](#); A [1993, 1421](#); [2009, 1083](#))

NRS 444.600 Injunctive relief. In addition to any other remedies provided in [NRS 444.450](#) to [444.590](#), inclusive, the State Department of Conservation and Natural Resources or a solid waste management authority may bring an action in a court of competent jurisdiction to enjoin a violation of [NRS 444.450](#) to [444.560](#), inclusive, any term or condition of a permit issued pursuant to [NRS 444.505](#), [444.553](#) or [444.556](#), any order issued pursuant to [NRS 444.592](#), or any regulation adopted by the State Environmental Commission or solid waste management authority.

(Added to NRS by [1971, 1180](#); A [1975, 1402](#); [1977, 1139](#); [1993, 17](#); [2009, 1083](#))

NRS 444.605 Issuance and enforcement of subpoenas.

1. In carrying out the provisions of [NRS 444.440](#) to [444.620](#), inclusive, the State Environmental Commission, a district board of health of a health district created pursuant to [NRS 439.362](#) or [439.370](#), and a solid waste management authority may by subpoena require the attendance and testimony of witnesses and the production of reports, papers, documents and other evidence which they deem necessary.

2. If any person to whom a subpoena has been directed pursuant to subsection 1 refuses to attend, testify or produce any evidence specified in the subpoena, the person who issued the subpoena may present a petition, to a court of competent jurisdiction where the person to whom the subpoena was directed is subject to service of process, setting forth that:

(a) Notice has been given of the time and place at which the person was required to attend, testify or produce evidence;

(b) A subpoena has been mailed to or personally served on the witness or custodian of the evidence in sufficient time to enable the person to comply with its provisions; and

(c) The person has failed or refused to attend, answer questions or produce evidence specified in the subpoena,

↪ and asking that the court issue an order compelling the person to attend and to testify or produce the evidence specified in the subpoena.

3. When a court receives a petition pursuant to subsection 2, it shall order the person to whom the subpoena was directed to appear at a time and place fixed by the court in its order, which must be not more than 10 days after the date of the order, and show cause why the person should not be held in contempt. A certified copy of the order must be mailed to or personally served on the person to whom the subpoena was directed.

4. If it appears to the court that the subpoena was properly issued and that the person's failure or refusal to appear, answer questions or produce evidence was without sufficient reason, the court shall order the person to appear at a time and place fixed by the court and to testify or produce the specified evidence. If the person fails to comply with the order of the court, the person may be punished as for a contempt of court.

(Added to NRS by [1993, 13](#); A [2005, 2469](#); [2009, 1083](#))

NRS 444.610 Unlawful acts; penalties.

1. Any person who violates any regulation adopted by the State Environmental Commission or any ordinance or resolution adopted by the governing body of a municipality or district board of health is guilty of a misdemeanor.

2. Each day or part of a day during which such violation is continued or repeated constitutes a separate offense.

3. Except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive:

(a) A person convicted of violating subsection 1 is, in addition to any criminal penalty imposed, liable for a civil penalty upon each such conviction; and

(b) A court, before whom a defendant is convicted of a violation of subsection 1, shall for each violation order the defendant to pay a civil penalty which is at least \$500 but not more than \$5,000.

(Added to NRS by [1971, 1180](#); A [1975, 1402](#); [2001, 1234](#))

NRS 444.615 Solid Waste Management Account: Creation; deposits. Any money received by the solid waste management authority pursuant to [NRS 444.596](#) or [444.598](#) must be deposited with the State Treasurer for credit to the Solid Waste Management Account, which is hereby created in the State General Fund.

(Added to NRS by [1993, 13](#))

NRS 444.616 Solid Waste Management Account: Distribution and use.

1. The State Controller shall allocate and remit, on a quarterly basis, the money in the Solid Waste Management Account as follows:

(a) To the Department of Taxation, 0.5 percent.

(b) To the State Department of Conservation and Natural Resources, 44.5 percent.

(c) To the district board of health of the health district which has the largest population in this State, 30 percent.

(d) To the district board of health of the health district which has the second largest population in this State, 25 percent.

↪ If more than two health districts are created within this State, the State Department of Conservation and Natural Resources shall transfer to the district boards of health of those additional districts an amount determined by the Department to be necessary to carry out the health district's duties pursuant to [NRS 444.440](#) to [444.620](#), inclusive. If less than two health districts are created within this State, the amount otherwise allocated to a health district must be allocated to the State Department of Conservation and Natural Resources.

2. The money allocated pursuant to subsection 1 to the State Department of Conservation and Natural Resources and the district boards of health must be used for solid waste management in accordance with [NRS 444.440](#) to [444.620](#), inclusive.

3. The State Department of Conservation and Natural Resources shall transfer to the Division of Environmental Protection of that Department a portion of the money it receives pursuant to this section it deems necessary for use in educating the public concerning the objectives and functioning of the State's plan for solid waste management and the purposes set forth in [NRS 444A.110](#).

(Added to NRS by [1993, 10](#); A [1995, 649](#); [2007, 3013](#))

NRS 444.620 Applicability of plans and provisions.

1. No plan for a solid waste management system adopted pursuant to [NRS 444.440](#) to [444.620](#), inclusive, applies to:

(a) Any agricultural activity or agricultural waste.

(b) A vehicle that is:

(1) Owned by an automobile wrecker licensed pursuant to [chapter 487](#) of NRS or in the possession of a salvage pool licensed pursuant to [chapter 487](#) of NRS; and

(2) Designated for dismantling as a source of parts.

2. No provision of [NRS 444.440](#) to [444.620](#), inclusive, prevents a mining operation from dumping waste from its operation on its own lands.

(Added to NRS by [1971, 1180](#); A [1981, 858](#); [1993, 17](#); [2015, 339](#))

UNLAWFUL DISPOSAL OF SOLID WASTE OR SEWAGE

NRS 444.621 Definitions. As used in [NRS 444.621](#) to [444.645](#), inclusive, unless the context otherwise requires, the words and terms defined in [NRS 444.623](#), [444.625](#) and [444.627](#) have the meanings ascribed to them in those sections.

(Added to NRS by [2001, 1233](#))

NRS 444.623 “Dump site” defined. “Dump site” means a location at which solid waste is disposed of unlawfully.

(Added to NRS by [2001, 1233](#))

NRS 444.625 “Solid waste” defined. “Solid waste” has the meaning ascribed to it in [NRS 444.490](#).

(Added to NRS by [2001, 1233](#))

NRS 444.627 “Solid waste management authority” defined. “Solid waste management authority” has the meaning ascribed to it in [NRS 444.495](#).

(Added to NRS by [2001, 1233](#))

NRS 444.629 Program for control of unlawful dumping; Establishment; administration; required elements; delegation of certain powers from solid waste management authority to hearing officer or board.

1. The solid waste management authority in each county may establish a program for the control of unlawful dumping and administer the program within its jurisdiction unless superseded.

2. The program established pursuant to subsection 1 must:

(a) Include standards and procedures for the control of unlawful dumping which are equivalent to or stricter than those established by statute or state regulation; and

(b) Provide for adequate administration and enforcement.

3. The solid waste management authority may delegate to an independent hearing officer or hearing board the authority to determine violations and levy administrative penalties for violations of the provisions of [NRS 444.440](#) to [444.645](#), inclusive, or any regulation adopted pursuant to those sections.

(Added to NRS by [2001, 1233](#); A [2009, 408, 1084](#))

NRS 444.630 Prohibited acts; criminal penalty; clean up of dump site; community service; timing of commencement of clean up; proof of lawful disposal; revocation of business license or registration; identification of violator; persons required to enforce provisions; issuance of citation; request for and provision of information.

1. A person who places, deposits or dumps, or who causes to be placed, deposited or dumped, or who causes or allows to overflow, any sewage, sludge, cesspool or septic tank effluent, or accumulation

of human excreta, or any solid waste, in or upon any street, alley, public highway or road in common use, or upon any public park or other public property other than property designated or set aside for such a purpose by the governing body having charge thereof, or upon any private property, is guilty of:

(a) Except as otherwise provided in paragraph (c), for a first offense within the immediately preceding 2 years, a misdemeanor.

(b) Except as otherwise provided in paragraph (c), for a second offense within the immediately preceding 2 years, a gross misdemeanor and shall be punished by imprisonment in the county jail for not less than 14 days but not more than 364 days.

(c) Except as otherwise provided in this paragraph, for a third or subsequent offense within the immediately preceding 2 years, a gross misdemeanor and shall be punished by imprisonment in the county jail for 364 days. If, within the immediately preceding 4 years, a person commits three or more offenses that involve placing, depositing or dumping, or causing to be placed, deposited or dumped, any cesspool or septic tank effluent or solid waste, the person is guilty of a gross misdemeanor and shall be punished by imprisonment in the county jail for 1 year.

2. For the purposes of subsection 1, an offense that occurred within 2 or 4 years, as applicable, immediately preceding the date of the principal offense or after the principal offense constitutes a prior offense when evidenced by a conviction, without regard to the sequence of the offenses and convictions.

3. In addition to any criminal penalty imposed pursuant to subsection 1, any civil penalty imposed pursuant to [NRS 444.635](#) and any administrative penalty imposed pursuant to [NRS 444.629](#), a court shall sentence a person convicted of violating subsection 1:

(a) If the person is a natural person, to clean up the dump site and perform 10 hours of community service under the conditions prescribed in [NRS 176.087](#).

(b) If the person is a business entity:

(1) Except as otherwise provided in subparagraph (2), for a first or second offense within the immediately preceding 2 years, to:

(I) Clean up the dump site; and

(II) Perform 40 hours of community service cleaning up other dump sites identified by the solid waste management authority.

(2) For a third or subsequent offense within the immediately preceding 2 or 4 years, as applicable pursuant to paragraph (c) of subsection 1, to:

(I) Clean up the dump site; and

(II) Perform 200 hours of community service cleaning up other dump sites identified by the solid waste management authority.

4. If a person is sentenced to clean up a dump site pursuant to subsection 3, the person shall:

(a) Within 3 calendar days after sentencing, commence cleaning up the dump site; and

(b) Within 5 business days after cleaning up the dump site, provide to the solid waste management authority proof of the lawful disposal of the sewage, solid waste or other matter that the person was convicted of disposing of unlawfully.

↪ The solid waste management authority shall prescribe the forms of proof which may be provided to satisfy the provisions of paragraph (b).

5. In addition to any other penalty prescribed by law, if a business entity is convicted of violating subsection 1:

(a) Such violation constitutes reasonable grounds for the revocation of any license or registration to engage in business that has been issued to the business entity by any governmental entity of this State; and

(b) The solid waste management authority may seek the revocation of such a license or registration by way of any applicable procedures established by the governmental entity that issued the license or registration.

6. Except as otherwise provided in [NRS 444.585](#), ownership of solid waste does not transfer from the person who originally possessed it until it is received for transport by a person authorized to dispose of solid waste pursuant to this chapter or until it is disposed of at a municipal disposal site. Identification of the owner of any solid waste which is disposed of in violation of subsection 1 creates a reasonable inference that the owner is the person who disposed of the solid waste. The fact that the disposal of the solid waste was not witnessed does not, in and of itself, preclude the identification of its owner.

7. All:

- (a) Health officers and their deputies;
- (b) Game wardens;
- (c) Police officers of cities and towns;
- (d) Sheriffs and their deputies;
- (e) Other peace officers of the State of Nevada; and
- (f) Other persons who are specifically designated by the local government to do so,

↪ shall, within their respective jurisdictions, enforce the provisions of this section.

8. A district health officer or a deputy of the district health officer or other person specifically designated by the local government to do so may issue a citation for any violation of this section which occurs within the jurisdiction of the district health officer.

9. To effectuate the purposes of this section, the persons charged with enforcing this section may request information from any:

- (a) Agency of the State or its political subdivisions.
- (b) Employer, public or private.
- (c) Employee organization or trust of any kind.
- (d) Financial institution or other entity which is in the business of providing credit reports.
- (e) Public utility.

↪ Each of these persons and entities, their officers and employees, shall cooperate by providing any information in their possession which may aid in the location and identification of a person believed to be in violation of subsection 1. A disclosure made in good faith pursuant to this subsection does not give rise to any action for damages for the disclosure.

[1:83:1953] + [2:83:1953] — (NRS A 1957, 262; [1967, 580](#); [1969, 126](#); [1981, 858](#); [1983, 856](#); [1989, 484](#); [1991, 1672](#); [1993, 814](#); [2001, 1235](#), [1920](#); [2001 Special Session, 141](#); [2003, 111, 113](#); [2013, 985, 1220](#))

NRS 444.635 Civil penalties: Liability upon each conviction; increase of penalty for subsequent conviction; payment in installments; collection; disposition and use of money collected.

1. Except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive, a person convicted of violating [NRS 444.555](#) and, in addition to the penalty imposed pursuant to [NRS 444.509](#), [444.583](#) or [444.630](#), any person convicted of violating [NRS 444.509](#), [444.583](#) or [444.630](#) is liable for a civil penalty upon each such conviction.

2. Except as otherwise provided in [NRS 445C.010](#) to [445C.120](#), inclusive, a court before whom a defendant is convicted of a violation of the provisions of [NRS 444.509](#), [444.555](#), [444.583](#) or [444.630](#), shall order the defendant:

- (a) For a first offense, to pay a civil penalty which is at least \$500 but not more than \$5,000.
- (b) For a second offense, to pay a civil penalty which is at least \$1,000 but not more than \$5,500.
- (c) For a third offense, to pay a civil penalty which is at least \$1,500 but not more than \$6,000.
- (d) For any subsequent offense, to pay a civil penalty which is at least \$500 more than the most recent previous civil penalty that the defendant was ordered to pay pursuant to this subsection.

3. If so provided by the court, a penalty imposed pursuant to this section may be paid in installments.

4. The solid waste management authority may attempt to collect all such penalties and installments which are in default in any manner provided by law for the enforcement of a judgment.

5. Except as otherwise provided in this subsection, each court which receives money pursuant to the provisions of this section shall forthwith remit the money to the Division of Environmental Protection of the State Department of Conservation and Natural Resources, which shall deposit the money with the State Treasurer for credit in a separate account in the State General Fund. If the health authority initiated the action or, if any other person authorized to enforce [NRS 444.630](#) initiated the action and the money collected was for a violation of [NRS 444.630](#), the court shall remit the money to the district health department which shall deposit the money with the county treasurer for deposit in an account for the district health department. Money deposited pursuant to this subsection must be:

(a) Used only to pay:

- (1) Rewards pursuant to [NRS 444.640](#);
- (2) For education regarding the unlawful disposal of solid waste;
- (3) For the cleaning up of dump sites; and
- (4) For the management of solid waste; and

(b) Paid as other claims against the state or local governments are paid.

(Added to NRS by [1987, 1490](#); A [1991, 1673](#); [1997, 1079](#); [2001, 1237](#); [2001 Special Session, 162](#); [2009, 408, 1084](#))

NRS 444.637 Performance of certain functions by nonprofit organization. A solid waste management authority may authorize a nonprofit organization to:

1. Organize the cleaning up of dump sites;
2. Provide educational materials and programs regarding unlawful dumping; and
3. Operate and pay the costs of programs of community service relating to the cleaning up of dump sites.

(Added to NRS by [2001, 1234](#))

NRS 444.639 Issuance and enforcement of subpoenas.

1. In carrying out the provisions of [NRS 444.621](#) to [444.645](#), inclusive, a district health officer may by subpoena require the attendance and testimony of witnesses and the production of reports, papers, documents and other evidence which they deem necessary.

2. If any person to whom a subpoena has been directed pursuant to subsection 1 refuses to attend, testify or produce any evidence specified in the subpoena, the person who issued the subpoena may present a petition, to a court of competent jurisdiction where the person to whom the subpoena was directed is subject to service of process, setting forth that:

(a) Notice has been given of the time and place at which the person was required to attend, testify or produce evidence;

(b) A subpoena has been mailed to or personally served on the witness or custodian of the evidence in sufficient time to enable him or her to comply with its provisions; and

(c) The person has failed or refused to attend, answer questions or produce evidence specified in the subpoena,

↳ and asking that the court issue an order compelling the person to attend and to testify or produce the evidence specified in the subpoena.

3. When a court receives a petition pursuant to subsection 2, it shall order the person to whom the subpoena was directed to appear at a time and place fixed by the court in its order, which must be not more than 10 days after the date of the order, and show cause why the person should not be held in contempt. A certified copy of the order must be mailed to or personally served on the person to whom the subpoena was directed.

4. If it appears to the court that the subpoena was properly issued and that the person's failure or refusal to appear, answer questions or produce evidence was without sufficient reason, the court shall order the person to appear at a time and place fixed by the court and to testify or produce the specified

evidence. If the person fails to comply with the order of the court, the person may be punished as for a contempt of court.

(Added to NRS by [2001, 1234](#))

NRS 444.640 Reward for information leading to arrest and conviction of violator; regulations.

1. The solid waste management authority shall offer a reward of \$100 for information leading to the arrest and conviction of any person violating [NRS 444.555](#) or [444.630](#). The reward must be paid upon the conviction of the person and the payment in full of the penalty. The reward must be distributed equally among the persons who supplied the information which led to the arrest and conviction.

2. The State Environmental Commission or district board of health may adopt regulations necessary to carry out the provisions of this section.

(Added to NRS by [1987, 1491](#); A [2001, 1237](#))

NRS 444.645 Notice of provision of [NRS 444.555](#) or [444.630](#) to be posted; offer of reward.

1. The Division of Environmental Protection of the State Department of Conservation and Natural Resources, and the district health officer in his or her district or the board of county commissioners in a county without a district health officer shall post notices of the provisions of [NRS 444.555](#) or [444.630](#), whichever is appropriate.

2. The notice must also contain an offer of a reward for information leading to the arrest and conviction of any person violating [NRS 444.555](#) or [444.630](#).

(Added to NRS by [1987, 1491](#))

Appendix 6

Solid Waste

Nevada Administrative Code

444.570 – 444.7499

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SOLID WASTE DISPOSAL

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SOLID WASTE DISPOSAL

General Provisions

NAC 444.570 Definitions. ([NRS 444.560](#)) As used in [NAC 444.570](#) to [444.7499](#), inclusive, unless the context otherwise requires, the words and terms defined in [NAC 444.5701](#) to [444.631](#), inclusive, have the meanings ascribed to them in those sections.

(Supplied in codification; A by Environmental Comm'n, 12-19-89; 9-2-92; 11-8-93; 3-1-94; R034-98, 4-17-98; R173-99, 2-9-2000)

NAC 444.5701 "Active life" defined. ([NRS 444.560](#)) "Active life" means the period of operation of a disposal site beginning with the initial receipt of solid waste and ending at the completion of closure activities in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.5702 "Administrator" defined. ([NRS 444.560](#)) "Administrator" means the Administrator of the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.5703 "Appendix I" defined. ([NRS 444.560](#)) "Appendix I" means the Appendix I of 40 C.F.R. Part 258.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.57035 "Appendix II" defined. ([NRS 444.560](#)) "Appendix II" means the Appendix II of 40 C.F.R. Part 258.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.5704 "Aquifer" defined. ([NRS 444.560](#)) "Aquifer" means a geological formation, group of formations or portion of a formation capable of yielding usable quantities of groundwater to wells and springs.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.57048 "Cell" defined. ([NRS 444.560](#)) "Cell" means a portion of a municipal solid waste landfill unit which consists of compacted wastes completely enclosed in cover material.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.5705 "Class I site" defined. ([NRS 444.560](#)) "Class I site" means a disposal site which:

1. Is comprised of at least one municipal solid waste landfill unit including all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste; and
2. Is not a Class II or Class III site.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.571 “Class II site” defined. ([NRS 444.560](#)) “Class II site” means a disposal site:

1. Which is comprised of at least one municipal solid waste landfill unit;
2. Which accepts less than 20 tons of solid waste per day on an annual average;
3. For which there is no evidence of contamination of groundwater originating from the site;
4. Which serves a community that has no other practicable alternatives for waste management; and
5. Which is located in an area which annually receives no more than 25 inches of precipitation.

↳ The term includes all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste.

(Added to NAC by Environmental Comm’n, eff. 9-2-92; A 11-8-93)

NAC 444.5715 “Class III site” defined. ([NRS 444.560](#)) “Class III site” means a disposal site which accepts only industrial solid waste.

(Added to NAC by Environmental Comm’n, eff. 9-2-92; A 11-8-93)

NAC 444.572 “Composting” defined. ([NRS 444.560](#)) “Composting” means a controlled process of biological degradation of solid waste to an inoffensive humus-like product.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.1, eff. 9-21-77]

NAC 444.573 “Contaminant” defined. ([NRS 444.560](#)) “Contaminant” has the meaning ascribed to it in [NRS 445A.325](#).

(Added to NAC by Environmental Comm’n, eff. 9-2-92)

NAC 444.5735 “Cross-media” defined. ([NRS 444.560](#)) “Cross-media” means the transfer of a constituent from a medium such as water, land or air, to another medium.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.574 “Disposal site” defined. ([NRS 444.560](#)) “Disposal site” has the meaning ascribed to it in [NRS 444.460](#).

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.2, eff. 9-21-77]

NAC 444.576 “Division” defined. ([NRS 444.560](#)) “Division” means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.3, eff. 9-21-77]

NAC 444.577 “Existing municipal solid waste landfill unit” defined. ([NRS 444.560](#)) “Existing municipal solid waste landfill unit” means a municipal solid waste landfill unit which is receiving waste on November 8, 1993.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.578 “Garbage” defined. ([NRS 444.560](#)) “Garbage” means putrescible animal and vegetable wastes resulting from the handling, storage, sale, preparation, cooking and serving of food.

(Environmental Comm’n, Solid Waste Mgt Reg. § 1.4, eff. 9-21-77)

NAC 444.5785 “Gas condensate” defined. ([NRS 444.560](#)) “Gas condensate” means the liquid generated as a result of any processes to recover gas at a municipal solid waste landfill unit.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.579 “Groundwater” defined. ([NRS 444.560](#)) “Groundwater” means all subsurface water comprising the zone of saturation, including perched water.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.580 “Hazardous waste” defined. ([NRS 444.560](#)) “Hazardous waste” has the meaning ascribed to it in [NRS 459.430](#).

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.5, eff. 9-21-77]—(NAC A 9-2-92)

NAC 444.581 “Household waste” defined. ([NRS 444.560](#)) “Household waste” means any solid waste, including garbage, trash and sanitary wastes, derived from households, including single and multiple family residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and recreation areas used during the daytime.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.584 “Incinerator” defined. ([NRS 444.560](#)) “Incinerator” means an engineered apparatus capable of withstanding heat and designed to efficiently reduce solid, semi-solid, liquid or gaseous waste at specified rates, and from which the residues contain little or no combustible material.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.7, eff. 9-21-77]

NAC 444.585 “Industrial solid waste” defined. ([NRS 444.560](#))

1. “Industrial solid waste” means solid waste derived from industrial or manufacturing processes, including, but not limited to, the solid waste generated by the:

- (a) Generation of electric power;
- (b) Manufacture of fertilizer and agricultural chemicals;
- (c) Manufacture of food and its related products and by-products;
- (d) Manufacture of inorganic chemicals;
- (e) Manufacture of leather and products made from leather;
- (f) Manufacture of nonferrous metals, including the foundries which manufacture those metals;
- (g) Manufacture of organic chemicals;
- (h) Manufacture of plastics, resins and other miscellaneous products made from plastic;
- (i) Pulp and paper industry;
- (j) Manufacture of rubber and other miscellaneous products made from rubber;
- (k) Manufacture of products made from stone, glass, clay and concrete;
- (l) Manufacture of textiles;
- (m) Manufacture of transportation equipment;
- (n) Treatment of water;
- (o) Manufacture of iron and steel; and
- (p) Construction, refurbishing or demolition of buildings or other structures.

2. The term does not include waste generated by the mining, oil and gas industries.
(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.587 “Lateral expansion” defined. ([NRS 444.560](#)) “Lateral expansion” means a horizontal expansion of the waste boundaries of a disposal site after October 9, 1993.
(Added to NAC by Environmental Comm'n, eff. 9-2-92)

NAC 444.5875 “Leachate” defined. ([NRS 444.560](#)) “Leachate” means a liquid which has passed through or emerged from a municipal solid waste landfill unit and contains soluble, suspended or miscible materials removed from the waste within the unit.
(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.588 “Lift” defined. ([NRS 444.560](#)) “Lift” means a compacted layer of solid waste, typically consisting of several cells, which is approximately 10 to 15 feet thick, placed within a defined area of a municipal solid waste landfill unit and separated from other lifts on the top and bottom by a layer of cover material.
[Environmental Comm'n, Solid Waste Mgt Reg. § 1.9, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.589 “Medical waste” defined. ([NRS 444.560](#)) “Medical waste” has the meaning as ascribed to it in 49 C.F.R. Part 173, Appendix G - “Definition of Regulated Medical Waste,” as that Appendix existed on November 8, 1993.
(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.591 “Municipal solid waste landfill unit” defined. ([NRS 444.560](#)) “Municipal solid waste landfill unit” means a discrete area of land or an excavation that receives household waste. A municipal solid waste landfill unit may receive other types of solid waste, including sludge and industrial solid waste. A municipal solid waste landfill unit may be publicly or privately owned. The term does not include an injection well, a surface impoundment, a land application unit or a waste pile, as those terms are defined in 40 C.F.R. § 257.2.
(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93; 3-1-94)

NAC 444.592 “Municipality” defined. ([NRS 444.560](#)) “Municipality” means any county and any city or town, whether incorporated or unincorporated, and Carson City.
[Environmental Comm'n, Solid Waste Mgt Reg. § 1.11, eff. 9-21-77]

NAC 444.593 “New municipal solid waste landfill unit” defined. ([NRS 444.560](#)) “New municipal solid waste landfill unit” means a municipal solid waste landfill unit which has not received waste before November 8, 1993.
(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.594 “Nuisance” defined. ([NRS 444.560](#)) “Nuisance” means anything which is injurious to health, offensive to the senses, or an obstruction to the free use of property, and thus interferes with the comfortable enjoyment of life or property.
[Environmental Comm'n, Solid Waste Mgt Reg. § 1.12, eff. 9-21-77]

NAC 444.596 “Open burning” defined. ([NRS 444.560](#)) “Open burning” means the combustion of solid waste without:

1. The control of air to maintain an adequate temperature for efficient combustion;
2. The containment of the reaction in an enclosed device to provide sufficient residence time and mixing for a complete combustion; and
3. The control of the emission of the products resulting from the combustion.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.13, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.598 “Open dump” defined. ([NRS 444.560](#)) “Open dump” means an uncontrolled disposal site where solid waste is disposed of in a manner which does not comply with [NRS 444.630](#), [NAC 444.570](#) to [444.7499](#), inclusive, or any permit issued pursuant thereto.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.14, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94)

NAC 444.5985 “Operator” defined. ([NRS 444.560](#)) “Operator” means the person responsible for the overall operation of a disposal site or any part of that site.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.599 “Owner” defined. ([NRS 444.560](#)) “Owner” means the person who owns a disposal site or any part of that site.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.600 “Pathological wastes” defined. ([NRS 444.560](#)) “Pathological wastes” means human and animal remains, consisting of carcasses, organs and solid organic waste from hospitals, laboratories, abattoirs, animal pounds and similar sources.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.15, eff. 9-21-77]

NAC 444.602 “Percolation” defined. ([NRS 444.560](#)) “Percolation” means the downward movement of water through soil or waste.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.16, eff. 9-21-77]

NAC 444.604 “Person” defined. ([NRS 444.560](#)) “Person” includes any state or federal agency, any state, including the State of Nevada, a political subdivision of any state, including the State of Nevada, and an interstate agency or organization.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.17, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.605 “Pollutant” defined. ([NRS 444.560](#)) “Pollutant” has the meaning ascribed to it in [NRS 445A.400](#).

(Added to NAC by Environmental Comm’n, eff. 9-2-92)

NAC 444.6065 “Postclosure” defined. ([NRS 444.560](#)) “Postclosure” means the period immediately after a disposal site is closed which lasts in accordance with [NAC 444.6894](#).

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.607 “Public waste storage bin facility” defined. ([NRS 444.560](#)) “Public waste storage bin facility” means a facility that provides one or more portable waste containers which

are used for the collection of solid waste for transport to a solid waste disposal site. The term does not include residential or commercial waste containers that are located on or near a site of waste generation.

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98; A by R105-02, 10-18-2002)

NAC 444.608 “Putrescible” defined. ([NRS 444.560](#)) “Putrescible” means capable of being decomposed by microorganisms with sufficient rapidity as to cause nuisances from odors or gases.

[Environmental Comm'n, Solid Waste Mgt Reg. § 1.19, eff. 9-21-77]

NAC 444.609 “Qualified groundwater scientist” defined. ([NRS 444.560](#)) “Qualified groundwater scientist” means a person who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by professional certifications or the completion of accredited programs offered by a college or university which enable him or her to make sound professional judgments regarding the monitoring of groundwater, the fate and transportation of contaminants, and required corrective actions.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.610 “Refuse” defined. ([NRS 444.560](#))

1. “Refuse” means any:

(a) Garbage.

(b) Sludge from a:

(1) Plant that treats wastewater.

(2) Plant that treats the water supply.

(3) Facility for controlling air pollution.

(c) Other discarded material, including solid, semi-solid, liquid or contained gaseous material, resulting from industrial or commercial operations or community activities.

2. The term does not include:

(a) Any discarded material, including solid, semi-solid, liquid or contained gaseous material, resulting from mining or agricultural activities which is excluded from a plan for a system for the management of solid waste pursuant to [NRS 444.620](#).

(b) Solid or dissolved materials in domestic sewage.

(c) Industrial discharges that are point sources subject to [NRS 445A.465](#).

(d) Source material, special nuclear material or by-product material, as those terms are defined by the Atomic Energy Act of 1954, as that act existed on November 8, 1993.

[Environmental Comm'n, Solid Waste Mgt Reg. § 1.20, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.612 “Rubbish” defined. ([NRS 444.560](#)) “Rubbish” means nonputrescible solid waste, consisting of both combustible and noncombustible wastes such as paper, cardboard, abandoned automobiles, tin cans, wood, glass, bedding, crockery and similar materials.

[Environmental Comm'n, Solid Waste Mgt Reg. § 1.21, eff. 9-21-77]

NAC 444.614 “Salvage yard” defined. ([NRS 444.560](#)) “Salvage yard” means any place where salvaged material is regularly dismantled, accumulated, stored or offered for sale, unless such operations are wholly contained in an approved building.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.23, eff. 9-21-77]

NAC 444.616 “Salvaging” defined. ([NRS 444.560](#)) “Salvaging” means the controlled removal of material from the solid waste stream for reuse, sale or recycling.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.22, eff. 9-21-77]

NAC 444.620 “Scavenging” defined. ([NRS 444.560](#)) “Scavenging” means the uncontrolled removal of material from the solid waste stream for any purpose in a manner which interferes with the safe, efficient operation of the system.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.25, eff. 9-21-77]

NAC 444.622 “Solid waste” defined. ([NRS 444.560](#)) “Solid waste” has the meaning ascribed to it in [NRS 444.490](#).

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.26, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.624 “Solid waste management authority” defined. ([NRS 444.560](#)) “Solid waste management authority” has the meaning ascribed to it in [NRS 444.495](#).

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.27, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.626 “Solid waste management system” defined. ([NRS 444.560](#)) “Solid waste management system” means the entire process of storage, collection, transportation, processing and disposal of solid waste by any person engaging in such process as a business or by any municipality or by any combination thereof.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.28, eff. 9-21-77]

NAC 444.6265 “Surface impoundment” defined. ([NRS 444.560](#)) “Surface impoundment” means a facility or part of a facility which is a natural topographic depression, artificially created excavation or diked area formed primarily of earthen material or lined with artificially created material, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids. The term includes holding storage, settling and aeration pits, ponds and lagoons. The term does not include an injection well.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.628 “Transfer station” defined. ([NRS 444.560](#)) “Transfer station” means a solid waste processing site where solid waste is transferred from one vehicle to another vehicle or storage device for temporary storage until transferred to a disposal site. Some processing may be included therein. The term does not include public waste storage bin facilities.

[Environmental Comm’n, Solid Waste Mgt Reg. § 1.29, eff. 9-21-77]—(NAC A by R034-98, 4-17-98; R105-02, 10-18-2002)

NAC 444.629 “Uppermost aquifer” defined. ([NRS 444.560](#)) “Uppermost aquifer” means the aquifer located within the boundaries of a disposal site that is nearest the natural

ground surface. The term includes lower aquifers which are hydraulically interconnected within the boundary of the disposal site.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.630 “Vector” defined. ([NRS 444.560](#)) “Vector” means a living insect or other arthropod or animal (not human) capable of carrying infectious disease from one person or animal to another.

[Environmental Comm'n, Solid Waste Mgt Reg. § 1.30, eff. 9-21-77]

NAC 444.631 “Waters of the State” defined. ([NRS 444.560](#)) “Waters of the State” has the meaning ascribed to it in [NRS 445A.415](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92)

NAC 444.634 Severability. ([NRS 444.560](#)) If any of the provisions of [NAC 444.570](#) to [444.7499](#), inclusive, or any application thereof to any person, thing or circumstance is held invalid, it is intended that such invalidity not affect the remaining provisions, or their application, that can be given effect without the invalid provision or application.

[Environmental Comm'n, Solid Waste Mgt Reg. § 2.1.1, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94; R173-99, 2-9-2000)

NAC 444.636 Adoption by reference of certain provisions of Code of Federal Regulations, United States Geological Survey and Environmental Protection Agency. ([NRS 444.560](#))

1. The following provisions are hereby adopted by reference:

- (a) Appendix I to 40 C.F.R. Part 258, as that Appendix existed on November 8, 1993;
- (b) Appendix II to 40 C.F.R. Part 258, as that Appendix existed on November 8, 1993;
- (c) The provisions of 40 C.F.R. Part 257.2, as that part existed on November 8, 1993, for the limited purposes of defining “municipal solid waste landfill unit” in [NAC 444.591](#);
- (d) The United States Geological Survey, Open File Report 82-1033, “Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States,” for the limited purpose of defining “seismic impact zone” in [NAC 444.6793](#);
- (e) “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” Environmental Protection Agency, Publication No. SW-846, for the limited purposes of defining “liquid waste” in [NAC 444.692](#); and

(f) The Toxic Substances Control Act Good Laboratory Practice Standards, 40 C.F.R. Part 792, as those standards existed on March 1, 1994, for the limited purpose of conducting scientific studies pursuant to sub-subparagraph (II) of subparagraph (2) of paragraph (b) of subsection 1 of [NAC 444.7492](#).

2. Volume 40 C.F.R. Parts 190 to 259, inclusive, may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, for the price of \$22.

3. The report of the United States Geological Survey may be obtained from the United States Geological Survey, Books and Open Files Reports Section, Federal Center, Building 810, Box 25425, Denver, Colorado 80225, at a cost of \$24.50.

4. Publication No. SW-846 of the Environmental Protection Agency may be obtained from NTIS, United States Department of Commerce, Springfield, Virginia 22161, at a cost of \$243.

5. The Toxic Substances Control Act Good Laboratory Practice Standards, 40 C.F.R. Part 792, may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, for the price of \$19.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93; 3-1-94; R202-97, 3-5-98)

NAC 444.638 Interpretation of provisions. ([NRS 444.560](#))

1. The provisions of [NAC 444.570](#) to [444.7499](#), inclusive, may not be interpreted to circumvent any of those provisions to make them less effective.

2. If more than one interpretation exists for a provision, the more restrictive interpretation applies.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.2.1 & 2.2.2, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94; R173-99, 2-9-2000)

NAC 444.639 Interrelation with other laws and regulations. ([NRS 444.560](#)) The provisions of [NAC 444.570](#) to [444.7499](#), inclusive, do not waive or circumvent the provisions of [NRS 445A.300](#) to [445A.730](#), inclusive, [445B.100](#) to [445B.640](#), inclusive, [459.400](#) to [459.600](#), inclusive, and [459.800](#) to [459.856](#), inclusive. Each owner and operator shall comply with all other laws and regulations adopted and orders issued pursuant to those sections governing the disposal of solid waste.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; R173-99, 2-9-2000)

NAC 444.6395 Fees for initial issuance of permit or letter of approval; annual permit fees. ([NRS 444.560](#))

1. The Division shall charge and collect the following fees for an application for the initial issuance of a permit or letter of approval:

For an application submitted by a class I site proposed to receive, based on an annual average, less than 500 tons per day.....	\$5,000
For an application submitted by a class I site proposed to receive, based on an annual average, 500 or more tons per day.....	65,000
For an application submitted by a class III site proposed to receive, based on an annual average, less than 500 tons per day.....	5,000
For an application submitted by a class III site proposed to receive, based on an annual average, 500 or more tons per day.....	20,000
For an application to operate a transfer station.....	1,000
For an application to operate a facility for the management of waste tires.....	2,500

2. The Division shall, on or before July 31 of each year, charge and collect the following annual permit fees:

- For a permit issued to a class I site receiving, based on an annual average, more than 100 but less than 500 tons per day, excluding class I sites which have received a waiver of the liner and groundwater monitoring requirements prescribed by this chapter..... \$5,000
- For a permit issued to a class I site receiving, based on an annual average, 500 or more tons per day..... 65,000
- For a permit issued to a class III site receiving, based on an annual average, more than 20 but less than 500 tons per day..... 5,000
- For a permit issued to a class III site receiving, based on an annual average, 500 or more tons per day..... 20,000
- For a permit issued to a class III site primarily receiving by-products from the combustion of coal and receiving, based on an annual average, less than 100 tons per day..... 5,000
- For a permit issued to a class III site primarily receiving by-products from the combustion of coal and receiving, based on an annual average, 100 or more tons per day..... 10,000

3. The Division shall charge and collect the annual permit fee prescribed by subsection 2 for each year during which a disposal site requires a permit for its operation. Upon the closure of the disposal site and for each year during which the disposal site requires postclosure care, the Division may charge and collect an annual permit fee in an amount equal to:

- (a) For each year during the first 5 years of postclosure care, 50 percent of the annual permit fee charged during the permitting period immediately preceding closure.
- (b) For each year after the first 5 years of postclosure care, 10 percent of the annual permit fee charged during the permitting period immediately preceding closure.

4. The Division shall, for the purpose of modifying an existing permit to operate a solid waste disposal site, charge and collect a fee in an amount equal to:

- (a) For a proposal to modify a permit that is subject to the requirements for public notice and review pursuant to [NAC 444.6435](#), 50 percent of the applicable fee prescribed by subsection 1.
- (b) For any other proposal to modify a permit, \$250.

↳ Routine technical corrections and administrative updates shall not be deemed to be substantive modifications to permits for the purposes of charging and collecting a fee pursuant to this subsection.

(Added to NAC by Environmental Comm'n by R037-13, eff. 10-24-2014)

Provisions Applicable to Solid Waste Management Systems

NAC 444.640 Open burning; disposal of animal carcasses. ([NRS 444.560](#))

1. Except as otherwise provided in this section, open burning of solid wastes at a disposal site, transfer station or other facility which handles solid waste is prohibited.
2. The solid waste management authority may approve open burning of yard waste and other untreated wood waste at facilities that serve remote communities if:
 - (a) There is no other practicable alternative for the management of the waste; and
 - (b) The burning is done in accordance with [NAC 445B.22067](#).
3. The provisions of [NAC 444.570](#) to [444.7499](#), inclusive, do not prevent the disposal of animal carcasses by burning if such burning is done in accordance with [NAC 445B.22067](#), except that such burning is not allowed at municipal solid waste landfill units and Class III sites covered by those provisions.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.3.1 & 2.3.2, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94; R105-02, 10-18-2002)

NAC 444.6405 Permit to operate disposal site: Requirement; exemptions; application. ([NRS 444.560](#))

1. Except as otherwise provided in subsection 2, the owner or operator of a disposal site must obtain a permit to operate the site from the appropriate solid waste management authority.
2. The following sites are exempt from the provisions of subsection 1:
 - (a) Composting bins which are operated at a personal residence for personal use; and
 - (b) Municipal composting operations for yard wastes.
3. The owner or operator of a proposed disposal site must obtain the permit before the construction or operation of that site. An application for the permit must be submitted at least 180 days before the anticipated start of construction, to allow sufficient time for the review and issuance of the permit.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 11-9-95; 10-3-96; R105-02, 10-18-2002)

NAC 444.641 Permit to operate disposal site: Evaluation of application; notice to applicant concerning completeness and compliance; notice of intent to issue or deny application; period for public comment. ([NRS 444.560](#))

1. A solid waste management authority shall, within 45 days after receiving an application for a permit to operate a disposal site, notify the applicant as to whether the application is complete or deficient in content. A determination of completeness must be based on whether the application contains all specified documents and supporting information required by [NAC 444.677](#), [444.705](#) or [444.733](#), as applicable. The solid waste management authority may require the submittal of any such additional documents or information as it deems necessary and may specify the period within which the documents or information must be submitted to the authority.
2. If the solid waste management authority determines that an application is complete, the authority shall evaluate the merits of the application to determine if the application is in compliance with all applicable statutes and regulations. If the solid waste management authority determines that the application does not comply with all applicable statutes and regulations, it shall mail a notice to the applicant. The notice must specify:
 - (a) Each statute or regulation with which the applicant has failed to comply;

(b) Any documents or other information which the applicant is required to submit to the authority; and

(c) The period within which the applicant is required to submit to the authority the documents or other information requested pursuant to paragraph (b).

3. Upon completion of the evaluation, the solid waste management authority shall prepare and issue:

(a) A notice of intent to issue or deny the issuance of the permit. The notice must:

(1) Be sent to the applicant and the local governing body in the area in which the disposal site is to be located, and published in a newspaper of general circulation for the area in which the site is located;

(2) Summarize the action to be taken by the solid waste management authority;

(3) State that the authority will accept comments from the general public for 30 days after the date that the notice is issued; and

(4) Describe the procedure for obtaining copies of the documents and comments submitted with the application.

(b) A factual sheet which describes the proposed facility, the proposed action, the availability of the documents submitted with the application, and the procedure for public review and comment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 10-3-96)

NAC 444.6415 Permit to operate disposal site: Response to notice of intent to issue or deny application; request for public hearing; notice of public hearing. ([NRS 444.560](#))

1. An applicant for a permit to operate a disposal site and any other interested person may, within 30 days after the notice of intent is issued pursuant to [NAC 444.641](#):

(a) Submit a written request to the solid waste management authority for a public hearing on the proposed issuance or denial of the permit which must state the nature of the issues which the requester intends to raise at the hearing; or

(b) Submit written comments on the proposed issuance or denial of the permit to the solid waste management authority.

2. The solid waste management authority:

(a) May schedule a public hearing if requested pursuant to this section or on its own initiative; and

(b) Shall publish a notice of a hearing scheduled pursuant to this section at least 30 days before the date of that hearing.

3. The solid waste management authority may extend the period for public review as it deems necessary.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6419 Permit to operate disposal site: Response by solid waste management authority to written comments concerning proposed issuance or denial of permit; publication of written comments. ([NRS 444.560](#)) The solid waste management authority shall issue a statement responding to the written comments on the proposed issuance or denial of a permit to operate a disposal site which are received during the period for public review. A copy of the statement must be sent to the applicant, the person who submitted the written comments, if different from the applicant, and all other persons who specifically request, in writing, a copy of

the statement. A copy of the statement must be made available for inspection by the general public at a location specified by the solid waste management authority.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6425 Permit to operate disposal site: Duties of solid waste management authority after period for public review; modification or placement of conditions based on public comments. ([NRS 444.560](#))

1. Within 30 days after the end of the period for public review, the solid waste management authority shall:

(a) Issue a permit to operate a disposal site; or

(b) Deny the application and send written notice to the applicant which details the reasons why the application is being denied. The written notice must set forth the time and procedure by which the applicant may appeal the decision of the solid waste management authority.

2. The solid waste management authority may modify or place conditions on a permit issued pursuant to this section based on public comments received concerning the permit.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A by R105-02, 10-18-2002)

NAC 444.643 Permit to operate disposal site: Issuance; revocation or suspension; requirements for transfer to subsequent owner or operator. ([NRS 444.560](#)) A permit to operate a disposal site issued by a solid waste management authority:

1. Must be issued for the life of the design of the disposal site;

2. May be modified by the solid waste management authority if the statutes or regulations upon which the issuance of the permit is based change, or if a modification is otherwise necessary to protect public health and safety and the environment;

3. Must specify the amount and type of solid waste which the disposal site may receive that is consistent with the design and operational plans of the site;

4. Must be issued for the area and volume of waste specified in the application, if the disposal site is a municipal solid waste landfill unit or Class III site;

5. May be revoked or suspended if written notice is given by the solid waste management authority and the disposal site does not remain in compliance with the applicable statutes and regulations; and

6. Must be issued to a specific operator or owner. A permit may be transferred to a subsequent owner or operator only if the solid waste management authority approves the transfer based on documentation of financial responsibility provided by the new owner or operator.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6435 Permit to operate disposal site: Request for modification; conditions requiring public notice and review. ([NRS 444.560](#)) A permit to operate a disposal site may be modified upon the request of the owner or operator of the disposal site and approval of the solid waste management authority. A proposal to modify a permit may be subject to public notice and 30 days of public review if the proposed modification includes:

1. An increase in the amount or type of solid wastes managed at the site which is inconsistent with the permitted design, operational plans or municipal plans concerning the management of solid waste;

2. A change in the manner of waste management at the site which is inconsistent with the permitted design or operational plans of the site;

3. A substantive change in the:
 - (a) Permitted design of the site;
 - (b) Plans for closure and postclosure;
 - (c) Procedures for monitoring the site and for taking any necessary corrective actions; or
 - (d) The mechanisms for financial assurance; and
4. Any other change which is deemed by the solid waste management authority to require public notice and a public hearing.
(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.644 Systems for solid waste. ([NRS 444.560](#))

1. All solid wastes must be:
 - (a) Stored, collected, utilized, treated, processed and disposed of by means that do not create a health hazard, public nuisance or impairment of the environment.
 - (b) Handled in such a manner which does not contribute to breeding of insects and rodents or to support any disease vector.
2. All solid waste systems must be operated in a manner that will not cause or contribute to pollution of:
 - (a) The atmosphere; or
 - (b) Surface or groundwaters of the State.
3. No system for solid waste handling, processing, salvage or disposal may be placed in operation unless approved by the solid waste management authority.
[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.5.1-2.5.5, eff. 9-21-77]—(NAC A 9-2-92)

NAC 444.645 Program for quality assurance and control for construction of required liner system. ([NRS 444.560](#)) The owner or operator of a municipal solid waste landfill unit shall:

1. Develop and carry out a program for quality assurance and quality control for the construction of all liner systems required by [NAC 444.681](#); and
2. Submit a summary of this program to the solid waste management authority before waste may be placed in the municipal solid waste landfill unit.
(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.646 Disposal of special wastes: Sewage sludge, septic tank pumpings and medical wastes; coverage of burial area. ([NRS 444.560](#))

1. Sewage sludges, septic tank pumpings and medical wastes may be deposited at a disposal site only if provisions for such disposal are included in the operational plan and approved by the solid waste management authority.
2. A completed special waste burial area must be covered with a layer of suitable cover material compacted to a minimum uniform depth of 36 inches.
[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.6.1.1-2.6.1.3, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.648 Disposal of special wastes: Waste tires. ([NRS 444.560](#))

1. Disposal of waste tires by open dumping is prohibited.
2. Disposal of waste tires by open burning is prohibited.

3. Waste tires which are disposed of by landfilling and which are not incorporated with other wastes in a landfill for which a permit has been issued by a solid waste management authority pursuant to [NAC 444.6405](#) must be chipped, split or otherwise handled in a manner approved by the solid waste management authority which:

- (a) Prevents tires from resurfacing after they have been covered;
- (b) Reduces the possibility of a fire at the landfill;
- (c) Controls vectors; and
- (d) Otherwise protects the environment and public health.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.6.2.1-2.6.2.4, eff. 9-21-77]—(NAC A 12-15-94)

NAC 444.650 Disposal of special wastes: Waste oils. ([NRS 444.560](#))

1. Large quantities of waste oils, greases, oil sludges or oil soaked wastes must not be placed in any land disposal site unless special provisions for handling and other special precautions are included in the operational plan to prevent fires and pollution of surface or groundwaters.

2. Provisions for handling and disposing of large quantities of waste oils are effective only if approved by the solid waste management authority.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.6.3.1-2.6.3.2, eff. 9-21-77]

NAC 444.652 Disposal of special wastes: Construction and demolition wastes. ([NRS 444.560](#)) Landfills incorporating large quantities of construction and demolition wastes of combustible nature must be cross-sectioned into cells by compacted cover material to prevent spread of accidental fires.

[Environmental Comm'n, Solid Waste Mgt Reg. § 2.6.4.1, eff. 9-21-77]

NAC 444.654 Disposal of special wastes: Septic tank pumpings and raw sewage. ([NRS 444.560](#))

1. Septic tank pumpings and raw sewage must not be disposed of by land spreading, unless it is specifically determined and approved in writing by the solid waste management authority that such disposal can be conducted with assured, adequate protection of public health and safety and the environment.

2. The disposal of raw sewage and the septic tank pumpings at a municipal solid waste landfill unit or a Class III site are prohibited.

[Environmental Comm'n, Solid Waste Mgt Reg. § 2.6.5.1, eff. 9-21-77]—(NAC A 11-8-93)

NAC 444.656 Disposal of special wastes: Untreated sewage sludge. ([NRS 444.560](#)) Untreated sewage sludges must not be:

1. Used as fertilizer on root crops, vegetables, low-growing berries or fruits that may be eaten raw.

2. Applied to land later than 1 year prior to planting, where vegetables are to be grown.

3. Used on grass in public parks or other areas at a time or in such a way that people could unknowingly come in contact with it.

4. Given or sold to the public without their knowledge as to its origin.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.6.5.2.1-2.6.5.2.4, eff. 9-21-77]

NAC 444.658 Plans to manage solid waste. ([NRS 444.560](#))

1. Every municipality or district board of health must develop a plan for the management of solid waste within the area of its jurisdiction, together with a program for carrying out the plan.
2. The area or region to be included in such plan is the area within the boundaries of each county in the State, except in those instances where an incorporated city develops and carries out a separate plan. This section does not prevent several municipalities from developing a single combined plan.
3. Such plans must be comprehensive in scope so as to provide for all parts of a complete solid waste management system.
4. In those areas where plans for a solid waste management system have already been developed and approved, plans must be updated as necessary to conform with [NAC 444.570](#) to [444.7499](#), inclusive, and submitted to the Division. The updated plan may be in the form of a letter or summary if all necessary items are included.
5. The schedule for carrying out the plan must state the times for putting each part of the plan into effect.
6. All municipalities and district boards of health must submit their respective plans for a solid waste management system on or before October 1, 1994.
7. Every plan must be reviewed and updated as necessary, but not less often than once every 5 years following October 1, 1994.
8. Every plan must be submitted to the Division for its approval. The plan may not be carried out unless it has been approved by the Division.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 2.7.1-2.7.7, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; 3-1-94)

NAC 444.660 Standards for storage, collection and transportation set by ordinances. ([NRS 444.560](#))

1. The storage on the premises, the collection and the transportation to the disposal site of solid waste must generally be according to the pertinent ordinances or regulations of the city, town or county wherein those services are performed.
2. The provisions of [NAC 444.570](#) to [444.7499](#), inclusive, do not abridge the authority of a town, city or county to establish, by ordinance or otherwise, higher standards than those contained in those sections.
3. No system for the storage, collection or transportation of solid waste may be allowed to cause health hazards, public nuisances or otherwise cause or contribute to the impairment of the environment.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 3.1 & 3.2, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94)

NAC 444.662 Storage of solid wastes before collection. ([NRS 444.560](#))

1. The owner or occupant, or both, of any premises, business establishment or industry are responsible for the safe and sanitary storage of all solid waste accumulated at the premise until it is removed.
2. All garbage and similar putrescible waste:
 - (a) Must be stored in:
 - (1) Durable, nonabsorbent, watertight and easily cleanable containers that are resistant to corrosion and rodents. The covers of such containers must prevent the entry of flies.

(2) Other types of containers acceptable to the solid waste management authority which conform to the intent of [NAC 444.660](#) to [444.666](#), inclusive.

(b) Except as otherwise provided in subsection 5, must not be stored for more than 1 week before collection.

3. The size and allowable weight of the container must be determined by the collection agency, subject to the approval of the solid waste management authority.

4. If garbage and similar putrescible wastes are stored in combination with nonputrescible wastes, containers for the storage of the mixture must meet the requirements for garbage storage.

5. The solid waste management authority may approve the storage of garbage and similar putrescible wastes for more than 1 week before collection in a remote community if the municipality in whose jurisdiction the storage occurs demonstrates that an alternative minimum collection frequency will not result in increased litter or odors, the harboring of vectors, the storage of excess waste outside of containers, or any other health hazard, public nuisance or impairment to the environment. The solid waste management authority may revoke its approval of an alternative minimum collection frequency.

6. Medical wastes must be stored in watertight, tightly covered and clearly labeled containers that are resistant to corrosion and are in a safe location, inaccessible to the public. In addition, medical wastes must be stored in cleanable containers with liners or in a manner approved by the solid waste management authority. Medical wastes must not be deposited in containers with other solid wastes. Medical wastes must be transported separately from other solid wastes to an approved disposal site and handled in accordance with a method approved by the solid waste management authority.

7. Bulky wastes or other nonputrescible wastes unsuitable for storage containers must be stored in a manner that does not cause a nuisance.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 3.3.1-3.3.5, eff. 9-21-77]—(NAC A 11-8-93; R105-02, 10-18-2002)

NAC 444.664 Collection and transportation of solid wastes. ([NRS 444.560](#))

1. The owner or occupant, or both, of any premises, business establishment or industry are responsible for the satisfactory and legal arrangement for removal of all solid waste accumulated at the premises.

2. The person collecting or transporting solid waste is responsible for prevention of littering and creation of other nuisances at the loading point and during transport, and for proper unloading at an authorized site or facility for solid waste disposal.

3. Vehicles or containers used for the collection and transportation of garbage and similar putrescible waste or refuse must be tightly covered, leak proof, durable and of easily cleanable construction. The vehicles or containers must be cleaned frequently to prevent nuisances and insect breeding and must be maintained in good repair.

4. Vehicles or containers used for the collection and transportation of any solid waste must be loaded and moved in such a manner that the contents will not fall, leak or spill therefrom and must be covered as necessary to prevent the blowing of material from the vehicle or container. Where spillage does occur, the waste must be picked up immediately by the collector or transporter and returned to the vehicle or container and the area otherwise properly cleaned.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 3.4.1-3.4.4, eff. 9-21-77]

NAC 444.666 Transfer stations: Design and operating plans. ([NRS 444.560](#))

1. A transfer station must not be established until the site location and the design and operating plans of the transfer station have been approved by the solid waste management authority.

2. A transfer station must be designed and constructed so as to be esthetically compatible with its environs.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 3.5.1-3.5.3, eff. 9-21-77]—(NAC A by R034-98, 4-17-98)

NAC 444.6661 Transfer stations: Application to operate or modify. ([NRS 444.560](#))

1. An application to operate a new transfer station or to modify an existing transfer station must be submitted to the solid waste management authority before construction commences.

2. The application must include:

(a) The name, location and mailing address of:

- (1) The transfer station;
- (2) The owner of the transfer station;
- (3) The operator of the transfer station; and
- (4) The authorized agent of the owner;

(b) Evidence of ownership of the land on which the transfer station will be located;

(c) The report concerning the design of the transfer station, as described in [NAC 444.6662](#);

(d) The plan for operating the transfer station, as described in [NAC 444.6663](#);

(e) Evidence of approval to establish a transfer station from the applicable local government; and

(f) Any other information that the solid waste management authority requires.

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98)

NAC 444.6662 Transfer stations: Contents of report concerning design. ([NRS 444.560](#))

The report concerning the design of the transfer station required pursuant to [NAC 444.6661](#) must:

1. Be prepared under the direction of a licensed professional engineer.

2. Be signed and stamped by a professional engineer who is licensed in this State.

3. Include, without limitation, a general location map that shows land use and zoning within a 1-mile radius of the transfer station.

4. Include, without limitation, plans and specifications of the transfer station in sufficient detail to demonstrate compliance with the design standards set forth in [NAC 444.6664](#). The plans must:

(a) Be drawn to a scale of not more than 200 feet per inch and must include, without limitation, contour intervals of not more than 5 feet;

(b) Show existing and proposed contours;

(c) Show access roads and traffic routing inside of and around the transfer station;

(d) Include, without limitation, provisions for the control of surface water runoff and show grades, berms, dikes, swales and other devices used for drainage and control of surface water;

(e) Show fencing, equipment, shelter, employee facilities, waste handling areas and any other appurtenance;

(f) Include, without limitation, provisions for weighing and measuring incoming solid waste;

- (g) Include, without limitation, provisions for controlling odors and dust as necessary to prevent a public nuisance;
- (h) Define the population and area to be served by the transfer station;
- (i) List the anticipated types, quantities and sources of solid waste to be received at the transfer station; and
- (j) Provide evidence that the transfer station will be in compliance with the design standards set forth in [NAC 444.6664](#).

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98)

NAC 444.6663 Transfer stations: Requirements for operating plan. ([NRS 444.560](#))

The operating plan of the transfer station required pursuant to [NAC 444.6661](#) must include, without limitation:

1. Provisions for the control of access to the transfer station;
2. The number of attendants who will be at the transfer station during operating hours;
3. A list of the equipment and machinery that will be used at the transfer station;
4. Procedures for controlling vehicular traffic;
5. The types of wastes that the transfer station will not receive and a list of the facilities where such waste will be directed;
6. A program for detecting and preventing the disposal of regulated hazardous waste and polychlorinated biphenyl wastes;
7. Procedures for measuring or weighing incoming solid waste;
8. The proposed capacity and expected life of the transfer station;
9. The frequency and method of transfer of solid waste to a disposal site;
10. The maximum time that solid waste will be stored at the transfer station;
11. The location of waste storage areas at the transfer station;
12. The proposed operating hours;
13. A contingency plan that describes procedures for emergencies and alternate solid waste handling systems;
14. A plan approved by the local fire authority for the prevention and control of fires;
15. A plan for the management of special wastes that are proposed for acceptance at the facility; and
16. A description of how the transfer station will comply with the operating standards set forth in [NAC 444.66645](#).

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98)

NAC 444.6664 Transfer stations: Construction. ([NRS 444.560](#))

1. A transfer station must be constructed with:
 - (a) Any barriers and appurtenances necessary to control access to the station;
 - (b) An all-weather access road;
 - (c) Appurtenances to control litter; and
 - (d) Areas for processing, tipping, sorting and storing that:
 - (1) Are located within a covered enclosure with at least three sides; and
 - (2) Have a floor with a hard surface such as concrete or asphalt pavement and a drainage structure for the recovery of liquids.
2. The transfer station must be constructed to comply with the requirements regarding signs set forth in [NAC 444.690](#).

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98)

NAC 444.66645 Transfer stations: Handling and salvage of solid waste; maintenance of records; handling of asbestos; removal of remaining waste at final closure. ([NRS 444.560](#))

1. Any solid waste accepted at a transfer station must be:
 - (a) Transferred to a disposal site that has been issued a permit by the solid waste management authority; or
 - (b) Salvaged for reuse or recycling and thereafter promptly removed from the transfer station.
 2. A transfer station must be kept in a neat and orderly condition. All residual wastes or other residual material must be promptly removed from the transfer station.
 3. Any area that is used for tipping, handling or storing solid waste must be free of standing water. The drainage from the floor of such an area must be discharged into a sewer or its equivalent.
 4. A person shall not salvage solid waste from a transfer station unless he or she:
 - (a) Is authorized by the solid waste management authority;
 - (b) Is supervised by the operator of the station;
 - (c) Stores the salvaged material in clearly identified containers or areas; and
 - (d) Maintains the salvaged material in a safe, sanitary and orderly manner.
 5. The operator of the transfer station shall maintain accurate records of the operations of the station. The records must be furnished upon request to the solid waste management authority or be made available for inspection by the solid waste management authority at any reasonable time. The records must include, without limitation:
 - (a) A daily log of the quantity of solid waste received and transported;
 - (b) Instances in which the station rejected a waste load; and
 - (c) Any emergencies or unusual events.
 6. Solid waste must be removed from a transfer station not more than 72 hours after acceptance unless the owner or operator is prevented from doing so because of an emergency such as a fire or flood. The owner or operator shall notify the solid waste management authority not more than 24 hours after an emergency that results in the storage of solid waste for more than 72 hours.
 7. The acceptance, handling and transportation of asbestos waste must be conducted pursuant to [NAC 444.965](#) to [444.980](#), inclusive.
 8. At the final closure of a transfer station, any remaining wastes must be removed to a disposal site that has been issued a permit by the solid waste management authority.
- (Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98)

NAC 444.66647 Public waste storage bin facility: Notification of establishment; general requirements; final closure. ([NRS 444.560](#))

1. The owner of a public waste storage bin facility shall notify the solid waste management authority in writing not more than 30 days after establishing the facility. The notification must include, without limitation:
 - (a) The location of the facility;
 - (b) The owner of the facility;
 - (c) The name and phone number of the authorized agent of the owner;
 - (d) The capacity of the facility in cubic yards;

- (e) The types of solid waste the facility receives; and
- (f) The population and area to be served by the facility.

2. Waste storage bins may have a combined capacity of not more than 160 cubic yards and must be constructed of durable, watertight materials with a lid or screen on top that prevents the loss of materials during transport. Storage of solid waste outside of the waste storage bins is prohibited unless approved by the solid waste management authority.

3. Except as otherwise provided in this subsection, if garbage and similar putrescible waste is stored in combination with nonputrescible waste, the wastes must not be stored at the facility for more than 1 week. The solid waste management authority may approve the storage of such waste for more than 1 week before collection in a remote community if the municipality in whose jurisdiction the storage occurs demonstrates that an alternative minimum collection frequency will not result in increased litter or odors, the harboring of vectors, the storage of excess waste outside of containers, or any other health hazard, public nuisance or impairment to the environment. The solid waste management authority may revoke its approval of an alternative minimum collection frequency.

4. The owner of a public waste storage bin facility shall:

- (a) Provide access to the facility by an all-weather road;
- (b) Construct the facility in a manner that allows the public to deposit waste materials conveniently and safely in the public waste storage bin;
- (c) Service the facility as often as is necessary to ensure that there is adequate storage capacity at all times;
- (d) Provide for the inspection of the site at least weekly and collect all scattered papers and other lightweight debris;
- (e) Use fences and other appurtenances to prevent the scattering of papers and other lightweight debris; and
- (f) Comply with the requirements regarding signs set forth in [NAC 444.690](#).

5. At final closure, the owner or operator shall remove any remaining wastes to a proper facility and shall remove all waste storage bins.

(Added to NAC by Environmental Comm'n by R034-98, eff. 4-17-98; A by R105-02, 10-18-2002)

NAC 444.6665 Operating criteria: Program for detecting and preventing disposal of regulated hazardous waste and PCB wastes. ([NRS 444.560](#))

1. The owner or operator shall carry out a program at the municipal solid waste landfill unit for detecting and preventing the disposal of regulated hazardous waste and PCB wastes. The program must include, but is not limited to:

- (a) Random inspections of incoming loads;
- (b) Records of inspections;
- (c) Training persons employed at the unit to recognize regulated hazardous waste and PCB wastes;
- (d) Procedures for handling hazardous waste or PCB wastes found at the site; and
- (e) Notification of the solid waste management authority if hazardous waste or PCB wastes are discovered at the unit.

2. As used in this section:

- (a) "Hazardous waste" includes those wastes described by 40 C.F.R. Part 261.3 which are not excluded by 40 C.F.R. Part 261.4(b) or generated by a conditionally exempt small quantity

generator in accordance with 40 C.F.R. Part 261.5, as those sections existed on November 8, 1993.

(b) "PCB" has the meaning ascribed to it in 40 C.F.R. Part 761.3, as that section existed on November 8, 1993.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.667 Operating criteria: Control of explosive gas. ([NRS 444.560](#))

1. An owner or operator shall provide for the control of explosive gas at the municipal solid waste landfill unit in accordance with the provisions of this section.

2. The owner or operator shall ensure that:

(a) The concentration of methane gas generated at the unit does not exceed 25 percent of the lower explosive limit for methane in structures, excluding components for any system to control or recover the gas; and

(b) The concentration of methane gas does not exceed the lower explosive limit for methane at the boundary of the unit.

3. The owner or operator shall carry out a routine program for monitoring methane gas to ensure that the standards set forth in subsection 2 are met. Except as otherwise provided in subsection 4, the level of methane must be monitored at least quarterly each year. The type and frequency of monitoring must be determined based on the:

(a) Conditions of the soil;

(b) Hydrogeologic conditions surrounding the unit;

(c) Hydraulic conditions surrounding the unit; and

(d) Location of the structures and boundaries of the unit.

4. The solid waste management authority may, after public review and comment, allow the owner or operator of a Class II site to monitor the level of methane gas less frequently than one time each quarter. In deciding whether to allow such a deviation, the solid waste management authority shall consider:

(a) The unique characteristics of small communities;

(b) Climatic and hydrogeologic conditions; and

(c) Whether allowing the deviation would have an adverse effect on human health or the environment.

5. If the owner or operator detects levels of methane gas exceeding the limits specified in paragraph (a) of subsection 2, he or she shall:

(a) Immediately take all necessary actions to ensure protection of public health and safety and notify the solid waste management authority;

(b) Except as otherwise provided in subsection 6, within 7 days after detection, place in the operating records for the unit the levels of methane gas detected and a description of the actions taken to protect public health and safety; and

(c) Except as otherwise provided in subsection 6, within 60 days after detection, carry out a plan for remediation for the releases of methane gas, place a copy of the plan in the operating records and notify the solid waste management authority that the plan has been carried out. The plan must describe the nature and extent of the problem and the proposed remedy.

6. The solid waste management authority may establish alternative schedules for demonstrating compliance with paragraphs (b) and (c) of subsection 5.

7. As used in this section, "lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25°C and at atmospheric pressure.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; R034-98, 4-17-98)

NAC 444.6675 Operating criteria: Compliance with state implementation plan; open burning of certain solid wastes prohibited. ([NRS 444.560](#))

1. An owner or operator shall ensure that the municipal solid waste landfill unit does not violate any applicable requirements developed by the state implementation plan, if any, approved or adopted by the Administrator of the Environmental Protection Agency pursuant to section 110 of the federal Clean Air Act, as amended, 42 U.S.C. § 7410, as that section existed on November 8, 1993, and [NRS 445B.100](#) to [445B.640](#), inclusive, and the regulations adopted pursuant thereto.

2. Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, debris from land clearing, diseased trees or debris from emergency clean-up operations, is prohibited at all municipal solid waste landfill units.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6678 Operating criteria: Vector control. ([NRS 444.560](#)) An owner or operator shall prevent or control populations of disease vectors at the municipal solid waste landfill unit using techniques appropriate for the protection of public health and safety and the environment. Other than daily cover, appropriate techniques must be instituted whenever required by the solid waste management authority to minimize the transmission of disease.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.668 System to process waste: Hazards, nuisances and impairment of environment prohibited. ([NRS 444.560](#)) No solid waste processing system may be allowed to cause health hazards, public nuisances or otherwise cause or contribute to the impairment of the environment.

[Environmental Comm'n, Solid Waste Mgt Reg. § 4.1, eff. 9-21-77]

NAC 444.670 System to process waste: Compost plant. ([NRS 444.560](#))

1. A compost plant must not be established until the site location, design of the plant and proposed method of operation have been approved by the solid waste management authority and a permit to operate the compost plant has been issued in accordance with the requirements of [NAC 444.6405](#) to [444.6435](#), inclusive. An application for such a permit must include:

(a) A description of the materials to be composted, including a characterization of the waste sufficient to evaluate the potential for biological or chemical contaminant migration in the event of a release;

(b) A layout diagram of the plant showing property boundaries, fencing, roads, principal processing equipment, storage areas for stockpiles of incoming materials and intermediate and final products;

(c) A description of the equipment and personnel necessary to operate the plant;

(d) A description of the process, with a schematic diagram, that shows loading and unloading areas and traffic flow routing;

(e) The maximum inventory, by volume, of feed stocks, intermediate materials and products;

(f) Proposed product specifications and a program to verify conformance with the specifications;

(g) A program for monitoring the parameters of the process, including moisture content and temperature;

(h) A description of the final use for the compost or the available markets for the compost;

(i) Provisions for fire prevention and control;

(j) Provisions for odor prevention and control;

(k) Provisions for the control of surface water runoff and runoff;

(l) Provisions for litter prevention and control;

(m) Contingency plans to be followed in the event of emergencies and unforeseen circumstances that may occur at the facility. The plans must provide, at a minimum, for an organized and coordinated course of action to be taken and address the following situations:

(1) A fire at the facility;

(2) A release of hazardous or toxic materials; and

(3) The shutdown of the facility for any reason; and

(n) Provisions for proper disposal of by-products.

2. Any person or municipality which maintains or operates a compost plant shall maintain and operate the site in conformance with the following standards:

(a) If the compost plant accepts municipal solid waste and is not fully contained within a building, a buffer zone must be maintained of at least 500 feet from the adjoining property and 1,000 feet from any public roads.

(b) Incoming solid waste must be confined to as small an area as practicable. At the conclusion of each day of operation, all windblown material resulting from the operation must be collected and returned to the area.

(c) Materials resulting from composting and offered for sale:

(1) Must meet the requirements relating to the maximum allowable density of fecal coliform or *Salmonella* sp. bacteria for Class A sewage sludge set forth in 40 C.F.R. § 503.32(a);

(2) Must not reheat upon standing;

(3) Must be innocuous; and

(4) Must contain no sharp particles which could cause injury to persons handling the compost.

(d) By-products removed during the processing must be handled in a sanitary and nuisance-free manner and disposed of at a facility approved by the solid waste management authority.

3. A compost plant shall comply with the plans for the design and operation of the facility approved by the solid waste management authority. A compost plant shall not:

(a) Contribute to the pollution of the air or waters of this State;

(b) Cause an impairment of the environment;

(c) Cause a health or safety hazard to employees of the facility or the general public; or

(d) Cause a public nuisance.

4. The solid waste management authority may suspend or revoke a permit to operate a compost plant if the owner or operator of the facility fails to comply with the provisions of [NAC 444.570](#) to [444.7499](#), inclusive.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 4.2.1-4.2.2.4, eff. 9-21-77]—(NAC A by R105-02, 10-18-2002)

NAC 444.672 System to process waste: Incineration. ([NRS 444.560](#))

1. An incinerator plant must not be established until the site location, facilities and the proposed method of operation have been approved by the solid waste management authority.

2. All incineration equipment and air pollution control appurtenances thereto must comply with the requirements of [NAC 445B.001](#) to [445B.3689](#), inclusive, and any local regulations governing the construction and operation of incinerators.

3. Incinerators used for the burning of pathological waste, garbage or material of high moisture content must be high temperature types with either grate or solid hearth construction, drying shelves for wet wastes and an auxiliary heating unit to ensure temperatures of 1,400 degrees Fahrenheit for not less than 0.3 second.

4. Any person or municipality which maintains or operates an incinerator must maintain and operate the site in conformance with the following standards:

(a) Adequate storage must be provided for incoming solid wastes and for incinerator residue to assure a nuisance-free operation. Storage facilities must conform to the requirements of [NAC 444.660](#) to [444.666](#), inclusive.

(b) Incinerator residue must be disposed of at an approved land disposal site or in accordance with provisions of an operational plan as approved by the solid waste management authority.

(c) Provisions must be made for emergency disposal of all solid wastes handled by the plant in the event of plant breakdown.

(d) Salvaging, if permitted, must be controlled so as not to interfere with optimum operation or create unsightly conditions or vector harborage.

(e) All quench water, washdown water, dust spray or surface water carrying organic matter must be discharged into a sanitary sewer or otherwise disposed of as provided in an operational plan as approved by the solid waste management authority.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 4.3.1-4.3.4.5, eff. 9-21-77]

NAC 444.674 System to process waste: Salvage yard. ([NRS 444.560](#))

1. A salvage yard must not be established until the location, facilities and proposed method of operation have been approved by the solid waste management authority.

2. Salvage in a salvage yard must be stored in an orderly manner so as to prevent harboring rodents, any public nuisance and accidents.

3. All nonsalvageable material must be stored and disposed of according to [NAC 444.570](#) to [444.7499](#), inclusive. In no case may nonsalvageable items be stored for more than 1 week.

4. No garbage or similar putrescible material may be present at a salvage yard, except in approved containers for such materials.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 4.4.1-4.4.4, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; 3-1-94)

NAC 444.676 System to process waste: Other methods. ([NRS 444.560](#)) Before any method of solid waste processing, not otherwise provided for in these regulations, is placed into operation, complete plans, specifications and design data must meet the approval of the solid waste management authority.

[Environmental Comm'n, Solid Waste Mgt Reg. § 4.5, eff. 9-21-77]

NAC 444.6765 Closure of existing municipal solid waste landfill unit for failure to prove compliance with certain provisions. ([NRS 444.560](#))

1. Except as otherwise provided in this section, an existing municipal solid waste landfill unit which does not file the proof required by [NAC 444.6783](#), [444.6785](#) and [444.6795](#) must close

by October 9, 1996, in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#), and must conduct postclosure activities in accordance with [NAC 444.6894](#).

2. The deadline for closure required by this section may be extended for not more than 2 years if the owner or operator demonstrates to the solid waste management authority that there is:

- (a) No available alternative for the disposal of waste; and
- (b) No immediate threat to public health and safety and the environment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

Class I Sites

NAC 444.6769 Minimum requirements. ([NRS 444.560](#)) A Class I site must comply with the minimum requirements set forth in [NAC 444.6405](#) to [444.6435](#), inclusive, [444.645](#), [444.6665](#) to [444.6678](#), inclusive, [444.6765](#) to [444.7025](#), inclusive, and [444.7481](#) to [444.7499](#), inclusive. A Class I site which fails to comply with these minimum requirements shall be deemed to be an open dump for the purposes of solid waste planning and is prohibited.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.677 Application for permit to operate Class I site or lateral expansion thereof. ([NRS 444.553](#), [444.556](#), [444.560](#)) An application for a permit to operate a Class I site or a lateral expansion of a Class I site must be submitted to the solid waste management authority and must include:

1. The name, location and mailing address of the:
 - (a) Site;
 - (b) Owner of the site;
 - (c) Operator of the site; and
 - (d) Authorized agent of the owner.
2. Proof of ownership of the land on which the site will be located.
3. The report of the design of the site required by [NAC 444.680](#).
4. The plan for monitoring water required by [NAC 444.683](#).
5. The plan for operating the site required by [NAC 444.684](#).
6. A plan for closure required by [NAC 444.6895](#).
7. A plan for postclosure required by [NAC 444.6896](#).
8. A copy of the financial assurance required by [NAC 444.685](#).
9. Any additional information which the solid waste management authority may require.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.678 Location restrictions: Generally. ([NRS 444.560](#)) The location of a Class I site must:

1. Be easily accessible in all kinds of weather to all vehicles expected to use it.
2. Prevent pollutants and contaminants from the municipal solid waste landfill units at the site from degrading the waters of the State.
3. Prevent uncontrolled migration of gas at the site.
4. Have an adequate quantity of earth cover that is workable and compactible and does not contain organic material of a quantity and distribution conducive to harboring and breeding disease vectors.

5. Conform with land use planning of the area.
6. Not be within one-fourth mile of the nearest inhabited dwelling or place of public gathering or be within 1,000 feet of a public highway, unless special provisions for the beautification of the site and the control of litter and vectors are included in the design and approved by the solid waste management authority.
7. Meet with the approval of the solid waste management authority.
8. Comply with the requirements set forth in [NAC 444.6765](#) and [444.6783](#) to [444.6795](#), inclusive.
9. Unless approved by the solid waste management authority, not be within 1,000 feet of any surface water or 100 feet of the uppermost aquifer if the site is approved after September 2, 1992.
[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1-5.1.1.7, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; 3-1-94)

NAC 444.6783 Location restrictions: Airport safety. ([NRS 444.560](#))

1. A Class I site must meet the following safety requirements relating to airports:
 - (a) An owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which is located:
 - (1) Within 10,000 feet of the end of any airport runway used by a turbojet aircraft; or
 - (2) Within 5,000 feet of the end of any airport runway used only by piston-type aircraft,↪ shall maintain proof that the unit or lateral expansion is designed and operated so that it does not pose a hazard to aircraft.
 - (b) The owner or operator shall place the proof in the operating record of the municipal solid waste landfill unit and notify the solid waste management authority that the proof has been placed in the operating records.
 - (c) The owner or operator who proposes to locate a new municipal solid waste landfill unit or lateral expansion within a 5-mile radius of the end of any airport runway used by a turbojet or piston-type aircraft shall notify the affected airport and the Federal Aviation Administration.
2. As used in this section:
 - (a) "Airport" means any public airport.
 - (b) "Hazard to aircraft" means an increase in the likelihood of a collision between a bird and an aircraft that may cause damage to the aircraft or injury to its occupants.
(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 10-3-96)

NAC 444.6785 Location restrictions: Floodplains. ([NRS 444.560](#))

1. The owner or operator of a new or existing municipal solid waste landfill unit or lateral expansion located in a 100-year floodplain shall maintain proof that the unit or lateral expansion will not:
 - (a) Restrict the flow of the floodplain;
 - (b) Reduce the temporary capacity of the floodplain to store water; and
 - (c) Result in the washout of solid waste that poses a hazard to public health and safety and the environment.
2. The owner or operator shall place the proof in the operating records of the municipal solid waste landfill unit and notify the solid waste management authority that the proof has been placed within the operating records.

3. As used in this section, “100-year floodplain” means the lowland and the relatively flat lands adjoining the waters that are inundated by a 100-year flood.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.679 Location restrictions: Wetlands. ([NRS 444.560](#))

1. A new municipal solid waste landfill unit or a lateral expansion may not be located in wetlands unless the owner or operator satisfactorily demonstrates to the solid waste management authority and the Administrator that:

(a) The presumption, if applicable pursuant to section 404 of the federal Clean Water Act of 1977, 33 U.S.C. § 1344, as that section existed on November 8, 1993, that a practicable alternative to the proposed unit or lateral expansion is available which does not involve wetland is clearly rebutted.

(b) The construction and operation of the municipal solid waste landfill unit or lateral expansion will not:

(1) Cause or contribute to violations of any applicable state water quality standard set forth in [NAC 445A.450](#) to [445A.492](#), inclusive;

(2) Violate any applicable toxic effluent standard or prohibition set forth in section 307 of the federal Clean Water Act of 1977, 33 U.S.C. § 1317, as that section existed on November 8, 1993;

(3) Jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of a critical habitat, protected by the federal Endangered Species Act of 1973, 16 U.S.C. §§ 1531 et seq., as that act existed on November 8, 1993; and

(4) Violate any requirement set forth in the Marine Protection, Research and Sanctuaries Act of 1972, 33 U.S.C. §§ 1401 et seq., for the protection of a marine sanctuary, as that act existed on November 8, 1993.

(c) The site will not cause or contribute to any significant degradation of the wetlands. The owner or operator shall demonstrate the integrity of the municipal solid waste landfill unit or lateral expansion and its ability to protect ecological resources by showing:

(1) The potential erosion, stability and migration of the soils, muds and deposits of the wetlands that are used to support the site;

(2) The potential erosion, stability and migration of dredged and fill materials used to support the site;

(3) The volume and chemical composition of the waste managed at the site;

(4) The potential impact on fish, wildlife and other aquatic resources and their habitat;

(5) The potential effects of a catastrophic release of waste to the wetlands and the resulting impacts on the environment; and

(6) Any additional factors required by the solid waste management authority to show that the ecological resources in the wetlands are protected.

(d) To the extent required by section 404 of the Clean Water Act, 33 U.S.C. § 1344, as that section existed on November 8, 1993, or any applicable state laws, actions have been taken to attempt to achieve no net loss of wetlands, as defined by acreage and function, by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a), then minimizing the unavoidable impacts to the maximum extent practicable, and then offsetting the remaining unavoidable impacts on the wetlands through all appropriate and practicable mitigation actions such as restoration of existing degraded wetlands or the creation of an artificially created wetland.

(e) Sufficient information is available to make a reasonable determination with respect to these demonstrations.

2. As used in this section, “wetlands” means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils, including swamps, marshes, bogs and other similar areas.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.6791 Location restrictions: Fault areas. ([NRS 444.560](#))

1. A new municipal solid waste landfill unit or lateral expansion must not be located within 200 feet of a fault that has had a displacement in Holocene time unless the owner or operator demonstrates to the solid waste management authority that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the unit and will protect public health and safety and the environment.

2. As used in this section:

(a) “Displacement” means the relative movement of any two sides of a fault measured in any direction.

(b) “Fault” means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(c) “Holocene” means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

(Added to NAC by Environmental Comm’n, eff. 11-8-93)

NAC 444.6793 Location restrictions: Seismic impact zones. ([NRS 444.560](#))

1. A new municipal solid waste landfill unit or lateral expansion may not be located in a seismic impact zone, unless the owner or operator submits proof to the solid waste management authority that all structures for containment, including liners, systems for the collection of leachate and systems for the control of surface water, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator shall place the proof in the operating records for the site and notify the solid waste management authority that the proof has been placed in the operating records.

2. As used in this section:

(a) “Lithified earth material” means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock which formed by the crystallization of magma or by the induration of loose sediments. The term does not include artificially created materials, such as fill, concrete and asphalt, or unconsolidated earth materials, soils or regolith lying at or near the surface of the earth.

(b) “Maximum horizontal acceleration” means the maximum expected horizontal acceleration depicted on a seismic hazard map with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a seismic risk assessment for the specific site.

(c) “Seismic impact zone” means an area with a 10 percent or greater probability that the maximum horizontal acceleration in lithified earth material will exceed 10 percent of the earth’s gravitational pull in 250 years, as determined by referencing the United States Geological Survey, Open File Report 82-1033, “Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States.”

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94)

NAC 444.6795 Location restrictions: Unstable areas. ([NRS 444.560](#))

1. The owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion located in an unstable area shall maintain proof that engineering measures have been incorporated into the structural design of the unit or lateral expansion to ensure that the integrity of the unit or lateral expansion will not be disrupted. The owner or operator shall place the proof in the design report and the operating records of the unit and notify the solid waste management authority that the proof has been placed in the operating records.

2. To determine if an area is unstable, the owner or operator shall consider:

(a) Conditions of the soil on or near the site which may result in a significant differential settling;

(b) Geologic or geomorphic features on or near the site; and

(c) Artificially created features or events which are on the surface or subsurface.

3. As used in this section:

(a) "Areas susceptible to mass movement" means those areas where the movement of earth material at, beneath or adjacent to the unit, because of natural or artificially created features, results in the downslope movement of soil and rock by means of gravitational influence. The term includes, but is not limited to, areas with landslides, avalanches, debris, slides and flows, block slidings and rock falls.

(b) "Karst terranes" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of the dissolution of limestone, dolomite or soluble rock. The term includes, but is not limited to, areas with sinkholes, sinking streams, caves, large springs and blind valleys.

(c) "Poor foundation conditions" means those areas with features which indicate that a natural or human-caused event may result in an inadequate foundation for the structural components of a municipal solid waste landfill unit or lateral expansion.

(d) "Structural components" means liners, systems for leachate collection, final cover, systems for runoff or runoff and any other component used in the construction and operation of a municipal solid waste landfill unit which is necessary for the protection of public health and safety and the environment.

(e) "Unstable area" means a location which is susceptible to natural or artificially created features that are capable of impairing the integrity of some or all of the structural components of a municipal solid waste landfill unit that will prevent the release of the solid waste, or any by-product thereof, from that landfill. The term includes poor foundation conditions, areas susceptible to mass movements and karst terranes.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.680 Report of design. ([NRS 444.560](#)) The report of the design of a Class I site must:

1. Be signed by a professional engineer registered in this State.

2. Include a general location map showing land use and zoning within 1 mile of the disposal site.

3. Include plans and specifications of the facility which are of sufficient detail to show compliance with the applicable design standards and provide a clear understanding of the development of the site. The plan must:

- (a) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet.
 - (b) Show the topography of the site before the development.
 - (c) Show the proposed limits of excavation and fill areas, including:
 - (1) The final elevations and grades of each municipal solid waste landfill unit on the site;
 - (2) The system for final cover;
 - (3) The location and placement of each system of liners; and
 - (4) Each system for the collection and removal of leachate showing all critical grades and elevations of the inverts and drainage envelopes for the collection pipes, manholes, cleanouts, valves and sumps and showing the thicknesses of the drainage blankets.
 - (d) Show any proposed soil borrow areas.
 - (e) Show the sequence of development for the facility including an outline of fill areas, the sequence of filling operations and the locations of access roads.
 - (f) Show access roads, including dimensions, slopes, profiles and the types of pavement to be used.
 - (g) Show a typical cross section of the landfill.
 - (h) Show grades, berms, dikes, swales and other devices for proper drainage and control of surface water, runoff and runoff for the site.
 - (i) Show the devices for monitoring and controlling the gases at the site.
 - (j) Show fencing, equipment shelter, employee facilities and all other features for the development of the site.
4. Define the population and area to be served by the site.
 5. Define the anticipated types, quantities and sources of solid wastes to be disposed of at the site.
 6. Define the source, type and quantity of cover material.
 7. Include proof of compliance with the requirements relating to the control of surface water set forth in [NAC 444.6885](#) and [444.6887](#).
 8. Contain documentation that the disposal site is in compliance with [NAC 444.681](#), including:
 - (a) Appropriate charts and graphs;
 - (b) Soil borings, test pit logs and other relevant geologic information;
 - (c) Engineering calculations; and
 - (d) Other supporting data, including literature citations.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.2.1-5.1.2.3.8, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.681 Design criteria. ([NRS 444.560](#))

1. A new municipal solid waste landfill unit or lateral expansion must be constructed:
 - (a) In accordance with a design approved by the solid waste management authority that is sufficient to protect the waters of the State from degradation by pollutants or contaminants; or
 - (b) With a composite liner and a system for the collection of leachate which is designed and constructed to maintain less than a 30-centimeter depth of leachate over the liner. The composite liner must have an upper component consisting of a flexible membrane liner of at least 30 mils and a lower component consisting of a layer of compacted soil that is at least 2 feet with a hydraulic conductivity of no more than 10^{-7} centimeters per second. Components of the flexible

membrane liner consisting of high density polyethylene must be at least 60 mils. The flexible membrane liner must be installed in direct and uniform contact with the compacted soil.

2. To approve the design of a new municipal solid waste landfill unit or lateral expansion, the solid waste management authority shall consider:

- (a) The hydrogeologic characteristics of the facility and surrounding land;
- (b) The climate of the area;
- (c) The volume and physical and chemical characteristics of the anticipated leachate; and
- (d) Any other relevant factors.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.683 Plan for monitoring water; suspension of monitoring requirements.

[\(NRS 444.560\)](#)

1. The plan for monitoring water for a Class I site must provide a complete description of a system capable of monitoring the performance of the design of the site, including monitoring of the groundwater to detect the release of pollutants or contaminants from the municipal solid waste landfill unit into the waters of the State.

2. The plan must:

- (a) Identify the location and construction of monitoring points;
- (b) Specify monitoring parameters and the frequency of monitoring those parameters;
- (c) Specify procedures for quality assurance for all field and laboratory work;
- (d) Provide for the semiannual submittal of monitoring data to the solid waste management authority;

(e) Establish procedures which must be used if monitoring provides evidence of leachate migration; and

(f) Comply with [NAC 444.7481](#) to [444.7499](#), inclusive.

3. The solid waste management authority may suspend monitoring requirements if the owner or operator of a Class I site demonstrates that there is no potential for migration of pollutants or contaminants from the site to waters of the State during the active life of the site, including the period for closure and postclosure. The demonstration must be:

(a) Certified by a qualified groundwater scientist and approved by the solid waste management authority; and

(b) Based on:

(1) Measurements collected at a specific field site, sampling and an analysis of physical, chemical and biological processes affecting the fate and transportation of pollutants or contaminants; and

(2) Predictions of the fate and transportation of the pollutants or contaminants that consider the maximum rate of the migration of contaminants and the impact of the pollutants or contaminants on public health and safety and the environment.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.6835 Schedule for compliance with monitoring requirements. [\(NRS 444.560\)](#)

Except as otherwise provided in [NAC 444.7482](#), the owner or operator of a municipal solid waste landfill unit in a Class I site shall comply with the requirements for monitoring groundwater according to the following schedule:

1. An existing municipal solid waste landfill unit and lateral expansion that is less than 1 mile from a surface or subsurface intake for drinking water must comply with [NAC 444.7483](#) to [444.7492](#), inclusive, by October 9, 1994.
2. An existing municipal solid waste landfill unit and lateral expansion that is at least 1 mile but less than 2 miles from a surface or subsurface intake for drinking water must comply with [NAC 444.7483](#) to [444.7492](#), inclusive, by October 9, 1995.
3. An existing municipal solid waste landfill unit and lateral expansion that is at least 2 miles from a surface or subsurface intake for drinking water must comply with [NAC 444.7483](#) to [444.7492](#), inclusive, by October 9, 1996.
4. A new municipal solid waste landfill unit must comply with [NAC 444.7483](#) to [444.7492](#), inclusive, before waste may be placed in the unit.
(Added to NAC by Environmental Comm'n, eff. 11-9-95)

NAC 444.684 Plan for operating. ([NRS 444.560](#)) The plan for operating a Class I site must:

1. Include a description of the equipment and persons necessary to operate the site;
2. Provide for:
 - (a) Adequate fire control methods to extinguish and prevent the spread of accidental fires;
 - (b) The prevention of scattering of papers and other lightweight debris by portable litter fences or other suitable devices; and
 - (c) The disposal of any special wastes specifically permitted by the solid waste management authority;
3. Show how the site will comply with the requirements set forth in [NAC 444.6665](#) to [444.6678](#), inclusive, and [444.686](#) to [444.7025](#), inclusive; and
4. Include a plan of action to be taken in the event of an emergency which might occur at the site. The plan must include, without limitation, an organized, coordinated and technically and financially feasible course of action to be taken:
 - (a) If a fire occurs at the site, including identifying the nearest fire department and how and under what circumstances the fire department will be notified.
 - (b) To protect the safety of personnel and users of the site, including training for employees on first aid and the availability of emergency services. The site must have a telephone, radio or other similar communication device to enable the personnel to contact the appropriate providers of emergency services.
 - (c) To shut down the site because of inclement weather or an act of God.
 - (d) If equipment breaks down, including the provision for and a description of backup equipment.
 - (e) If hazardous or toxic materials are released from the site.
 - (f) If the presence of leachate is detected in a structure for the collection of leachate which was previously dry, or if a spill or leak occurs at a tank or surface impoundment for the storage of leachate.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.2.5-5.1.2.10, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; 11-9-95)

NAC 444.685 Financial assurance: Compliance mandatory; exemptions; waiver. ([NRS 444.560](#))

1. Except as otherwise provided in this section, the owner or operator of a Class I site or lateral expansion of a Class I site shall comply with the provisions of [NAC 444.6851](#) to [444.6859](#), inclusive.

2. Owners or operators of Class I sites:

(a) Who are entities of the State of Nevada or the Federal Government; and

(b) Whose debts and liabilities are the debts and liabilities of the State of Nevada or the Federal Government,

↪ are exempt from the provisions of this section.

3. The solid waste management authority may approve an alternate plan for financial assurance if the alternate plan meets the criteria set forth in [NAC 444.6859](#).

4. The solid waste management authority may waive compliance with the provisions of [NAC 444.6851](#) to [444.6859](#), inclusive, for a period not to extend beyond April 9, 1998, if an owner or operator demonstrates that:

(a) The date for compliance set forth in [NAC 444.6851](#) to [444.6859](#), inclusive, does not provide the owner or operator with sufficient time to comply with the provisions of those sections; and

(b) A waiver will not adversely affect human health and the environment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; 10-29-97)

NAC 444.6851 Financial assurance: Estimate for cost of plan for closure; adjustments to estimate. ([NRS 444.560](#))

1. The owner or operator shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to close the largest area of all municipal solid waste landfill units within the site requiring a final cover as required by [NAC 444.6891](#) at any time during the active life of the unit, in accordance with the plan for closure. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the disposal site.

2. The estimate must equal the cost of closing the largest area of all municipal solid waste landfill units within the site requiring a final cover at any time during the active life of the unit when the extent and manner of its operation would make closure the most expensive, as indicated by the plan for closure.

3. During the active life of the municipal solid waste landfill unit, the owner or operator shall annually adjust the estimate for inflation.

4. The owner or operator shall increase the estimate and amount of financial assurance if changes to the plan for closure or conditions at the municipal solid waste landfill unit increase the maximum cost of closure at any time during the remaining active life of the unit.

5. The owner or operator may reduce the estimate and amount of financial assurance if the estimate exceeds the maximum cost of closure at any time during the remaining life of the municipal solid waste landfill unit. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the site.

6. The owner or operator of each municipal solid waste landfill unit shall establish financial assurance for closure of the municipal solid waste landfill unit in compliance with [NAC 444.68525](#) to [444.6859](#), inclusive. The owner or operator shall provide continuous coverage for closure until released by the solid waste management authority from the requirements for financial assurance by demonstrating compliance with [NAC 444.6893](#).

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95)

NAC 444.68515 Financial assurance: Estimate for cost of program for postclosure; adjustments to estimate. ([NRS 444.560](#))

1. The owner or operator shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to conduct a program for postclosure for each of the municipal solid waste landfill units within the site in compliance with the plan for postclosure developed pursuant to [NAC 444.6894](#). The estimate for postclosure used to demonstrate financial assurance pursuant to subsection 6 must account for the total costs of conducting the program for postclosure, including annual and periodic costs as described in the plan for postclosure over the entire period for postclosure. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the unit.

2. The estimate for postclosure must be based on the most expensive costs of postclosure during the period for postclosure.

3. During the active life of the municipal solid waste landfill unit and the period for postclosure, the owner or operator shall annually adjust the estimate for postclosure for inflation.

4. The owner or operator shall increase the estimate for postclosure and amount of financial assurance if changes in the plan for postclosure or the conditions of the municipal solid waste landfill unit increase the maximum costs of postclosure.

5. The owner or operator may reduce the estimate for postclosure and amount of financial assurance if the estimate exceeds the maximum costs of postclosure remaining over the period for postclosure. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the unit.

6. The owner or operator of each municipal solid waste landfill unit shall establish, in accordance with [NAC 444.68525](#) to [444.6859](#), inclusive, financial assurance for the costs of postclosure as required by [NAC 444.6894](#). The owner or operator shall provide continuous coverage for postclosure until released by the solid waste management authority from the requirements of financial assurance for postclosure by demonstrating compliance with subsection 3 of [NAC 444.6894](#).

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95)

NAC 444.6852 Financial assurance: Estimate for cost of plan for corrective action; adjustments to estimate. ([NRS 444.560](#))

1. An owner or operator of a municipal solid waste landfill unit required to undertake a plan for corrective action pursuant to [NAC 444.7497](#), [444.7498](#) and [444.7499](#), shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to perform the corrective action in accordance with that plan. The estimate of the corrective action must account for the total cost of activities for corrective action as described in the plan for corrective action for the period of the plan. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the unit.

2. The owner or operator shall annually adjust the estimate for inflation until the plan for corrective action is completed in accordance with [NAC 444.7497](#), [444.7498](#) and [444.7499](#).

3. The owner or operator shall increase the estimate for corrective action and amount of financial assurance if changes in the plan for corrective action or conditions at the municipal solid waste landfill unit increase the maximum costs of the corrective action.

4. The owner or operator may reduce the amount of the estimate for corrective action and amount of financial assurance if the estimate exceeds the maximum remaining costs of the corrective action. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the unit.

5. The owner or operator of each municipal solid waste landfill unit required to undertake a plan for corrective action pursuant to [NAC 444.7497](#), [444.7498](#) and [444.7499](#), shall establish, in accordance with [NAC 444.68525](#) to [444.6859](#), inclusive, financial assurance for the most recent plan for corrective action. The owner or operator shall provide continuous coverage for corrective action until released by the solid waste management authority from the requirements of financial assurance for corrective action by demonstrating compliance with [NAC 444.7499](#).

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.68525 Financial assurance: Allowable mechanisms. ([NRS 444.560](#)) The mechanisms used to demonstrate financial assurance pursuant to [NAC 444.685](#) must ensure that the money necessary to meet the cost of closure, postclosure and corrective action for known releases of contaminants will be available whenever it is needed. The financial assurance may be in the form of:

1. A trust fund as described in [NAC 444.6853](#);
2. A surety bond guaranteeing payment or performance as described in [NAC 444.68535](#);
3. A letter of credit as described in [NAC 444.6854](#);
4. A policy of insurance as described in [NAC 444.6855](#);
5. A mechanism approved by the solid waste management authority pursuant to [NAC 444.6856](#);
6. An assumption of responsibility by the State as described in [NAC 444.6857](#); or
7. Any combination of the options listed in subsections 1 to 6, inclusive.

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95)

NAC 444.6853 Financial assurance: Trust fund. ([NRS 444.560](#))

1. An owner or operator may satisfy the requirements of [NAC 444.685](#) by establishing a trust fund which conforms to the requirements of this section. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. A copy of the trust agreement must be placed in the operating records of the disposal site.

2. The owner or operator shall annually make payments into the trust fund over the term of the period for payment into the fund.

3. If a trust fund is used to demonstrate financial assurance for closure and postclosure, the first payment into the fund must be at least equal to the current estimate of the cost for closure or postclosure, except as otherwise provided in [NAC 444.6857](#), divided by the number of years of the period for payment into the fund. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{CE-CV}}{Y}$$

where:

CE is the current estimate for closure or postclosure, as adjusted for inflation or other changes.

CV is the current value of the trust fund.

Y is the number of years remaining in the period for payment into the fund.

4. If a trust fund is used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current estimate of the cost for corrective action, except as otherwise provided in [NAC 444.6857](#), divided by the number of years in the period for payment into the fund. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{RB} - \text{CV}}{Y}$$

where:

RB is the most recent estimate of the required balance in the trust fund needed for corrective action.

CV is the current value of the trust fund.

Y is the number of years remaining in the period for payment into the trust fund.

5. The owner or operator shall:

(a) For a trust fund for closure and postclosure, obtain and make the initial payment into the trust fund before April 9, 1997, or the initial receipt of solid waste, whichever is later.

(b) For a trust fund for corrective action, obtain the trust fund and make the initial payment into the trust fund no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of [NAC 444.7497](#), [444.7498](#) and [444.7499](#).

(c) Maintain the trust fund until he or she is no longer required to demonstrate financial responsibility pursuant to [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

6. If the owner or operator establishes a trust fund after having used one or more alternate mechanisms specified in [NAC 444.68525](#), the first payment into the trust fund must be at least equal to the amount which the fund would have contained if the trust fund were established initially and annual payments made pursuant to this section.

7. The owner, operator or any other person authorized to conduct activities for closure, postclosure or corrective action may request reimbursement from the trustee for related expenditures. Requests for reimbursement may be granted by the trustee only if sufficient money is remaining in the trust fund to cover the remaining costs of closure, postclosure or corrective action, and if justification and documentation of the cost is placed in the operating records of the disposal site. The owner or operator shall notify the solid waste management authority that the documentation of the justification for reimbursement has been placed in the operating records and that reimbursement has been received.

8. The owner or operator may terminate the trust fund only if he or she substitutes alternate financial assurance as specified in this section or is no longer required to demonstrate financial responsibility in accordance with the requirements of [NAC 444.6851](#), [444.68515](#) or [444.6852](#).

9. As used in this section, “period for payment into the fund” means:

(a) In the case of a trust fund for closure or postclosure, the remaining life of the municipal solid waste landfill unit.

(b) In the case of a trust fund for corrective action, over one-half of the estimated length of the program for corrective action.

(Added to NAC by Environmental Comm’n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.68535 Financial assurance: Surety bond guaranteeing payment or performance. ([NRS 444.560](#))

1. An owner or operator may demonstrate financial assurance for closure or postclosure by obtaining a surety bond guaranteeing payment or performance which conforms to the requirements of this section. An owner or operator may demonstrate financial assurance for corrective action by obtaining a surety bond guaranteeing performance which conforms to the requirements of this section.

2. A bond must:

(a) If for closure and postclosure, be obtained by the owner or operator and become effective before April 9, 1997, or the initial receipt of waste, whichever is later.

(b) If for corrective action, be obtained by the owner or operator and become effective no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of [NAC 444.7497](#), [444.7498](#) and [444.7499](#).

(c) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

3. The owner or operator shall notify the solid waste management authority that a copy of the bond has been placed in the operating records of the disposal site.

4. The surety company issuing the bond must be among those listed as an acceptable surety on federal bonds in Circular 570 of the U.S. Department of the Treasury which is published each July in the Federal Register.

5. Except as otherwise provided in [NAC 444.6858](#), the sum of the bond must be in an amount at least equal to the current estimate for closure, postclosure or corrective action, whichever is applicable.

6. The surety must become liable on the bond if the owner or operator fails to make payments or perform as guaranteed by the bond.

7. In addition to obtaining the surety bond, the owner or operator shall establish a trust fund. The trust fund must meet the requirements of [NAC 444.6853](#), except the requirements for initial payment and subsequent annual payments specified in that section.

8. The surety shall deposit payments made under the terms of the bond directly into the trust fund. Payments from the trust fund must be approved by the trustee.

9. The terms of the bond must authorize the surety to cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the solid waste management authority at least 120 days before cancellation. If the surety cancels the bond, the owner or operator shall obtain alternate financial assurance as specified in [NAC 444.68525](#) to [444.6859](#), inclusive.

10. The owner or operator may cancel the bond only if alternate financial assurance is substituted as specified in [NAC 444.68525](#) to [444.6859](#), inclusive, or the owner or operator is no longer required to demonstrate financial responsibility in accordance with [NAC 444.6851](#), [444.68515](#) or [444.6852](#).

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.6854 Financial assurance: Letter of credit. ([NRS 444.560](#))

1. An owner or operator may satisfy the requirements of [NAC 444.685](#) by obtaining an irrevocable letter of credit which conforms to the requirements of this section.

2. A letter of credit must:

(a) If for closure and postclosure, be obtained by the owner or operator and become effective before April 9, 1997, or the initial receipt of waste, whichever is later.

(b) If for corrective action, be obtained by the owner or operator and become effective no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of [NAC 444.7497](#), [444.7498](#) and [444.7499](#).

(c) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

3. The owner or operator shall notify the solid waste management authority that a copy of the letter of credit has been placed in the operating records of the disposal site.

4. The issuing institution must be an entity which has the authority to issue letters of credit and whose operations are regulated and examined by a federal or state agency.

5. A letter from the owner or operator must be filed with the letter of credit in the operating records that includes:

(a) A reference to the letter of credit by number;

(b) The issuing institution;

(c) The date of issuance;

(d) The name of the owner or operator;

(e) The address of the disposal site; and

(f) The amount of money assured.

6. Except as otherwise provided in this section, the letter of credit must be irrevocable and issued for a period of at least 1 year in an amount at least equal to the current estimate for closure, postclosure or corrective action, whichever is applicable. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless the issuing institution has cancelled the letter of credit.

7. The terms of the letter of credit must authorize the issuing institution to cancel the letter of credit by sending notice of cancellation by certified mail to the owner or operator and to the solid waste management authority at least 120 days before the cancellation. If the letter of credit is cancelled by the issuing institution, the owner or operator shall obtain alternate financial assurance.

8. The owner or operator may cancel the letter of credit only if alternate financial assurance is substituted as specified in [NAC 444.68525](#) to [444.6859](#), inclusive, or the owner or operator is released from the requirements of this section in accordance with [NAC 444.6851](#), [444.68515](#) or [444.6852](#).

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.6855 Financial assurance: Insurance. ([NRS 444.560](#))

1. An owner or operator may demonstrate financial assurance for closure and postclosure by obtaining insurance which conforms to the requirements of this section.

2. The insurance must:

(a) Be obtained by the owner or operator and become effective before April 9, 1997, or the initial receipt of waste, whichever is later; and

(b) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

3. The insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in this State.

4. The owner or operator shall notify the solid waste management authority that a copy of the policy of insurance has been placed in the operating records of the disposal site.

5. The policy of insurance must guarantee that money will be available to close the municipal solid waste landfill unit whenever final closure occurs or to carry out a program for postclosure whenever the period of postclosure begins, whichever is applicable. The policy must also guarantee that once closure or postclosure begins, the insurer is responsible for paying money to the owner, operator or any other person authorized to conduct the closure or postclosure, up to an amount equal to the face amount of the policy.

6. Except as otherwise provided in [NAC 444.6853](#), the policy of insurance must be issued for a face amount at least equal to the current estimate for closure or postclosure, whichever is applicable. Actual payments by the insurer must not change the face amount, although the insurer's future liability may be lowered by the amount of the payments.

7. An owner, operator or any other person authorized to conduct the closure or postclosure may receive reimbursements for related expenditures. Requests for reimbursement may be granted by the insurer only if the remaining value of the policy is sufficient to cover the remaining costs of the closure or postclosure, and if justification and documentation of the cost is placed in the operating records of the disposal site. The owner or operator shall notify the solid waste management authority that documentation of the justification for reimbursement has been placed in the operating records and that reimbursement has been received.

8. Each policy of insurance must contain a provision allowing the assignment of the policy to a successor owner or operator. The assignment may be conditional upon the consent of the insurer, if the consent is not unreasonably refused.

9. The policy of insurance must provide that the insurer may not cancel, terminate or fail to renew the policy except for a failure to pay the premium. An automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner, operator and solid waste management authority at least 120 days before the cancellation. If the insurer cancels the policy, the owner or operator shall obtain alternate financial assurance as specified in [NAC 444.68525](#) to [444.6859](#), inclusive.

10. If a policy of insurance provides coverage for postclosure, the insurer shall, commencing on the date that liability to make payments pursuant to the policy accrues, annually increase the face amount of the policy. The increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equal to 85 percent of the most recent rate of interest for or 85 percent of the equivalent yield announced by the United States Treasury for 26-week treasury bills.

11. The owner or operator may cancel the policy of insurance only if he or she substitutes alternate financial assurance in accordance with [NAC 444.68525](#) to [444.6859](#), inclusive, or he or she is no longer required to demonstrate financial responsibility in accordance with the requirements of [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

12. As used in this section, “face amount” means the total amount the insurer is obligated to pay under the policy.

(Added to NAC by Environmental Comm’n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.6856 Financial assurance: Alternate mechanisms approved by solid waste management authority. ([NRS 444.560](#))

1. An owner or operator may satisfy the requirements of [NAC 444.685](#) by obtaining any other mechanism which:

- (a) Meets the criteria specified in [NAC 444.6859](#); and
- (b) Is approved by the solid waste management authority.

2. A mechanism obtained pursuant to this section must be obtained by the owner or operator:

(a) For closure and postclosure, by April 9, 1997, or before the initial receipt of waste, whichever is later.

(b) For corrective action, no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of [NAC 444.7497](#), [444.7498](#) and [444.7499](#).

(c) Maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to [NAC 444.6851](#), [444.68515](#) and [444.6852](#).

(Added to NAC by Environmental Comm’n, 11-8-93, eff. 4-9-95; A 11-9-95)

NAC 444.6857 Financial assurance: Assumption of responsibility by State. ([NRS 444.560](#)) If this State assumes legal responsibility for an owner’s or operator’s compliance with the requirements for closure, postclosure or corrective action set forth in [NAC 444.570](#) to [444.7499](#), inclusive, or assures that money will be available from the State to cover the related expenses, the owner or operator shall be deemed to be in compliance with the requirements of [NAC 444.685](#). Any assumption of responsibility by this State must meet the criteria specified in [NAC 444.6859](#).

(Added to NAC by Environmental Comm’n, 11-8-93, eff. 4-9-95; A 3-1-94)

NAC 444.6858 Financial assurance: Use of multiple mechanisms. ([NRS 444.560](#))

1. Except as otherwise provided in subsection 2, an owner or operator may satisfy the requirements of [NAC 444.685](#) by establishing more than one mechanism for financial assurance per municipal solid waste landfill unit as specified in [NAC 444.6853](#) to [444.6857](#), inclusive. The combination of mechanisms, rather than a single mechanism, must provide financial assurance for an amount at least equal to the current estimate of cost for closure, postclosure or corrective action, whichever is applicable.

2. Any financial assurance provided by:

(a) A corporate parent, if the entity holding the financial mechanism is a subsidiary of the corporate parent or a subsidiary of a subsidiary of the corporate parent; or

(b) Another subsidiary of the corporate parent, if the entity holding the financial mechanism is a subsidiary of the same corporate parent,

→ may not be combined if the financial statements of the two entities are consolidated.

(Added to NAC by Environmental Comm'n, 11-8-93; eff. 4-9-95)

NAC 444.6859 Financial assurance: General requirements for all mechanisms. ([NRS 444.560](#))

1. An entity providing the mechanism used to demonstrate financial assurance pursuant to [NAC 444.685](#) shall reimburse or make payments to the owner, operator or any other person designated by the solid waste management authority, from that mechanism, for expenses in such amounts as the solid waste management authority shall direct in writing.

2. Any such mechanism must:

(a) Ensure that the amount of money assured is sufficient to cover the costs of closure, postclosure or corrective action for known releases of contaminants, when needed;

(b) Ensure that money will be available in a timely fashion, when needed; and

(c) Be legally valid, binding and enforceable under applicable state and federal law.

(Added to NAC by Environmental Comm'n, 11-8-93; eff. 4-9-95)

NAC 444.686 Operation and maintenance. ([NRS 444.560](#))

1. The operation and maintenance of a Class I site must be in a manner which will not create odors, unsightliness or other nuisances.

2. The face of the working fill must be kept as narrow as is consistent with safe and efficient operation of equipment.

3. Bulky waste material which may provide for the harborage of rodents must not be used for the final surface of side slopes.

4. The solid wastes must be spread and compacted in thin layers. In the construction of each cell it must be spread into layers that do not exceed 2 feet before compaction. Equipment for compaction must be appropriately sized and must make a minimum of two passes over each layer of waste.

5. Solid waste must not be placed within 200 feet of the boundary line of a Class I site unless a shorter distance is approved by the solid waste management authority. In approving a setback of less than 200 feet, the solid waste management authority shall consider the uses of the surrounding land, the surrounding topography and the operations conducted at the site.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.1-5.1.3.4, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.688 Covering of compacted solid waste; continuous operation as alternative. ([NRS 444.560](#))

1. The compacted solid waste of a Class I site must be covered as follows:

(a) Except as otherwise provided in this section, solid waste that is disposed of at the Class I site must be covered at the end of each operating day or at more frequent intervals as necessary to control disease vectors, fires, odors, blowing litter and scavenging with at least 6 inches of compacted earthen material.

(b) The solid waste management authority may approve alternative materials to be used for compaction and alternative thicknesses of that material if the owner or operator shows that the alternative materials and thicknesses are capable of controlling disease vectors, fires, odors, blowing litter and scavenging without presenting a threat to public health and safety and the environment.

(c) The solid waste management authority may grant a temporary waiver from the requirements of paragraphs (a) and (b) if the owner or operator can show that extreme seasonal climatic conditions make the requirements impractical.

(d) Unless otherwise approved by the solid waste management authority, at least 12 inches of compacted earthen material must be placed as an intermediate cover on a fill surface if that surface is not to receive waste for more than 90 days. This paragraph does not apply to final fill surfaces.

(e) The integrity of daily and intermediate cover must be maintained until further filling or the addition of final cover is made. All cracks, depressions and erosion of the cover for surface and side slopes of fills must be promptly repaired.

(f) Daily and temporary cover must be graded to drain runoff of surface water. The top slope must have a grade of not less than 3 percent.

2. The solid waste management authority may approve the continuous operation of a Class I site as an alternative to the requirements of subsection 1 if the owner or operator shows that its plan for the continuous operation of the site is sufficient to control disease vectors, fires, odors, blowing litter and scavenging without presenting a threat to public health and safety and the environment.

3. As used in this section:

(a) “Continuous operation” means that at all times throughout each 24-hour period:

(1) Waste is being received, placed, spread or compacted on the working surface of the site; and

(2) At least one piece of heavy equipment is operating on the working surface of the site to spread or compact the waste.

(b) “Operating day” means the portion of a day during which a site is accepting or managing solid waste.

[Environmental Comm’n, Solid Waste Mgt Reg. §§ 5.1.3.5.1-5.1.3.5.5, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; R034-98, 4-17-98; R179-05, 1-30-2008, eff. 4-1-2008)

NAC 444.6885 System to control runoff and runoff. ([NRS 444.560](#))

1. The owner or operator of a Class I site shall provide a system to control runoff and runoff.

2. The owner or operator of a Class I site shall design, construct and maintain:

(a) A system to control runoff to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm; and

(b) A system to control runoff from the active portion of the landfill to collect and control at least the volume of water resulting from a 24-hour, 25-year storm,

↪ as those durations and frequencies for storms are defined in the “Precipitation Frequency Atlas of the Western United States,” vol. VII-Nevada, prepared by the National Weather Service and National Oceanic and Atmospheric Administration, United States Department of Commerce. The publication may be obtained from the Hydrometeorological Design Studies Center, Office of Hydrology, National Weather Service, 1325 East-West Highway, Silver Spring, Maryland 20910, at a cost of \$9.

3. Runoff from the active portion of the landfill must be handled in accordance with [NAC 444.6887](#).

4. As used in this section, “active portion” means that part of a municipal solid waste landfill unit which has received or is receiving wastes and which has not been closed in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A by R202-97, 3-5-98)

NAC 444.6887 Discharge of pollutants or contaminants into surface waters prohibited.
([NRS 444.560](#)) The owner or operator of a Class I site shall not:

1. Cause a discharge of pollutants or contaminants from a municipal solid waste landfill unit into the waters of the State or waters of the United States, including wetlands, which violates any requirements of the federal Clean Water Act of 1977, including, but not limited to, the National Pollutant Discharge Elimination System, 33 U.S.C. § 1342, as that section existed on November 8, 1993, or [NRS 445A.300](#) to [445A.730](#), inclusive, and the regulations adopted pursuant thereto; or

2. Cause the discharge of a nonpoint source of pollution into the waters of the State or waters of the United States, including wetlands, which violates any requirement of a plan for the management of the quality of water that is applicable in the area or throughout the State and which has been approved pursuant to sections 208 or 319 of the Clean Water Act of 1977, 33 U.S.C. §§ 1288 or 1329, as those sections existed on November 8, 1993, or [NRS 445A.300](#) to [445A.730](#), inclusive, and the regulations adopted pursuant thereto.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6891 Requirements for design and construction of system for final cover.
([NRS 444.560](#))

1. The owner or operator of a Class I site shall install a system for a final cover which is designed to minimize infiltration and erosion. Except as otherwise provided in subsection 2, the system must be designed and constructed to:

(a) Have a permeability that is less than or equal to the permeability of any system for a bottom liner or natural subsoils present, or have a permeability no greater than 1×10^{-5} centimeters per second, whichever is less;

(b) Minimize infiltration through the closed municipal solid waste landfill unit by the use of an infiltration layer which contains at least 18 inches of earthen material; and

(c) Minimize erosion of the final cover by the use of an erosion layer which contains at least 6 inches of earthen material which is capable of sustaining the growth of native plants.

2. The solid waste management authority may approve an alternative design for a final cover which includes:

(a) An infiltration layer which achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (a) and (b) of subsection 1; and

(b) An erosion layer which provides equivalent protection from wind and water erosion as the erosion layer specified in paragraph (c) of subsection 1.

3. The final cover must be graded to drain surface water from the cover. The top slope must have a grade of not less than 3 percent. The design of the final cover must be sufficient to control erosion and maintain the stability of the slope.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6892 Notice of intent to close; general requirements concerning closure.
([NRS 444.560](#))

1. At least 15 days before beginning the closure of a municipal solid waste landfill unit at a Class I site pursuant to subsection 2, an owner or operator shall provide notice to the solid waste management authority of the intent to close the unit.

2. The owner or operator shall begin activities for the closure of the municipal solid waste landfill unit no later than 30 days after the date on which the unit receives the final receipt of wastes or, if the unit has remaining capacity and there is a reasonable likelihood that the unit will receive additional wastes, no later than 1 year after the most recent receipt of wastes. Extensions beyond the 1-year deadline may be granted by the solid waste management authority if the owner or operator demonstrates that the unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all actions necessary to prevent threats to public health and safety and the environment from the open unit.

3. Except as otherwise provided in subsections 4 and 5, the owner or operator of a Class I site shall complete activities for the closure of each municipal solid waste landfill unit at the site in accordance with the plan for closure within 180 days after the beginning the closure. Extensions of the period for closure may be granted by the solid waste management authority if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and that the owner or operator has taken and will continue to take all actions to prevent threats to public health and safety and the environment from the open unit.

4. The owner or operator of a Class I site which stopped receiving waste before November 8, 1993, shall:

- (a) Comply with the requirements for a final cover set forth in [NAC 444.6891](#); and
- (b) Complete activities for the closure of each municipal solid waste landfill unit at the site by May 8, 1994.

5. The owner or operator of an existing municipal solid waste landfill unit or lateral expansion at a Class I site which accepts less than 100 tons of solid waste per day shall, if the site stops receiving waste before April 9, 1994:

- (a) Comply with the requirements for a final cover set forth in [NAC 444.6891](#); and
- (b) Complete activities for the closure of each municipal solid waste landfill unit at the site within 180 days after the last receipt of waste.

6. After the closure of each municipal solid waste landfill unit, the owner or operator of the site shall notify the solid waste management authority that a certification, signed by an independent licensed professional engineer and approved by the solid waste management authority verifying that closure has been completed in accordance with the plan for closure, has been placed in the operating record of the site.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94)

NAC 444.6893 Requirements after closure of all municipal solid waste landfill units within Class I site. ([NRS 444.560](#))

1. After the closure of all municipal solid waste landfill units within a Class I site, the owner or operator of the site shall:

- (a) Record a notation that complies with the requirements of subsection 2 on the deed to the property on which the site is located or on any other instrument which is normally examined during a title search; and
- (b) Notify the solid waste management authority that the notation has been recorded and a copy of the notation has been placed in the operating records of the site.

2. The notation on the deed or other instrument must in perpetuity notify any potential purchaser of the property that:

- (a) The land has been used as a landfill; and
- (b) Its use is restricted in accordance with [NAC 444.6896](#).

3. The owner or operator may request permission from the solid waste management authority to remove the notation from the deed or other instrument if all wastes are removed from the site.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6894 Program for postclosure for each municipal solid waste landfill unit within Class I site. ([NRS 444.560](#))

1. After the closure of each municipal solid waste landfill unit of a Class I site, the owner or operator of the site shall conduct a program for postclosure for that unit. Except as otherwise provided in subsection 2, the program must be conducted for 30 years and consist of at least the following:

(a) The integrity and effectiveness of any final cover must be maintained, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion or other events, and preventing runoff and runoff from eroding or otherwise damaging the final cover.

(b) The system to collect leachate must be maintained and operated in accordance with the requirements in [NAC 444.681](#), if applicable. The solid waste management authority may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to public health and safety and the environment.

(c) The groundwater must be monitored in accordance with [NAC 444.7481](#) to [444.7499](#), inclusive, and the system for monitoring the groundwater must be maintained, if applicable.

(d) The system for monitoring gas must be maintained and operated in accordance with [NAC 444.667](#).

2. The length of the program for postclosure may be:

(a) Decreased by the solid waste management authority if the owner or operator demonstrates that the reduced period is sufficient to protect public health and safety and the environment and this demonstration is approved by the solid waste management authority; or

(b) Increased by the solid waste management authority if it determines that the lengthened period is necessary to protect public health and safety and the environment.

3. After the completion of the program for postclosure for each municipal solid waste landfill unit at a Class I site, the owner or operator shall notify the solid waste management authority that a certification, signed by an independent licensed professional engineer and approved by the solid waste management authority verifying that the program has been completed in accordance with the plan for postclosure, has been placed in the operating record.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6895 Plan for final cover or closure of Class I site. ([NRS 444.560](#)) A plan for closing a Class I site must include:

1. A description of the actions necessary to close all municipal solid waste landfill units within the site at any time during their active life;

2. A description of the final cover required by [NAC 444.6891](#), [444.6892](#) and [444.6893](#);

3. An estimate of the largest area of the municipal solid waste landfill unit which would require final cover at any time during the active life of the unit if the site is closed;

4. An estimate of the total maximum inventory of wastes to be placed on the disposal site during the entire estimated life of the site;

5. The equipment and structures for the removal of wastes, decommissioning and decontamination;

6. The placement and installation of devices to monitor or control water, vadose zone and landfill gases, if necessary; and

7. A schedule for completing all construction and related activities needed to close the disposal site in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.6896 Plan for postclosure; use of property during or after period of postclosure. ([NRS 444.560](#))

1. A plan for postclosure which specifies how and at what frequency a municipal solid waste landfill unit will be maintained and monitored during the period of postclosure must include:

(a) A program for monitoring water which complies with the requirements of [NAC 444.7481](#) to [444.7499](#), inclusive;

(b) A program for the inspection and maintenance of:

(1) The final cover;

(2) Structures for drainage and protection from floods; and

(3) Systems for monitoring and controlling landfill gases;

(c) The name, address and telephone number of the person or office to contact about the unit during the period of postclosure;

(d) A description of the planned uses of the property during the period of postclosure; and

(e) Any other information which the solid waste management authority may require.

2. Any use of the property during or after the period of postclosure must not disturb the integrity of the final cover, liners, any other components of the system for containment or the function of the monitoring system unless necessary to comply with the requirements of [NAC 444.570](#) to [444.7499](#), inclusive.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94)

NAC 444.6897 Maintenance of plans for closure and postclosure in operating records of site. ([NRS 444.553](#), [444.560](#)) The owner or operator of a Class I site shall maintain a copy of the plans for closure and postclosure in the operating records of the site. To receive a permit to operate the disposal site, the plans for closure and postclosure must be placed in the operating records of the disposal site by November 8, 1993, or by the initial receipt of waste, whichever is later. The owner or operator shall notify the solid waste management authority immediately upon placing the plans in its operating records. The owner or operator shall include the plans for closure and postclosure in his or her application for a permit to operate the site.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.690 Signs. ([NRS 444.560](#)) Signs must be posted that clearly indicate:

1. The owner and operator of the site.

2. The hours of operation.

3. Materials accepted or excluded.

4. Fees charged.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.18.1-5.1.3.18.4, eff. 9-21-77]

NAC 444.692 Disposal of liquids. ([NRS 444.560](#))

1. An owner or operator of a Class I site shall restrict the types and amounts of liquids disposed of in a Class I site except as permitted by the solid waste management authority in accordance with subsections 2 and 3.

2. Liquids which are in bulk or not in containers may not be placed in a municipal solid waste landfill unit unless:

(a) The waste is household waste other than septic waste; or

(b) The waste is leachate or gas condensate from the municipal solid waste landfill unit and the new or existing unit or lateral expansion is designed with a composite liner and system for the collection of leachate as described in [NAC 444.681](#).

3. Containers holding liquid waste may not be placed in a municipal solid waste landfill unit unless:

(a) The container is a small container similar in size to a container which would normally be found in household waste;

(b) The container is designed to hold liquids for use other than storage; and

(c) The liquid waste is household waste.

4. As used in this section, "liquid waste" means any waste material which is determined to contain free liquids as a result of a paint filter liquids test, Method 9095, described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Environmental Protection Agency, Publication No. SW-846, as adopted by reference in [NAC 444.636](#).

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.1.3.12, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93; 11-9-95; R202-97, 3-5-98)

NAC 444.694 Putrescible wastes; vector control. ([NRS 444.560](#))

1. Any dead animals, carrion, slaughterhouse wastes and other highly putrescible wastes accepted at the land disposal site must be placed in a separate trench or area and covered immediately.

2. Vector control must be instituted, whenever necessary in the judgment of the solid waste management authority, to minimize transmission of disease.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.13 & 5.1.3.14, eff. 9-21-77]

NAC 444.696 Control of erosion and dust. ([NRS 444.560](#))

1. Suitable grasses must be planted, as required, in completed areas of the landfill to prevent erosion, surface deterioration and fugitive dust.

2. Adequate water must be available at all times for dust control and for compaction of cover material.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.5.6 & 5.1.3.6, eff. 9-21-77]

NAC 444.698 Access; roads. ([NRS 444.560](#))

1. Access to a municipal solid waste landfill unit must be controlled as to time of use and as to those authorized to use the site in order to prevent unauthorized vehicular traffic and illegal dumping. Access must be controlled by using artificial or natural barriers, or both, as appropriate, to protect public health and safety and the environment. An attendant must be on duty to control access during hours of operation.

2. Permanent roads may be provided from the public road system to the site. Temporary roads may be provided as necessary to the working face. All roads must be passable during inclement weather.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.11 & 5.1.3.16, eff. 9-21-77]—
(NAC A 11-8-93)

NAC 444.700 Facilities for personnel. ([NRS 444.560](#)) Suitable shelter and sanitary facilities must be provided for operating personnel and waste transport personnel.

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.1.3.10, eff. 9-21-77]

NAC 444.702 Miscellaneous requirements for operation; quarterly reports; topographic or other volumetric surveys and reports. ([NRS 444.560](#))

1. Scavenging at a Class I site is prohibited.
2. Salvaging is prohibited at the working face of a Class I site.
3. A Class I site must be inspected daily and all scattered paper and other lightweight debris returned to the fill area and covered.
4. The operator of a Class I site shall establish provisions concerning weighing or otherwise adequately measuring and recording all solid waste delivered to the site.
5. The operation of a Class I site must be approved by the solid waste management authority.
6. The operator of a Class I site shall submit quarterly to the Division a report of the solid waste received at the site. The report must be submitted on a form prescribed by the Division.
7. The operator of a Class I site shall, on or before January 1, 2004, and at least once every 5 years thereafter until the site is closed in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#), conduct a topographic survey, or other volumetric survey approved by the solid waste management authority, of the site and submit a report to the solid waste management authority. Except as otherwise provided in this subsection, each such report must be submitted not later than 5 years after the date on which the immediately preceding report was submitted. Each report must:
 - (a) Be signed by a professional engineer registered in this State;
 - (b) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet;
 - (c) Show the current topography of the site;
 - (d) Indicate the remaining volume and disposal capacity of the site;
 - (e) Indicate the volume used and waste disposed of since the original report of design; and
 - (f) Calculate the remaining life of the site, in years.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.1.3.7-5.1.3.9, 5.1.3.15 & 5.1.3.17, eff. 9-21-77]—(NAC A 9-2-92; R105-02, 10-18-2002)

NAC 444.7025 Operating records required to be kept; notice to solid waste management authority. ([NRS 444.560](#))

1. The owner or operator of a Class I site shall record and retain at the site in the operating records or at a location approved by the solid waste management authority, the following information as it becomes available:

- (a) Any demonstration of restrictions on location required by [NAC 444.678](#) to [444.6795](#), inclusive;
- (b) Records of inspection, training procedures and procedures for notification required by [NAC 444.6665](#);
- (c) Results from the monitoring of gas and any remediation plans required by [NAC 444.667](#);

(d) Any documentation relating to the design of the municipal solid waste landfill unit for the placement of leachate or gas condensate in the unit as required by paragraph (b) of subsection 2 of [NAC 444.692](#);

(e) Any demonstration, certification, finding, monitoring, testing or analytical data from the program for monitoring groundwater required by [NAC 444.7481](#) to [444.7499](#), inclusive;

(f) Plans for closure and postclosure and any monitoring, testing or analytical data required by [NAC 444.6891](#) to [444.6896](#), inclusive; and

(g) Any documentation of cost estimates and financial assurance required by [NAC 444.685](#).

2. The owner or operator shall notify the solid waste management authority when the documentation has been placed in or added to the operating records. All information contained in the operating records must be furnished upon request to the solid waste management authority or be made available at all reasonable times for inspection by the solid waste management authority.

3. The solid waste management authority may establish alternative schedules for recordkeeping and notification required by [NAC 444.570](#) to [444.7499](#), inclusive, except for the notification required by paragraph (c) of subsection 1 of [NAC 444.6783](#) and by subsection 3 of [NAC 444.7491](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94)

Class II Sites

NAC 444.704 Minimum requirements; operating records; contamination of groundwater. ([NRS 444.560](#))

1. All Class II sites must comply with the minimum requirements set forth in this section and [NAC 444.706](#) to [444.728](#), inclusive. A Class II site which fails to satisfy the minimum requirements shall be deemed to be an open dump for the purpose of the disposal of solid waste and is prohibited.

2. The owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which meets the criteria for a Class II site pursuant to [NAC 444.571](#) shall place in the operating records of the unit such information as necessary to demonstrate how the unit or lateral expansion meets the criteria.

3. An owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which meets the criteria for a Class II site who has knowledge that the unit or lateral expansion has contaminated the groundwater shall:

(a) Notify the solid waste management authority of the contamination; and

(b) Comply with the requirements for a Class I site set forth in [NAC 444.645](#), [444.6665](#) to [444.6678](#), inclusive, [444.6765](#) to [444.7025](#), inclusive, and [444.7481](#) to [444.7499](#), inclusive.

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.2, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.7045 Provisions for employees; compliance with certain provisions; deviations. ([NRS 444.560](#))

1. The owner or operator of a Class II site shall provide suitable shelter, drinking water and sanitary facilities for the employees who work at the Class II site.

2. Except as otherwise provided in subsection 3, the owner or operator of a Class II site shall comply with:

- (a) [NAC 444.6895](#), for the closure of the municipal solid waste landfill units;
- (b) [NAC 444.6894](#) and [444.6896](#), for the postclosure maintenance of municipal solid waste landfill units;
- (c) [NAC 444.685](#) to [444.6859](#), inclusive;
- (d) [NAC 444.6665](#) to [444.6678](#), inclusive, [444.6885](#), [444.6887](#), [444.692](#), [444.698](#) and [444.7025](#), if the Class II site contains at least one municipal solid waste landfill unit;
- (e) [NAC 444.6765](#) and [444.678](#) to [444.6795](#), inclusive; and
- (f) [NAC 444.6891](#), [444.6892](#) and [444.6893](#).

3. The solid waste management authority may, after public review and comment, allow the owner or operator to deviate from the provisions concerning the infiltration barrier set forth in [NAC 444.6891](#). In deciding whether to allow the deviation, the solid waste management authority shall consider:

- (a) The unique characteristics of small communities;
- (b) Climatic and hydrogeologic conditions; and
- (c) Whether allowing the deviation would have an adverse effect on human health or the environment.

(Added to NAC by Environmental Comm'n, 11-8-93, eff. 10-9-95; A 3-1-94; 11-9-95, eff. 10-9-97; R034-98, 4-17-98)

NAC 444.705 Application for permit to operate Class II site or lateral expansion thereof. ([NRS 444.553](#), [444.556](#), [444.560](#)) An application for a permit to operate a Class II site or a lateral expansion of a Class II site must be submitted to the solid waste management authority and must include:

- 1. The name, location and mailing address of the:
 - (a) Site;
 - (b) Owner of the site;
 - (c) Operator of the site; and
 - (d) Authorized agent of the owner.
- 2. Proof of ownership of the land on which the site will be located.
- 3. The report for the design of the site required by [NAC 444.708](#).
- 4. The plan for operating the site required by [NAC 444.712](#).
- 5. The plan for closing the site, the plan for postclosure and the documentation of the financial assurance required by [NAC 444.704](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93; 10-3-96)

NAC 444.706 Location. ([NRS 444.560](#)) The location of a Class II site must:

- 1. Not be within one-half mile of the nearest inhabited dwelling or place of public gathering or within 1,000 feet of a public highway, unless special provisions for the beautification of the site and the control of litter and vectors are included in the design and approved by the solid waste management authority.
- 2. Meet with the approval of the solid waste management authority.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.1.1-5.2.1.7, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.708 Report for design. ([NRS 444.560](#)) The report for the design of a Class II site must include a design that:

1. Is intended to protect the waters of the State from degradation by pollutants or contaminants; and

2. Complies with the requirements set forth in subsections 1 to 7, inclusive, of [NAC 444.680](#).

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.2.2-5.2.2.3.8, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.711 Required installation of certain systems. ([NRS 444.560](#)) The solid waste management authority may require the owner or operator of a Class II site to install:

1. A system for monitoring groundwater which complies with the provisions of [NAC 444.7483](#); or

2. A system for monitoring moisture in the unsaturated zone,

↪ if the solid waste management authority determines that the system is necessary to protect the waters of the State from degradation by pollutants or contaminants.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; 11-9-95; 10-3-96)

NAC 444.712 Plan for operating. ([NRS 444.560](#)) The plan for operating a Class II site must:

1. Comply with subsections 1, 2 and 4 of [NAC 444.684](#); and

2. Demonstrate how the site will comply with [NAC 444.6665](#) to [444.6678](#), inclusive, and [444.714](#) to [444.728](#), inclusive.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.2.6-5.2.2.9, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.714 Operation and maintenance. ([NRS 444.560](#)) The operation and maintenance of a Class II site must be in accordance with [NAC 444.686](#).

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.3.1-5.2.3.4, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93)

NAC 444.716 Cover of solid wastes. ([NRS 444.560](#))

1. Except as otherwise provided in subsection 2, solid wastes at a Class II site must be covered in accordance with [NAC 444.688](#).

2. The solid waste management authority may, after public review and comment, allow the owner or operator of a Class II site to cover solid waste less frequently than set forth in [NAC 444.688](#). In deciding whether to allow the deviation, the solid waste management authority shall consider:

(a) The unique characteristics of small communities;

(b) Climatic and hydrogeologic conditions; and

(c) Whether allowing the deviation would have an adverse effect on human health or the environment.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.3.5.1-5.2.3.5.4, eff. 9-21-77]—(NAC A 9-2-92; 11-8-93, eff. 10-9-95; 11-9-95, eff. 10-9-97; R034-98, 4-17-98)

NAC 444.7175 Final cover and closure for certain sites; deviations. ([NRS 444.560](#))

1. The owner or operator of a Class II site that stops receiving waste before October 9, 1997, shall:

(a) Except as otherwise provided in subsection 2, comply with the requirements for a final cover set forth in [NAC 444.6891](#); and

(b) Complete activities for the closure of each municipal solid waste landfill unit at the site within 180 days after the last receipt of waste.

2. The solid waste management authority may, after public review and comment, allow the owner or operator to deviate from the provisions concerning the infiltration barrier set forth in [NAC 444.6891](#). In deciding whether to allow the deviation, the solid waste management authority shall consider:

(a) The unique characteristics of small communities;

(b) Climatic and hydrogeologic conditions; and

(c) Whether allowing the deviation would have an adverse effect on human health or the environment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; 11-9-95; R034-98, 4-17-98)

NAC 444.718 Signs. ([NRS 444.560](#)) Signs must be posted that clearly indicate:

1. The owner and operator of the site.

2. The hours of operation.

3. Materials accepted or excluded.

4. Fees charged.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.3.14-5.2.3.14.4, eff. 9-21-77]

NAC 444.720 Disposal of special wastes. ([NRS 444.560](#)) Sewage solids or liquids and other special wastes must not be disposed of in a Class II site except when special permission has been given by the solid waste management authority.

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.2.3.8, eff. 9-21-77]—(NAC A 9-2-92)

NAC 444.722 Putrescible wastes; vector control. ([NRS 444.560](#))

1. Any dead animals, carrion, slaughterhouse wastes or other highly putrescible wastes accepted at the land disposal site must be placed in a separate trench or area and covered immediately.

2. Vector control must be instituted, whenever necessary in the judgment of the solid waste management authority, to minimize transmission of disease.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.3.9 & 5.2.3.10, eff. 9-21-77]

NAC 444.724 Control of erosion and dust. ([NRS 444.560](#)) Suitable grasses must be planted, as required, in completed areas of the landfill to prevent erosion, surface deterioration and fugitive dust.

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.2.3.5.5, eff. 9-21-77]

NAC 444.726 Roads. ([NRS 444.560](#))

1. Permanent roads should be provided from the public road system to the site.

2. Temporary roads may be provided as necessary to the working face.

3. All roads must be passable during normal inclement weather.

[Environmental Comm'n, Solid Waste Mgt Reg. § 5.2.3.12, eff. 9-21-77]

NAC 444.728 Miscellaneous requirements for operation; semiannual reports; topographic or other volumetric surveys and reports. ([NRS 444.560](#))

1. Salvaging is prohibited at the working face of a Class II site. Scavenging is prohibited at a Class II site.

2. A Class II site must be inspected semiweekly and all scattered papers and other lightweight debris returned to the fill area and covered.

3. The operator of a Class II site shall establish provisions concerning weighing or otherwise adequately measuring and recording all solid waste delivered to the site.

4. The operation of a Class II site must be approved by the solid waste management authority.

5. The operator of a Class II site shall:

(a) Comply with the requirements relating to the maintenance and operation of the site set forth in 40 C.F.R. Parts 258.20 to 258.29, inclusive, effective October 9, 1997.

(b) Submit semiannually to the Division a report of the solid waste received at the site. The report must be submitted on a form prescribed by the Division.

(c) On or before January 1, 2004, and at least once every 5 years thereafter until the site is closed in accordance with [NAC 444.6891](#), [444.6892](#) and [444.6893](#), conduct a topographic survey, or other volumetric survey approved by the solid waste management authority, of the site and submit a report to the solid waste management authority. Except as otherwise provided in this paragraph, each such report must be submitted no later than 5 years after the date on which the immediately preceding report was submitted. Each report must:

(1) Be signed by a professional engineer registered in this State;

(2) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet;

(3) Show the current topography of the site;

(4) Indicate the remaining volume and disposal capacity of the site;

(5) Indicate the volume used and waste disposed of since the original report of design; and

(6) Calculate the remaining life of the site, in years.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 5.2.3.6, 5.2.3.7, 5.2.3.11 & 5.2.3.13, eff. 9-21-77]—(NAC A 9-2-92; 11-9-95; R105-02, 10-18-2002)

Class III Sites

NAC 444.731 Minimum standards; reduction or waiver of requirements. ([NRS 444.560](#))

1. Except as otherwise provided in subsections 2 and 3, each Class III site must comply with the standards for location, design, construction, operation and maintenance set forth in [NAC 444.733](#) to [444.747](#), inclusive.

2. A solid waste management authority may adopt less restrictive standards for a Class III site which receives waste material which is inert or unlikely to create an environmental hazard or threaten the health of the general public.

3. A solid waste management authority may waive the requirements for a Class III site if the owner or operator of that site demonstrates that:

(a) All waste which is placed in the landfill is incidental to his or her industrial operation;

(b) The landfill is located on property controlled by the operator of the industrial operation; and

(c) The landfill will not receive any hazardous materials and is unlikely to produce pollutants or contaminants that may degrade waters of the State.

4. An owner or operator who applies for a waiver must submit a plan to the solid waste management authority for approval. The plan must include:

(a) A description of the type and estimated amount of material which will be placed in the landfill; and

(b) A program for the maintenance of the site.

5. As used in this section, "hazardous material" has the meaning ascribed to it in [NRS 459.7024](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-9-95)

NAC 444.733 Application for permit to operate Class III site or lateral expansion thereof. ([NRS 444.553](#), [444.560](#)) An application for a permit to operate a Class III site or a lateral expansion of a Class III site must be submitted to the solid waste management authority. Unless otherwise determined by the solid waste management authority, the application must include:

1. The name, location and mailing address of the:

(a) Site;

(b) Owner of the site;

(c) Operator of the site; and

(d) Authorized agent of the owner.

2. Proof of ownership of the land on which the site will be located.

3. The plan to characterize solid waste required by [NAC 444.737](#).

4. The report required by [NAC 444.739](#).

5. The plan for monitoring water required by [NAC 444.741](#).

6. The plan for operating the site required by [NAC 444.684](#).

7. The plan for closing the site which complies with [NAC 444.6895](#).

8. The plan for postclosure of the site which complies with [NAC 444.6896](#).

9. Documentation of financial assurance which complies with [NAC 444.685](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.735 Location. ([NRS 444.560](#)) The location of a Class III site must:

1. Be easily accessible in all kinds of weather to all vehicles expected to use it.

2. Safeguard against water pollution originating from the decomposed solid waste at the site.

3. Safeguard against uncontrolled movement or collection of gas originating from the decomposed waste at the site.

4. Have an adequate quantity of cover material that is workable, compactible and does not contain organic material of a quantity and distribution conducive to the harboring and breeding of disease vectors.

5. Conform to the land use planning of the area.

6. Not be within one-fourth mile of the nearest inhabited domestic dwelling or place of public gathering or be within 1,000 feet of a public highway, unless special provisions for the beautification of the site and the control of litter vectors are included in the design and approved by the solid waste management authority.

7. Not be within 1,000 feet of any surface water or be within 100 feet of the uppermost aquifer if the site is approved after September 2, 1992, unless approved by the solid waste management authority.

8. Be approved by the solid waste management authority.

9. If the site accepts hazardous waste from conditionally exempt small quantity generators as defined in 40 C.F.R. § 261.5, comply with the provisions of [NAC 444.6785](#) and [444.679](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A by R034-98, 4-17-98)

NAC 444.737 Plan to characterize solid waste. ([NRS 444.560](#)) A plan to characterize solid waste for a Class III site must be sufficient to:

1. Determine that the waste is not a hazardous waste;
2. Identify physical and chemical characteristics of the waste which may create an environmental hazard or threaten the health of the general public; and
3. Provide for the periodic characterization of the waste stream as needed.

(Added to NAC by Environmental Comm'n, eff. 9-2-92)

NAC 444.739 Report for design. ([NRS 444.560](#)) A report for the design of a Class III site must:

1. Be signed by a professional engineer registered in this State.
2. Include a general location map showing land use and zoning within 1 mile of the disposal site.
3. Include a topographic map of the area which must:
 - (a) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet.
 - (b) Indicate the proposed fill areas.
 - (c) Indicate any proposed borrow areas.
 - (d) Indicate access roads.
 - (e) Indicate a typical cross section of a lift.
 - (f) Indicate grades for proper drainage of each lift.
 - (g) Indicate the placement of special devices for drainage and controlling gas, if required.
 - (h) Indicate fencing, equipment for shelter, facilities for employees and all other relevant data to indicate clearly that the landfill will be developed, operated and completed in an orderly manner.
4. Define anticipated types, quantities and sources of solid wastes to be disposed of at the site.
5. Demonstrate the design is sufficient to protect the waters of the State from degradation by pollutants or contaminants. The demonstration must consider, without limitation:
 - (a) The hydrogeologic characteristics of the site and surrounding area;
 - (b) The climatic factors of the area; and
 - (c) The volume and physical and chemical characteristics of predicted leachate generation.
6. Provide proof of compliance with the provisions relating to the runoff and control of surface water set forth in [NAC 444.6885](#) and [444.6887](#).
7. Define the source, type and quantity of cover material for the site.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.741 Plan for monitoring water; suspension of monitoring requirements. ([NRS 444.560](#))

1. A plan for monitoring water for a Class III site must provide for a system capable of monitoring the performance of the design of the site, including the monitoring of the unsaturated zone or groundwater depending on local conditions.

2. The plan must:

(a) Identify the location and construction of monitoring points to be used to detect the migration of pollutants or contaminants from the site to the waters of the State;

(b) Specify monitoring parameters and the frequency of monitoring those parameters;

(c) Specify procedures to ensure quality for all field and laboratory work;

(d) Provide for the semiannual submittal of monitoring data to the solid waste management authority;

(e) Define procedures which will be followed if monitoring provides evidence of potential design failure; and

(f) Comply with the provisions of [NAC 444.7481](#) to [444.7499](#), inclusive, if the plan includes the monitoring of groundwater.

3. The solid waste management authority may suspend monitoring requirements if the owner or operator of a Class III site demonstrates that there is no reasonable potential for migration of pollutants or contaminants from the site to waters of the State.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.743 Final cover or closure; postclosure. ([NRS 444.560](#)) A Class III site must comply with requirements set forth in [NAC 444.6891](#) to [444.6894](#), inclusive, concerning closure and postclosure.

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A 11-8-93)

NAC 444.745 Control of erosion and dust. ([NRS 444.560](#))

1. Suitable grasses must be planted at a Class III site, if required, in completed areas of the landfill to prevent erosion, surface deterioration and fugitive dust.

2. The operator of the site shall ensure that an adequate amount of water is available at all times for the control of dust and the compaction of cover material.

(Added to NAC by Environmental Comm'n, eff. 9-2-92)

NAC 444.747 Miscellaneous requirements; reports; records; notification. ([NRS 444.560](#))

1. Scavenging at a Class III site is prohibited.

2. The area of a Class III site must be inspected daily and all scattered paper and other lightweight debris returned to the fill area and covered.

3. The operator of a Class III site shall:

(a) Establish provisions concerning weighing or otherwise adequately measuring and recording all solid waste received at the site; and

(b) Submit annually to the Division a report of the solid waste received at the site. The report must be submitted on a form provided by the Division within 30 days following the end of each calendar year.

4. The operation of a Class III site must be approved by the solid waste management authority.

5. The owner or operator of a Class III site shall record and retain in its operating records at its site or at another location approved by the solid waste management authority:

- (a) Any documentation of cost estimates and financial assurance required pursuant to [NAC 444.685](#);
- (b) Plans for closure and postclosure care and any monitoring, testing or analytical data required pursuant to [NAC 444.6891](#) to [444.6896](#), inclusive;
- (c) How the site conforms to the restrictions on location set forth in [NAC 444.735](#);
- (d) Any plan to characterize solid waste required pursuant to [NAC 444.737](#); and
- (e) Any demonstration, certification, finding, monitoring, testing or analytical data from the program for monitoring groundwater required pursuant to [NAC 444.7481](#) to [444.7499](#), inclusive.

6. The owner or operator shall promptly notify the solid waste management authority after the owner or operator has placed the information in the operating record of its facility pursuant to subsection 5. The information must be furnished upon request to the solid waste management authority or be made available for inspection by the solid waste management authority at any reasonable time.

7. Notwithstanding any other provision of this chapter, the solid waste management authority may establish alternative schedules for Class III sites for any recordkeeping and notification required pursuant to [NAC 444.570](#) to [444.7499](#), inclusive, except that the authority will not establish an alternative schedule for the notification required pursuant to subsection 3 of [NAC 444.7491](#).

(Added to NAC by Environmental Comm'n, eff. 9-2-92; A by R034-98, 4-17-98)

Materials Recovery Facilities

NAC 444.7474 “Materials recovery facility” defined. ([NRS 444.560](#)) As used in [NAC 444.7474](#) to [444.74779](#), inclusive, unless the context otherwise requires, “materials recovery facility” means a solid waste management facility that provides for the extraction from solid waste of recyclable materials, materials suitable for use as a fuel or soil amendment, or any combination of those materials. The term does not include:

1. A facility that receives only recyclable materials that have been separated at the source of waste generation if further processing of the materials generates less than 10 percent waste residue by weight on an annual average;
2. A salvage yard for the recovery of used motor vehicle parts;
3. A facility that receives, processes or stores only concrete, masonry waste, asphalt pavement, brick, uncontaminated soil or stone for the recovery of recyclable materials; and
4. A facility that recovers less than 10 percent by weight of the recyclable material from the solid waste received on an annual average.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74743 Approval needed for operation; submission of application before construction begins. ([NRS 444.560](#))

1. A person shall not operate a materials recovery facility unless the location, design and operating plans of the facility have been approved by the solid waste management authority.
2. An application to operate a materials recovery facility must be submitted to the solid waste management authority before construction of the facility begins.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74747 Application to operate; application to modify. ([NRS 444.560](#))

1. An application to operate a materials recovery facility must include:

(a) The name, location and mailing address of:

- (1) The materials recovery facility;
- (2) The owner of the materials recovery facility;
- (3) The operator of the materials recovery facility; and
- (4) The authorized agent of the owner.

(b) Proof of ownership of the land on which the materials recovery facility will be located.

(c) A report of the design of the materials recovery facility that complies with the provisions of [NAC 444.74751](#).

(d) A plan for operating the materials recovery facility that complies with the provisions of [NAC 444.74755](#).

(e) A plan for the closure of the materials recovery facility that identifies the procedures required to close the facility and describes the manner in which the facility will comply with the provisions for closure set forth in [NAC 444.74771](#). The plan must include a detailed written estimate, in current dollars, of the cost to hire a person to close the materials recovery facility in accordance with the plan.

(f) Proof of financial assurance that complies with the provisions of [NAC 444.74775](#).

(g) A list of the recyclable materials that will be recovered at the materials recovery facility.

(h) A description of the final use, or the available markets, for the materials identified for recovery.

(i) Any other information that the solid waste management authority requires to evaluate the proposed operation of the facility.

2. A materials recovery facility that has been approved by the solid waste management authority may not modify:

- (a) The storage or processing capacity of the facility;
- (b) The types of waste that a facility may accept; or
- (c) The design or method of operation of the facility,

↪ unless the facility obtains the prior approval of the solid waste management authority for those modifications. An application to modify a materials recovery facility must be submitted on a form prescribed by the solid waste management authority.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74751 Report of design. ([NRS 444.560](#)) The report of the design of the materials recovery facility required by [NAC 444.74747](#) must:

1. Include a detailed description of the site of the facility, a diagram indicating the manner in which the materials are processed at the facility and the design capacity and environmental controls for the facility.

2. Be prepared under the direction of and signed and stamped by a professional engineer who is licensed in this State.

3. Include a general location map that indicates land use and zoning within 1 mile of the materials recovery facility.

4. Include plans and specifications of the materials recovery facility in sufficient detail to demonstrate compliance with the standards for the design of the facility set forth in [NAC 444.74759](#). The plans must:

- (a) Be drawn to a scale of not more than 200 feet per inch;
- (b) Indicate existing and proposed contours;
- (c) Indicate access roads and traffic routes around and within the materials recovery facility;
- (d) Include provisions for the control of surface water to minimize the contact of storm water with waste materials and to prevent pollutants or other contaminants from entering the waters of the State;
- (e) Indicate fencing, areas for storing equipment, facilities for employees, areas for receiving and handling waste, maintenance areas and any other appurtenances;
- (f) Include the maximum processing rate of the facility and the maximum storage capacity, in cubic yards, for processed and unprocessed waste and recovered materials;
- (g) Include provisions for controlling odors and dust to prevent a public nuisance;
- (h) Define the population and area that will be served by the materials recovery facility; and
- (i) List the anticipated types, quantities and sources of solid waste that will be received at the materials recovery facility.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74755 Plan for operating. ([NRS 444.560](#)) The plan for operating the materials recovery facility required by [NAC 444.74747](#) must provide a detailed description of the proposed operating procedures and include, without limitation:

1. The provisions for controlling access to the materials recovery facility;
2. The number of persons who will be employed at the materials recovery facility during operating hours;
3. A list of the equipment and machinery that will be required to operate the materials recovery facility;
4. The procedures to control vehicular traffic within the materials recovery facility;
5. The types of wastes that the materials recovery facility will not accept and a list of the facilities where such waste will be directed;
6. A program to detect and reject regulated hazardous waste, polychlorinated biphenyl wastes or any other unacceptable wastes identified in the application;
7. The procedures for measuring or weighing solid waste that is accepted by the materials recovery facility;
8. The frequency and method for transferring solid waste to a disposal site;
9. The location of storage areas for processed and unprocessed solid wastes and recovered materials at the materials recovery facility;
10. A plan for the disposal of processed and unprocessed solid wastes and recovered materials;
11. The proposed operating hours of the materials recovery facility;
12. A contingency plan that describes the procedures for emergencies and identifies alternate solid waste management systems;
13. A description of the manner in which the materials recovery facility will comply with the provisions set forth in [NAC 444.74763](#); and
14. The safety procedures and protective equipment required for persons who handle solid waste at the materials recovery facility.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74759 Standards for design. ([NRS 444.560](#))

1. A materials recovery facility must be constructed with:
 - (a) Barriers and appurtenances necessary to control access to the facility;
 - (b) A road that provides access to the facility in all kinds of weather;
 - (c) Appurtenances to control litter;
 - (d) Provisions that screen the facility from the view of members of the general public;
 - (e) In areas where putrescible wastes will be received, processed or stored, a covered enclosure with at least three sides, and a floor with a durable surface that contains drainage controls to control runoff and prevent runoff or the accumulation of standing water; and
 - (f) In areas where solid wastes from the construction, refurbishment or demolition of buildings or other structures will be received, processed or stored, a floor with a durable surface that contains drainage controls to control runoff and prevent runoff or the accumulation of standing water.
2. A materials recovery facility that is open to the public must comply with the provisions relating to signs set forth in [NAC 444.690](#).
3. The design and location of a materials recovery facility must comply with applicable local ordinances.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74763 Transfer, removal, recovery and storage of solid waste. ([NRS 444.560](#))

1. Solid waste that is accepted by a materials recovery facility must be:
 - (a) Transferred to a disposal site that has been issued a permit by the solid waste management authority; or
 - (b) Recovered for reuse or recycling.
2. Unless the owner or operator is unable to do so because of an emergency, putrescible solid waste or solid waste that is mixed with putrescible solid waste must be removed from a materials recovery facility not more than 72 hours after acceptance by the facility.
3. Nonputrescible solid waste may not be stored at the materials recovery facility for more than 1 week. Not more than 3,000 cubic yards of solid waste may be stored at the facility at one time, unless otherwise approved by the solid waste management authority.
4. Recovered materials may not be stored at the facility for more than 1 year. At least 75 percent of the materials recovered at the facility must be sold and removed from the facility in a 12-month period. Any recovered materials stored for more than 1 year must be considered waste and properly disposed of at a disposal site that has been issued a permit by the solid waste management authority or a facility approved by the solid waste management authority.
5. Solid waste or recovered materials may not be stored in piles which are more than 15 feet in height or have an area at the base which is more than 5,000 square feet. A distance of at least 12 feet must be maintained between adjacent piles of material and at least 10 feet between any pile of materials and the boundary of the facility.
6. The acceptance, handling and transportation of asbestos must be conducted in the manner prescribed by [NAC 444.965](#) to [444.976](#), inclusive.
7. The owner or operator of a materials recovery facility shall:
 - (a) Inspect the area of the facility daily and collect, and properly dispose of, all scattered paper and lightweight debris; and
 - (b) Comply, in accordance with the provisions of [NAC 444.660](#), with any local ordinances concerning the storage, collection or transportation of solid waste.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74767 Maintenance, availability and content of records; classification of certain information as trade secret; reporting of recycled materials. ([NRS 444.560](#))

1. The operator of a materials recovery facility shall maintain accurate operating records at the facility. The records must be furnished upon request to the solid waste management authority or made available for inspection by the solid waste management authority during the regular business hours of the facility. The records must include:

(a) A daily record of:

(1) The quantity of solid waste received at the facility.

(2) The quantity of solid waste transported to disposal sites and the name and location of each such disposal site.

(3) The quantity of recovered materials removed from the facility and the name and location of each facility that receives the recovered materials.

(b) The receipt or rejection of prohibited wastes.

(c) Any emergencies or unusual events.

2. The operator of the facility may request that certain information included in the records be classified as a trade secret. If the solid waste management authority determines that such information is a trade secret, it shall not disclose that information unless ordered to do so pursuant to a court order.

3. The owner or operator of a materials recovery facility shall comply with the requirements of [NAC 444A.135](#) concerning the reporting of recycled material.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74771 Closure of facility. ([NRS 444.560](#))

1. The owner or operator of a materials recovery facility shall notify the solid waste management authority in writing at least 90 days before the date the facility is expected to close. The facility may not accept any solid waste after the expected closing date.

2. The owner or operator shall, within 30 days after receiving the final shipment of solid waste, remove all remaining solid waste, litter, recovered materials and inoperable equipment in accordance with the plan for closure of the facility required by [NAC 444.74747](#), except that all putrescible waste must be removed within 72 hours after receipt.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74775 Surety bond or other financial assurance required to cover cost of closure. ([NRS 444.560](#))

1. The owner or operator of a materials recovery facility shall obtain a surety bond, or any other mechanism of financial assurance approved by the solid waste management authority, to cover the cost to close the facility, including the removal and proper disposal of the maximum inventory of waste and recovered materials for which the facility is designed. The owner or operator shall provide financial assurance for the closure of the facility until the facility is closed and the closure has been approved by the solid waste management authority.

2. The surety bond must be issued by a corporation licensed to do business in this State and include an indemnity agreement that guarantees payment to a trust fund or to the solid waste management authority.

3. If payment is guaranteed to a trust fund, the trustee of the trust fund must be an entity which is authorized to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

4. The owner or operator of the materials recovery facility or any other person who is authorized to conduct activities for the closure of the facility may request reimbursement from the trustee for any cost incurred to close the facility. The trustee may provide reimbursement for that cost only if there is sufficient money in the trust fund to pay the remaining costs to close the facility, and proof and justification of the cost is placed in the operating records of the facility. The owner or operator shall notify the solid waste management authority that the proof and justification for the reimbursement of the cost was placed in the operating records of the facility and that he or she has received the reimbursement.

5. The owner or operator of the facility shall review annually the estimate of the cost to close the facility upon which the bond or other mechanism of financial assurance is based and submit the estimate to the solid waste management authority for its review and approval.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

NAC 444.74779 Compliance with plans for design and operation; suspension or revocation of approval to operate. ([NRS 444.560](#))

1. A materials recovery facility must comply with the plans for the design and operation of the facility approved by the solid waste management authority. A materials recovery facility must not:

- (a) Contribute to the pollution of the air or waters of the State;
- (b) Cause an impairment of the environment;
- (c) Cause a health or safety hazard to employees of the facility or the general public; or
- (d) Cause a public nuisance.

2. The solid waste management authority may suspend or revoke its approval to operate a materials recovery facility if the owner or operator of the facility fails to comply with the provisions of [NAC 444.7474](#) to [444.74779](#), inclusive.

(Added to NAC by Environmental Comm'n by R173-99, eff. 2-9-2000)

Appeals and Requests for Variance

NAC 444.748 Petition for variance; appeals. ([NRS 444.558](#), [444.560](#), [444.590](#))

1. Any person who believes that an alternative to any standard specified in [NAC 444.570](#) to [444.7499](#), inclusive, will comply with the intent of the specified standard and will protect public health and the environment, may petition the State Environmental Commission for a variance in accordance with its procedural rules. A variance may not be granted if it is inconsistent with the federal criteria for landfills set forth in 40 C.F.R. Part 258, as that part existed on November 8, 1993.

2. Any person who wishes to appeal from a decision or action of the Division may do so. Such an appeal must be made in writing in accordance with the State Environmental Commission's procedural rules.

[Environmental Comm'n, Solid Waste Mgt Reg. §§ 6.1 & 6.2, eff. 9-21-77]—(NAC A 11-8-93; 3-1-94; R123-11, 5-30-2012)

Groundwater Monitoring and Corrective Action

NAC 444.7481 Suspension and continuation of monitoring requirements. ([NRS 444.560](#))

1. The requirements for monitoring groundwater set forth in [NAC 444.7483](#) to [444.7492](#), inclusive, may be suspended by a solid waste management authority for a municipal solid waste landfill unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that unit to the uppermost aquifer during the active life of the unit, including the period of closure and postclosure. The demonstration must be certified by a qualified groundwater scientist and approved by the solid waste management authority. The demonstration must be based upon:

- (a) Measurements collected at specific field sites and the sampling and analysis of physical, chemical and biological processes affecting the fate and transportation of contaminants; and
- (b) Predictions of the fate and transportation of contaminants which are based on the maximum possible rate of the migration of the contaminants and a consideration of the impacts on public health and safety and the environment.

2. Once monitoring of groundwater begins at a municipal solid waste landfill unit, the owner or operator of the unit shall continue to monitor the groundwater throughout the active life of the unit, including the period of closure and postclosure, as specified in [NAC 444.6894](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94; 11-9-95; 11-9-95)

NAC 444.7482 Alternative schedule for complying with monitoring requirements. ([NRS 444.560](#))

1. A solid waste management authority may establish an alternative schedule for the owners or operators of existing municipal solid waste landfill units or lateral expansions within the area of its jurisdiction to comply with [NAC 444.7483](#) to [444.7499](#), inclusive. The schedule must ensure that at least 50 percent of all existing municipal solid waste landfill units within the area of its jurisdiction are in compliance by October 9, 1994, and all existing municipal solid waste landfill units within the area of its jurisdiction are in compliance by October 9, 1996. In establishing the schedule for compliance, the solid waste management authority shall consider potential risks posed by the units or lateral expansions to public health and safety and the environment, including the:

- (a) Proximity of persons and environmental conditions that may be affected by those risks;
- (b) Design of the municipal solid waste landfill unit;
- (c) Age of the municipal solid waste landfill unit;
- (d) Size of the municipal solid waste landfill unit;
- (e) Types and quantities of wastes disposed of at the unit, including sewage sludge; and
- (f) Resource value of the underlying aquifer, including:
 - (1) Its current and future uses;
 - (2) Its proximity and rate of withdrawal of users; and
 - (3) The quality and quantity of groundwater.

2. The solid waste management authority may establish alternative schedules for demonstrating compliance with:

- (a) The provisions of [NAC 444.7483](#) that require notification of the placement of the certification in the operating plan;
- (b) The provisions of [NAC 444.7489](#) relating to:

- (1) Notification and the placement of the notice in the operating record of any statistically significant increase in levels of constituents listed in Appendix I; and
 - (2) The program for assessment monitoring;
 - (c) The provisions of [NAC 444.749](#) relating to:
 - (1) The sampling and analyzing of constituents listed in Appendix II;
 - (2) Placement in the operating record of the notice that constituents listed in Appendix II have been detected and notification of that notice; and
 - (3) Sampling for constituents listed in Appendix I or II;
 - (d) The provisions of [NAC 444.7491](#) relating to notification and the placement of the notice in the operating record of any statistically significant increase above the standard for the protection of groundwater;
 - (e) The provisions of [NAC 444.7491](#) and [444.7493](#) relating to the assessment of corrective measures;
 - (f) The provisions of [NAC 444.7494](#) relating to the selection of a remedy and notification of the placement of documents relating to the selection in the operating record; and
 - (g) The provisions of [NAC 444.7498](#) and [444.7499](#) relating to the notification of the placement in the operating record of:
 - (1) Alternative measures of corrective action; and
 - (2) Certification of the completion of the remedy.
- (Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7483 Requirements concerning system for monitoring groundwater. ([NRS 444.560](#))

1. The owner or operator of a municipal solid waste landfill unit shall install a system for monitoring groundwater which consists of a sufficient number of wells, installed at appropriate locations and depths, to yield samples of groundwater from the uppermost aquifer which:
 - (a) Represent the quality of background groundwater which has not been affected by leakage from the unit. A determination of background quality may include the sampling of wells that are not hydraulically upgradient of the waste management area if:
 - (1) Hydrogeologic conditions do not allow the owner or operator to determine which wells are hydraulically upgradient; or
 - (2) Sampling at other wells will provide an indication of the quality of the background groundwater which is as representative or more representative than that provided by the upgradient wells.
 - (b) Represent the quality of groundwater at the boundary of the waste management unit.
 - ↪ The monitoring system must be installed to ensure detection of contaminants in the groundwater in the uppermost aquifer. When physical obstacles preclude installation of wells to monitor groundwater at the boundary of the waste management unit, a downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the boundary which ensures detection of contamination of groundwater in the uppermost aquifer.
2. If a disposal site has more than one municipal solid waste management landfill unit, the solid waste management authority may approve a system for monitoring groundwater with multiple units instead of separate systems for each municipal solid waste landfill unit, if the system complies with the requirements of subsection 1 and is as protective of public health and safety and the environment as the separate systems. To approve a system with multiple units, the solid waste management authority shall consider the:

- (a) Number, spacing and orientation of the municipal solid waste landfill units;
- (b) Hydrogeologic setting;
- (c) History of the disposal site;
- (d) Engineering design of the municipal solid waste landfill units; and
- (e) Type of waste accepted at the municipal solid waste landfill units.

3. Monitoring wells must be cased in a manner which maintains the integrity of the bore hole of the monitoring well. The casing must be screened or perforated and packed with gravel or sand, if necessary, to enable the collection of samples of groundwater. The annular space above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

4. The owner or operator shall notify the solid waste management authority that documentation concerning the design, installation, development and decommission of any monitoring wells, piezometers and other measurement, sampling and analytical devices has been placed in the records of the site. The monitoring wells, piezometers and other measurement, sampling and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

5. The number, spacing and depths of the monitoring systems must be:

(a) Determined based upon technical information for each specific site, including a thorough characterization of the:

(1) Thickness of the aquifer and the rate and direction of the flow of groundwater, including seasonal and temporal fluctuations; and

(2) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, without limitation, the thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities of these materials; and

(b) Certified by a qualified groundwater scientist and approved by the solid waste management authority. Within 14 days after receiving certification and approval, the owner or operator shall place the certification in the records for the site.

6. As used in this section:

(a) "Annular space" means the space between the bore hole and well casing.

(b) "Boundary of the waste management unit" means a vertical surface located at the hydraulically downgradient limit of the unit that extends down in the uppermost aquifer.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7484 Program for sampling and analysis. ([NRS 444.560](#))

1. The owner or operator shall notify the solid waste management authority that the documentation of the program for sampling and analysis has been placed in the records of the disposal site.

2. A system for monitoring groundwater must include:

(a) Consistent sampling and analytical procedures designed to ensure monitoring results which provide an accurate representation of the quality of the background and downgradient groundwater at the monitoring wells installed in compliance with [NAC 444.7483](#).

(b) Procedures and techniques for:

(1) The collection, preservation and shipment of samples;

(2) Analyzing samples;

- (3) The control of the chain of custody; and
- (4) Quality assurance and quality control.

(c) Methods for sampling and analysis which are appropriate for sampling groundwater and which accurately measure hazardous constituents and other monitoring parameters in samples of groundwater. Samples of groundwater must not be filtered in the field before they are analyzed in the laboratory.

3. The sampling procedures and frequency must be protective of public health and safety and the environment.

4. Each time groundwater is sampled, the elevations of groundwater must be measured in each well immediately before purging and the owner or operator shall determine the rate and direction of the flow of groundwater. The elevations of groundwater in wells which monitor the same disposal site must be measured within a period that is short enough to avoid temporal variations in the flow of groundwater which could preclude an accurate determination of the rate of flow and direction of groundwater.

5. The owner or operator shall determine the quality of the background groundwater in a hydraulically upgradient or background well for each of the monitoring parameters or constituents required by the system for monitoring groundwater which applies to the municipal solid waste landfill unit, as determined pursuant to [NAC 444.7487](#) or [444.749](#). The quality of the background groundwater may be determined at wells that are not located hydraulically upgradient from the municipal solid waste landfill unit if the monitoring system meets the requirements of [NAC 444.7483](#).

6. The number of samples collected to establish data concerning the quality of groundwater must be consistent with the appropriate statistical procedures set forth in [NAC 444.7485](#). The sampling procedures used must be those specified by [NAC 444.7488](#) for detection monitoring, [NAC 444.749](#) for assessment monitoring and [NAC 444.7493](#) for corrective action.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7485 Statistical methods for evaluating data; performance standards. ([NRS 444.560](#))

1. An owner or operator shall specify in the records for the disposal site one of the following statistical methods to be used in evaluating data from monitoring groundwater for each hazardous constituent:

(a) A parametric analysis of variance followed by procedures for multiple comparisons to identify statistically significant evidence of contamination. This method must include an estimation and testing of the contrasts between the mean for each compliance well and the background mean levels for each constituent.

(b) An analysis of variance based on ranks followed by procedures for multiple comparisons to identify statistically significant evidence of contamination. This method must include an estimation and testing of the contrasts between the median for each compliance well and the background median levels for each constituent.

(c) A procedure using tolerance or predictional intervals whereby an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(d) A procedure using a control chart which gives limits of control for each constituent.

(e) Any other statistical method which meets the performance standards set forth in subsection 3. The owner or operator shall place a written justification for using the statistical

method in the operating records for the disposal site and notify the solid waste management authority of the use of this alternative method. The justification must demonstrate that the alternative method meets the performance standards set forth in subsection 3.

2. The statistical method chosen pursuant to this section must be conducted separately for each hazardous constituent in each well.

3. Any statistical method chosen pursuant to this section must comply with the following performance standards, as appropriate:

(a) The statistical method used to evaluate data from monitoring groundwater must be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data must be transformed or a theory test that does not use data from the distribution of chemical parameters or hazardous constituents must be used. If the distributions for the constituents differ, more than one statistical method may be used, if needed.

(b) If a procedure which compares individual wells is used to compare the concentration of constituents for an individual compliance well with background concentrations of constituents or a standard for the protection of groundwater, the test must be done at a Type I error level that is no less than 0.01 for each testing period. If a procedure using multiple comparisons is used, the Type I error level for each testing period must be no less than 0.05, and the Type I error level of no less than 0.01 for comparisons of individual wells must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.

(c) If a control chart is used to evaluate data, the control chart and its associated values for its parameters must be protective of public health and safety and the environment. The parameters must be determined after considering the number of samples in the background database, the distribution of data and the range of the concentration values for each constituent.

(d) If a tolerance interval or a prediction interval is used to evaluate data from monitoring groundwater, the levels of confidence and, for tolerance intervals, the percentage of the population of samples which the interval must contain, must be protective of public health and safety and the environment. These parameters must be determined after considering the number of samples in the background database, the data distribution and the range of the concentration values for each constituent of concern.

(e) The statistical method must account for data below the limit of detection with one or more statistical procedures which are protective of public health and safety and the environment. Any practical quantitation limit which is used in the statistical method must be the lowest concentration level which can be reliably achieved within specified limits of precision and accuracy during routine conditions for the operation of a laboratory which are available to the disposal site.

(f) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability and temporal correlation in the data.

4. As used in this section, "Type I error" means an error which occurs when a true null hypothesis is rejected erroneously and, as a result, a test for the monitoring of groundwater incorrectly indicates contamination or an increase in contamination at a regulated unit.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7486 Determination of statistically significant increase over background values. ([NRS 444.560](#))

1. Within 14 days after completing sampling and analysis, the owner or operator shall determine whether there is a statistically significant increase over background values for each parameter or constituent at each monitoring well required in the system for monitoring groundwater which applies to the municipal solid waste landfill unit, as determined pursuant to [NAC 444.7487](#) or [444.749](#).

2. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the quality of the groundwater of each parameter or constituent at each monitoring well designated pursuant to [NAC 444.7483](#) to the background value of that constituent, according to the statistical procedures and performance standards set forth in [NAC 444.7485](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7487 Constituents required to be monitored; establishment of list of alternative parameters for inorganic materials. ([NRS 444.560](#))

1. An owner or operator shall monitor constituents at all wells monitoring groundwater pursuant to [NAC 444.7483](#). At a minimum, the constituents listed in Appendix I must be monitored.

2. The solid waste management authority may delete any of the parameters for monitoring constituents listed in Appendix I for a municipal solid waste landfill unit if it is shown that the deleted constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

3. The solid waste management authority may establish a list of alternative parameters for inorganic materials for a municipal solid waste landfill unit, in lieu of any of the following:

- (a) Antimony;
- (b) Arsenic;
- (c) Barium;
- (d) Beryllium;
- (e) Cadmium;
- (f) Chromium;
- (g) Cobalt;
- (h) Copper;
- (i) Lead;
- (j) Nickel;
- (k) Selenium;
- (l) Silver;
- (m) Thallium;
- (n) Vanadium; and
- (o) Zinc,

↪ if the alternative parameters provide a reliable indication of releases of inorganic materials from the municipal solid waste landfill unit into the groundwater.

4. In establishing alternative parameters, the solid waste management authority shall consider:

(a) The types, quantities and concentrations of constituents in waste managed at the municipal solid waste landfill unit;

(b) The mobility, stability and persistence of constituents or their reaction products in the unsaturated zone beneath the municipal solid waste landfill unit;

(c) The detectability of indicator parameters, constituents and reaction products in the groundwater; and

(d) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7488 Program for detection monitoring. ([NRS 444.560](#))

1. Except as otherwise provided in subsection 2, all constituents listed in Appendix I or in the list of alternative parameters established pursuant to [NAC 444.7487](#) must be monitored at least semiannually during the active life of a municipal solid waste landfill unit, including the period of closure and postclosure. At least four independent samples from each background and downgradient well must be collected and analyzed for the constituents during the first semiannual sampling. At least one sample from each background and downgradient well must be collected and analyzed during subsequent semiannual sampling.

2. The solid waste management authority may specify an appropriate alternative schedule for monitoring constituents listed in Appendix I or the list of alternative parameters. The alternative schedule may require monitoring not less than annually. The alternative schedule must be based on the:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Rate of flow of groundwater;

(d) Minimum distance between the upgradient edge of the municipal solid waste landfill unit and downgradient monitoring well screen; and

(e) Resource value of the aquifer.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7489 Procedures upon determination of statistically significant increase of Appendix I constituents or alternative parameters. ([NRS 444.560](#))

1. If an owner or operator determines, pursuant to [NAC 444.7485](#), that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I or the list of alternative parameters established pursuant to [NAC 444.7487](#), at any monitoring well at the boundary specified by [NAC 444.7483](#), the owner or operator shall:

(a) Within 14 days after making this determination, place a notice in the records of the disposal site indicating which constituents have shown statistically significant increases and notify the solid waste management authority that this notice was placed in the operating records; and

(b) Except as otherwise provided in subsection 2, establish a program for assessment monitoring pursuant to [NAC 444.749](#) and [444.7491](#) within 90 days after making the determination.

2. The owner or operator may demonstrate that a source other than a municipal solid waste landfill unit caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis or statistical evaluation or from a natural variation in the quality of groundwater. A report documenting this demonstration must be certified by a qualified groundwater scientist, approved by the solid waste management authority and placed in the operating records of the disposal site. If a successful demonstration is made and approved, the owner or operator may continue monitoring constituents as specified in this section and [NAC](#)

[444.7487](#) and [444.7488](#). If, after 90 days, a successful demonstration is not made, the owner or operator shall initiate a program for assessment monitoring pursuant to [NAC 444.749](#) and [444.7491](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.749 Program for assessment monitoring. ([NRS 444.560](#))

1. If a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or the list of alternative parameters established pursuant to [NAC 444.7487](#), an owner or operator shall establish a program for assessment monitoring.

2. Except as otherwise provided in subsection 3, within 90 days after initiating a program for assessment monitoring, and annually thereafter, the owner or operator shall sample and analyze the groundwater for all constituents identified in Appendix II. At least one sample from each downgradient well must be collected and analyzed during each sampling. For any constituent detected in the downgradient wells as a result of this analysis, at least four independent samples from each background and downgradient well must be collected and analyzed to establish background for the constituents. The solid waste management authority may specify an appropriate subset of wells to be sampled and analyzed for constituents listed in Appendix II during assessment monitoring. The solid waste management authority may delete any of the parameters for monitoring constituents listed in Appendix II for a municipal solid waste landfill unit if it is shown that the deleted constituents are not reasonably expected to be in or derived from the waste contained in the unit.

3. The solid waste management authority may specify an appropriate alternative schedule for monitoring all constituents listed in Appendix II. The alternative schedule must be based on the:

- (a) Lithology of the aquifer and unsaturated zone;
- (b) Hydraulic conductivity of the aquifer and unsaturated zone;
- (c) Rate of flow of groundwater;
- (d) Minimum distance between the upgradient edge of the municipal solid waste landfill unit and downgradient monitoring well screen;
- (e) Resource value of the aquifer; and
- (f) Nature, fate and transportation of any constituents detected in accordance with this section.

4. After obtaining the results from the initial or subsequent samplings pursuant to subsection 2 or 3, the owner or operator shall:

(a) Within 14 days, place a notice in the operating records of the disposal site identifying the constituents listed in Appendix II which have been detected and submit the sampling results to the solid waste management authority.

(b) Within 90 days, and on at least a semiannual basis thereafter:

- (1) Resample all wells specified by [NAC 444.7483](#);
- (2) Conduct analyses for all constituents listed in Appendix I or the list of alternative parameters established pursuant to [NAC 444.7487](#), and for those constituents in Appendix II which are detected as a result of sampling pursuant to subsection 2 or 3; and
- (3) Record their concentrations in the operating records for the disposal site.

↪ At least one sample from each background and downgradient well must be collected and analyzed during the samplings. The solid waste management authority may specify an alternative schedule for monitoring the constituents referred to in this section. The alternative schedule for

constituents listed in Appendix I or the list of alternative parameters established pursuant to [NAC 444.7487](#) may not require monitoring not less than annually. The alternative schedule must be based on the factors specified in subsection 3.

(c) Establish background concentrations for any constituents detected pursuant to paragraph (b) or subsection 2 or 3.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7491 Procedures upon determination of concentrations of Appendix II constituents. ([NRS 444.560](#))

1. If the concentrations of all constituents listed in Appendix II are shown to be at or below background values, using the statistical procedures set forth in [NAC 444.7485](#), for two consecutive samplings, the owner or operator shall notify the solid waste management authority of this finding and may return to the monitoring procedures set forth in [NAC 444.7488](#).

2. If the concentrations of any constituents listed in Appendix II are above background values, but all concentrations are below the standard for the protection of groundwater established pursuant to [NAC 444.7492](#), using the statistical procedures in [NAC 444.7485](#), the owner or operator shall continue monitoring in accordance with this section.

3. Except as otherwise provided in subsection 4, if one or more constituents listed in Appendix II are detected at statistically significant levels above the standard for the protection of groundwater in any sampling, the owner or operator shall:

(a) Within 14 days of this finding, place a notice in the operating records for the disposal site identifying the constituents which have exceeded the standard and notify the solid waste management authority and all appropriate local government officials that the notice has been placed in the operating records;

(b) Characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(c) Install at least one additional monitoring well at the boundary of the municipal solid waste landfill unit in the direction of the migration of the contaminant and sample this well in accordance with [NAC 444.749](#);

(d) Notify all persons who own or reside on the land which directly overlies any part of the plume of contamination if contaminants have migrated off the site as indicated by the sampling of wells in accordance with this section; and

(e) Initiate an assessment of corrective measures pursuant to [NAC 444.7493](#).

4. In lieu of complying with the provisions of subsection 3, the owner or operator may demonstrate that a source other than a municipal solid waste landfill unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis or statistical evaluation or from a natural variation in the quality of the groundwater. A report documenting this demonstration must be certified by a qualified groundwater scientist, approved by the solid waste management authority and placed in the operating records of the unit. If a successful demonstration is made, the owner or operator shall continue monitoring in accordance with the program for assessment pursuant to this section, and may return to detection monitoring if the constituents are at or below background in accordance with subsection 1. Until a successful demonstration is made, the owner or operator shall comply with the provisions of subsection 3.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7492 Establishment of standard for protection of groundwater. ([NRS 444.560](#))

1. The Administrator shall establish a standard for the protection of groundwater for each constituent listed in Appendix II detected in the groundwater as follows:

(a) For a constituent for which a maximum contaminant level has been set forth pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq., and 40 C.F.R. Part 141, as those sections existed on November 8, 1993, the maximum contaminant level for that constituent.

(b) For a constituent for which a maximum contaminant level has not been adopted, a level equal to:

(1) The background concentration of the constituent; or

(2) An appropriate level that is based on the protection of public health and safety and complies with the following requirements:

(I) The level must be established in compliance with state and federal guidelines for assessing the health risks of environmental pollutants;

(II) The level must be based on scientific studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards, 40 C.F.R. Part 792, as those standards exist on March 1, 1994, or equivalent studies;

(III) For carcinogens, the level must represent a concentration of the constituent that is associated with an excess risk of cancer caused by a continuous lifetime exposure which is within a range of 1×10^{-4} to 1×10^{-6} , inclusive; and

(IV) For systemic toxicants, the level must represent a concentration to which a human being could be exposed on a daily basis without an appreciable risk of deleterious effects during the course of his or her lifetime. As used in this sub-subparagraph, "systemic toxicant" includes toxic chemicals that cause deleterious effects other than cancer or a mutation.

(c) For a constituent for which the background level is higher than the maximum contaminant level set forth in paragraph (a), the background concentration of the constituent.

2. In establishing standards pursuant to paragraph (b) of subsection 1, the Administrator may consider:

(a) Multiple contaminants in the groundwater;

(b) Potential threats to sensitive areas of the environment; and

(c) Other threats specific to that site or potential threats to groundwater.

(Added to NAC by Environmental Comm'n, eff. 11-8-93; A 3-1-94)

NAC 444.7493 Assessment of corrective measures upon determination that level of any Appendix II constituent exceeds standard for protection of groundwater; public notice and comment. ([NRS 444.560](#))

1. Within 90 days after finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the standards for the protection of groundwater established pursuant to [NAC 444.7492](#), the owner or operator shall initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period specified by the solid waste management authority and submitted for review and approval by the solid waste management authority.

2. The owner or operator shall continue monitoring in accordance with [NAC 444.749](#) and [444.7491](#) until the solid waste management authority approves the assessment of corrective measures.

3. The assessment must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy in accordance with [NAC 444.7494](#), [444.7495](#) and [444.7496](#), including, but not limited to:

- (a) The performance, reliability, ease of implementation and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts and the control of exposure to any residual contamination;
- (b) The time required to begin and complete the remedy;
- (c) The costs of carrying out the remedy; and
- (d) Any state or local statutory or regulatory requirements or other environmental or public health and safety requirements which may substantially affect the implementation of the remedy.

4. The solid waste management authority shall issue a public notice and accept public comment for 30 days before the selection of a remedy. If requested during the period of public comment, a public hearing must be held to discuss the assessment of corrective measures.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7494 Selection and approval of remedy by solid waste management authority. ([NRS 444.560](#))

1. Based on the results of the assessment of corrective measures conducted pursuant to [NAC 444.7493](#) and the public comments received, if any, the solid waste management authority may approve a remedy which:

- (a) Is protective of public health and safety and the environment;
- (b) Complies with the standard for the protection of groundwater established pursuant to [NAC 444.7492](#);
- (c) Controls the sources of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of constituents listed in Appendix II which may pose a threat to the public health and safety or the environment; and
- (d) Complies with standards for the management of wastes as specified in subsection 3 of [NAC 444.7498](#).

2. In selecting a remedy, the solid waste management authority shall consider:

- (a) The long-term and short-term effectiveness and protectiveness of a potential remedy, and the degree of certainty that the remedy will prove successful, based on the:
 - (1) Magnitude of reducing existing risks;
 - (2) Magnitude of residual risks and the likelihood of further releases caused by waste remaining after the implementation of a potential remedy;
 - (3) Type and degree of long-term management required, including monitoring, operation and maintenance;
 - (4) Short-term risks which might be posed to the community, workers or the environment during implementation of a potential remedy, including potential threats to public health and safety and the environment associated with the excavation, transportation, and redisposal or containment of the constituent;
 - (5) Time until full protection is achieved;
 - (6) Potential for exposure of persons and environmental conditions to remaining wastes, considering the potential threat to public health and safety and the environment associated with the excavation, transportation, redisposal or containment;
 - (7) Long-term reliability of the engineering and institutional controls; and
 - (8) Potential need for the replacement of the remedy.

- (b) The effectiveness of the remedy in controlling the source to reduce further releases based on the extent to which:
 - (1) Practices for containment will reduce further releases; and
 - (2) Technologies for treatment may be used.
 - (c) The ease or difficulty of carrying out a potential remedy based on the consideration of the following factors:
 - (1) The degree of difficulty associated with constructing the technology;
 - (2) The expected operational reliability of the technologies;
 - (3) The need to coordinate with and obtain necessary approvals and permits from other agencies;
 - (4) The availability of necessary equipment and specialists; and
 - (5) The available capacity and location of needed treatment, storage and disposal services.
 - (d) The practicable capability of the owner or operator to carry out the remedy, including a consideration of his or her technical and economic capability.
 - (e) The degree to which concerns of the community are addressed by the potential remedy.
- (Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7495 Schedule for initiation and completion of remedial activities. ([NRS 444.560](#)) An owner or operator shall submit to the solid waste management authority a schedule for initiating and completing remedial activities. The schedule must require the initiation of remedial activities within a reasonable period and must be approved by the solid waste management authority. In proposing the schedule, the owner or operator shall consider:

1. The extent and nature of contamination;
 2. The practical capabilities of remedial technologies in achieving compliance with standards for the protection of groundwater established pursuant to [NAC 444.7492](#) and other objectives of the remedy;
 3. The availability of systems for the treatment or disposal of wastes managed during the implementation of the remedy;
 4. The desirability of utilizing technologies which are experimental or not widely available, but which may offer significant advantages over readily available technologies in terms of effectiveness, reliability, safety or ability to achieve remedial objectives;
 5. The potential risks to public health and safety and the environment from exposure to contamination before the completion of the remedy;
 6. The resource value of the aquifer, including:
 - (a) The current and future uses;
 - (b) The proximity and rate of withdrawal of users;
 - (c) The quantity and quality of groundwater;
 - (d) The potential damage to wildlife, crops, vegetation and physical structures caused by exposure to a constituent;
 - (e) The hydrogeologic characteristics of the disposal site and surrounding land;
 - (f) The cost of removing and treating groundwater; and
 - (g) The cost and availability of alternative water supplies;
 7. The practicable capability of the owner or operator to carry out the remedial activities;
- and
8. Any other relevant factors.
- (Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7496 Exemptions from requirement of remediation. (NRS 444.560)

1. The solid waste management authority and the Administrator may jointly determine that remediation of a release of a constituent listed in Appendix II from a municipal solid waste landfill unit is not necessary if the owner or operator demonstrates to the solid waste management authority and the Administrator that:

(a) The groundwater is additionally contaminated by substances that have originated from a source other than a municipal solid waste landfill unit and those substances are present in such concentrations that the clean up of the release from the municipal solid waste landfill unit would provide no significant reduction in risk to persons or environmental conditions that are or may be affected by the release;

(b) The constituents are present in groundwater which:

(1) Is not currently or reasonably expected to be a source of drinking water; and

(2) Is not hydraulically connected with waters to which the constituents are migrating or are likely to migrate in concentrations which would exceed the standards for the protection of groundwater established pursuant to [NAC 444.7492](#);

(c) Remediation of the releases is technically impracticable; or

(d) Remediation would result in unacceptable cross-media impacts.

2. The provisions of subsection 1 do not affect the authority of the Administrator or solid waste management authority to require the owner or operator to undertake measures to control the source of the constituent or any other measures which may be necessary to:

(a) Eliminate or minimize further releases to the groundwater;

(b) Prevent exposure of the groundwater to constituents; or

(c) Remediate the groundwater to concentrations which are technically practicable and significantly reduce threats to public health and safety and the environment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7497 Program for monitoring corrective action; performance of remedial activities; interim measures to protect public. (NRS 444.560) Based on the schedule established pursuant to [NAC 444.7495](#) for the initiation and completion of remedial activities, the owner or operator shall:

1. Establish and carry out a program for monitoring the corrective action for the groundwater which:

(a) At a minimum, meets the requirements for monitoring set forth in [NAC 444.749](#) and [444.7491](#);

(b) Indicates the effectiveness of the remedy; and

(c) Demonstrates compliance with the standard for the protection of groundwater in accordance with paragraph (b) of subsection 1 of [NAC 444.7499](#);

2. Carry out the remedy selected pursuant to [NAC 444.7494](#), [444.7495](#) and [444.7496](#); and

3. Take any interim measures necessary to ensure the protection of public health and safety and the environment. Interim measures must, to the greatest extent practicable, be consistent with the objectives, and contribute to the performance, of any remedy which may be required pursuant to [NAC 444.7494](#), [444.7495](#) and [444.7496](#). In determining whether interim measures are necessary, the owner or operator shall consider:

(a) The time required to develop and carry out a final remedy;

(b) The actual or potential exposure of nearby populations or environmental conditions to hazardous constituents;

(c) The actual or potential contamination of supplies for drinking water or sensitive ecosystems;

(d) The further degradation of the groundwater which may occur if remedial action is not initiated expeditiously;

(e) Weather conditions which may cause hazardous constituents to migrate or be released;

(f) The risk of fire or explosion, or the potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

(g) Any other situations which may pose threats to public health and safety and the environment.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7498 Ineffectiveness of selected remedy; impracticability of currently available methods of remediation. ([NRS 444.560](#))

1. The solid waste management authority may determine, based on information developed after the initiation of a remedy or any other information, that compliance with the requirements of [NAC 444.7494](#) is not being achieved by the remedy selected. If the solid waste management authority makes such a determination, the owner or operator shall carry out any other method or technique which could practicably comply with the requirements, unless the solid waste management authority determines pursuant to subsection 2 that compliance cannot be practicably achieved.

2. If the solid waste management authority and the Administrator determine that compliance with the requirements of [NAC 444.7494](#) cannot be practically achieved with any currently available methods, the owner or operator shall:

(a) Obtain certification from a qualified groundwater scientist and the approval of the solid waste management authority and Administrator that compliance with [NAC 444.7494](#) cannot be practically achieved with any currently available methods;

(b) Carry out alternative measures to control exposure of persons or the environment to residual contamination, as necessary to protect public health and safety and the environment;

(c) Carry out alternate measures for the control of the sources of contamination, or for the removal or decontamination of equipment, units, devices or structures which are:

(1) Technically practicable; and

(2) Consistent with the overall objective of the remedy; and

(d) Obtain the approval of the solid waste management authority and the Administrator for the alternative measures before carrying out those measures.

3. All solid wastes managed pursuant to a remedy required by [NAC 444.7494](#), [444.7495](#) and [444.7496](#) or an interim measure required by [NAC 444.7497](#) must be managed in a manner which:

(a) Is protective of public health and safety and the environment; and

(b) Complies with all applicable requirements set forth in the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 et seq., as that act existed on November 8, 1993.

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

NAC 444.7499 Remedy deemed complete; certification of completion. ([NRS 444.560](#))

1. A remedy selected pursuant to [NAC 444.7494](#), [444.7495](#) and [444.7496](#) shall be deemed to be complete when each of the following occurs:

(a) The owner or operator complies with the standards for the protection of groundwater established pursuant to [NAC 444.7492](#) at all points within the plume of contamination which lie beyond the system of wells for monitoring the groundwater established pursuant to [NAC 444.7483](#).

(b) The owner or operator demonstrates that concentrations of constituents listed in Appendix II have not exceeded the standards for the protection of groundwater for a period of 3 consecutive years using the statistical procedures and performance standards set forth in [NAC 444.7485](#). The solid waste management authority and Administrator may specify an alternative length of time during which the owner or operator may demonstrate that concentrations of constituents listed in Appendix II have not exceeded the standards for the protection of groundwater, taking into consideration the:

- (1) Extent and concentration of the release;
- (2) Behavioral characteristics of the constituents in the groundwater;
- (3) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological or other environmental variables which may affect the accuracy of those techniques; and
- (4) Characteristics of the groundwater.

(c) All actions required to complete the remedy have been taken.

2. Within 14 days after the completion of the remedy, the owner or operator shall notify the solid waste management authority that a certification that the remedy has been completed in compliance with the requirements of subsection 1 has been placed in the operating records of the disposal site. The certification must be signed by the owner or operator and a qualified groundwater scientist and approved by the solid waste management authority.

3. When, upon completion of the certification, the solid waste management authority determines that the remedy for corrective action has been completed in accordance with the requirements of subsection 1, the owner or operator is no longer required to comply with the requirements for financial assurance for corrective action pursuant to [NAC 444.6852](#).

(Added to NAC by Environmental Comm'n, eff. 11-8-93)

Appendix 7

Recycling
Nevada Revised Statutes
444A.010 – 444A.120

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CHAPTER 444A - PROGRAMS FOR RECYCLING

RECYCLING OR DISPOSAL OF SOLID WASTE AND OTHER WASTE

NRS 444A.010	Definitions.
NRS 444A.0103	“Apartment complex” defined.
NRS 444A.0107	“Condominium” defined.
NRS 444A.011	“Department” defined.
NRS 444A.012	“Municipality” defined.
NRS 444A.013	“Recyclable material” defined.
NRS 444A.014	“Recycling center” defined.
NRS 444A.015	“Solid waste” defined.
NRS 444A.016	“Tire for a vehicle” defined.
NRS 444A.017	“Vehicle” defined.
NRS 444A.020	Adoption of regulations establishing standards for recycling or disposal of solid waste; goal of standards; methods for disposal of used or waste tires.
NRS 444A.030	Adoption of model plan for recycling or disposal of solid waste or other waste; compliance with standards adopted by State Environmental Commission.
NRS 444A.040	Availability of programs for recycling or disposal of solid waste in certain counties and municipalities; approval of programs required; availability to residents of Indian reservation or colony.
NRS 444A.050	Report of effectiveness of program; notice of recycling opportunities; enforcement, review and proposed revisions of program by municipality.
NRS 444A.060	Unlawful to refuse to accept used or waste tires in exchange on purchase of new tire; notice of requirement; penalty.
NRS 444A.070	Report to Legislature on status of programs for recycling and reuse of materials.
NRS 444A.080	Adoption of regulations.

FEE FOR PURCHASE OF NEW TIRE

NRS 444A.090	Imposition and rate of fee; accounting for and disposition of money collected; powers and duties of Department of Taxation.
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PROGRAM OF PUBLIC EDUCATION

NRS 444A.110	Program of public education concerning disposal of solid waste, recycling, reuse and waste reduction; reduction of waste and litter; technical assistance; grants for projects concerning solid waste management systems and efficient use of resources; regulations governing administration of grants.
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PROGRAM FOR COLLECTION AND SEPARATION OF RECYCLABLE MATERIAL WHICH MAY BE USED AS SOURCE OF RENEWABLE ENERGY

NRS 444A.120	Establishment in larger counties; activities to be included in program; program must not conflict with certain standards adopted by State Environmental Commission.
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RECYCLING OR DISPOSAL OF SOLID WASTE AND OTHER WASTE

NRS 444A.010 Definitions. As used in [NRS 444A.010](#) to [444A.080](#), inclusive, unless the context otherwise requires, the words and terms defined in [NRS 444A.0103](#) to [444A.017](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NRS by [1991, 1668](#); A [1993, 17, 1441](#); [2009, 832](#))

NRS 444A.0103 “Apartment complex” defined. “Apartment complex” means a building or group of buildings, each building of which consists of at least five units of connecting rooms, with each unit designed for independent housekeeping.

(Added to NRS by [2009, 831](#))

NRS 444A.0107 “Condominium” defined. “Condominium” has the meaning ascribed to it in [NRS 117.010](#).

(Added to NRS by [2009, 832](#))

NRS 444A.011 “Department” defined. “Department” means the State Department of Conservation and Natural Resources.

(Added to NRS by [1993, 1441](#))

NRS 444A.012 “Municipality” defined. “Municipality” means a county, city, town, general improvement district or health district created pursuant to [NRS 439.362](#) or [439.370](#) or other political subdivision of this State which has jurisdiction over the management of solid waste.

(Added to NRS by [1993, 1441](#); A [2005, 2470](#))

NRS 444A.013 “Recyclable material” defined. “Recyclable material” means solid waste that can be processed and returned to the economic mainstream in the form of raw materials or products, as determined by the State Environmental Commission.

(Added to NRS by [1993, 1441](#))

NRS 444A.014 “Recycling center” defined. “Recycling center” means a facility designed and operated to receive, store, process or transfer recyclable material which has been separated at the source from other solid waste.

(Added to NRS by [1993, 1441](#))

NRS 444A.015 “Solid waste” defined. “Solid waste” has the meaning ascribed to it in [NRS 444.490](#).

(Added to NRS by [1993, 1441](#))

NRS 444A.016 “Tire for a vehicle” defined. “Tire for a vehicle” includes a tire for a motorized vehicle that is 12 inches or larger in diameter, but does not include a recapped tire or used tire which is sold again.

(Added to NRS by [1993, 1441](#))

NRS 444A.017 “Vehicle” defined. “Vehicle” means any device in, upon or by which any person or property is or may be transported or drawn upon land. The term does not include:

1. Devices moved by human or electrical power;
 2. Commercial coaches as defined in [NRS 489.062](#);
 3. Electric personal assistive mobility devices as defined in [NRS 482.029](#); and
 4. Mobile homes as defined in [NRS 489.120](#).
- (Added to NRS by [1993, 1441](#); A [2003, 1207](#))

NRS 444A.020 Adoption of regulations establishing standards for recycling or disposal of solid waste; goal of standards; methods for disposal of used or waste tires.

1. The State Environmental Commission shall adopt regulations establishing minimum standards for:

(a) Separating at the source recyclable material from other solid waste originating from residential premises and public buildings where services for the collection of solid waste are provided, including, without limitation, the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.

(b) Establishing recycling centers for the collection and disposal of recyclable material.

(c) The disposal of hazardous household products which are capable of causing harmful physical effects if inhaled, absorbed or ingested.

2. The regulations adopted 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 following the adoption of such standards.

3. The State Environmental Commission shall, by regulation, establish acceptable methods for disposing of used or waste tires consistent with the provisions of [NRS 444.505](#), [444.507](#) and [444.509](#).

(Added to NRS by [1991, 1668](#); A [1999, 3178](#); [2009, 1085](#); [2011, 1319](#))

NRS 444A.030 Adoption of model plan for recycling or disposal of solid waste or other waste; compliance with standards adopted by State Environmental Commission.

1. The Division of Environmental Protection of the Department shall, by regulation, adopt a model plan for:

(a) Separating at the source recyclable material from other solid waste originating from residential premises and public buildings where services for the collection of solid waste are provided, including, without limitation, the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.

(b) Establishing recycling centers for the collection and disposal of recyclable material in areas where there are no centers.

(c) The disposal of hazardous household products which are capable of causing harmful physical effects if inhaled, absorbed or ingested.

(d) The disposal of infectious waste, hazardous waste which is not regulated pursuant to [NRS 459.485](#) and liquid waste which is not regulated pursuant to [NRS 445A.300](#) to [445A.730](#), inclusive.

2. The model plans adopted pursuant to subsection 1 must not conflict with the standards adopted by the State Environmental Commission pursuant to [NRS 444A.020](#).

(Added to NRS by [1991, 1669](#); A [1999, 3178](#); [2011, 1320](#))

NRS 444A.040 Availability of programs for recycling or disposal of solid waste in certain counties and municipalities; approval of programs required; availability to residents of Indian reservation or colony.

1. The board of county commissioners in a county whose population is 100,000 or more, or its designee, shall make available for use in that county a program for:

(a) The separation at the source of recyclable material from other solid waste originating from residential premises and public buildings where services for the collection of solid waste are provided, including, without limitation, the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.

(b) The establishment of recycling centers for the collection and disposal of recyclable material where existing recycling centers do not carry out the 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 other program made available pursuant to this subsection.

(d) The encouragement of businesses to reduce solid waste and to separate at the source recyclable material from other solid waste. This program must, without limitation, make information regarding solid waste reduction and recycling opportunities available to a business at the time the business applies for or renews a business license.

2. The board of county commissioners of a county whose population is 45,000 or more but less than 100,000, or its designee:

(a) May make available for use in that county a program for the separation at the source of recyclable material from other solid waste originating from residential premises and public buildings where services for the collection of solid waste are provided, including, without limitation, the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.

(b) Shall make available for use in that county a program for:

(1) The establishment of recycling centers for the collection and disposal of recyclable material where existing recycling centers do not carry out the purposes of the program established pursuant to paragraph (a).

(2) 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 other program made available pursuant to this subsection.

3. The board of county commissioners of a county whose population is less than 45,000, or its designee, may make available for use in that county a program for:

(a) The separation at the source of recyclable material from other solid waste originating from residential premises and public buildings where services for the collection of solid waste are provided, including, without limitation, the placement of recycling containers on the premises of apartment complexes and condominiums where those services are provided.

(b) The establishment of recycling centers for the collection and disposal of recyclable material where existing recycling centers do not carry out the 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 other program made available pursuant to this subsection.

4. Any program made available pursuant to this section:

(a) Must not:

(1) Conflict with the standards adopted by the State Environmental Commission pursuant to [NRS 444A.020](#); and

(2) Become effective until approved by the Department.

(b) May be based on the model plans adopted pursuant to [NRS 444A.030](#).

5. The governing body of a municipality may adopt and carry out within the municipality such programs made available pursuant to this section as are deemed necessary and appropriate for that municipality.

6. Any municipality may, with the approval of the governing body of an adjoining municipality, participate in any program adopted by the adjoining municipality pursuant to subsection 5.

7. Persons residing on an Indian reservation or Indian colony may participate in any program adopted pursuant to subsection 5 by a municipality in which the reservation or colony is located if the governing body of the reservation or colony adopts an ordinance requesting such participation. Upon receipt of such a request, the governing body of the municipality shall make available to the residents of the reservation or colony those programs requested.

(Added to NRS by [1991, 1669](#); A [1995, 506](#); [1999, 3179](#); [2001, 1990](#); [2005, 1501](#); [2009, 832](#); [2011, 1258](#))

NRS 444A.050 Report of effectiveness of program; notice of recycling opportunities; enforcement, review and proposed revisions of program by municipality.

1. A county or health district that adopts a program pursuant to [NRS 444A.040](#) shall:

(a) On or before July 1 of each year, submit a report to the Department of the number of tons of material disposed of in the area covered by the program.

(b) Within 6 months after adopting the program, and at least once every 6 months thereafter, notify all persons occupying residential, commercial, governmental and institutional premises within the area covered by the program of the local recycling opportunities and the need to reduce the amount of waste generated.

2. The governing body of a municipality that adopts a program pursuant to [NRS 444A.040](#) shall:

(a) Adopt such ordinances as are necessary for the enforcement of the program.

(b) At least once every 24 months, conduct a review of the program and propose such revisions to the program and any ordinances adopted pursuant thereto as the governing body determines are necessary and appropriate. The findings of the review and any proposed revisions must be submitted to the Department for approval on or before July 30 of each even-numbered year.

(Added to NRS by [1991, 1670](#); A [1999, 3180](#); [2005, 1502](#))

NRS 444A.060 Unlawful to refuse to accept used or waste tires in exchange on purchase of new tire; notice of requirement; penalty.

1. A person who offers a tire for a vehicle for sale at retail shall post at the point of purchase a written notice which is at least 8 1/2 inches by 11 inches in size and contains the following information:

NOTICE

State law requires us to accept used tires for disposal or recycling when new tires are purchased from us.

2. It is unlawful for a person who offers a tire for a vehicle for retail sale to refuse to accept used or waste tires in exchange on the purchase of a new tire. This section does not require the purchaser of a tire to provide a used or waste tire as a condition of his or her purchase of a new tire. The seller shall comply with the regulations of the State Environmental Commission regarding the proper disposal of the used or waste tires so collected. In addition to any other applicable penalty, any person who violates the provisions of this subsection is guilty of a misdemeanor and shall be fined not less than \$100 for each day of violation.

(Added to NRS by [1991, 1668](#); A [2005, 1502](#))

NRS 444A.070 Report to Legislature on status of programs for recycling and reuse of materials. The Director of the Department shall deliver to the Director of the Legislative Counsel Bureau a biennial report on or before January 31 of each odd-numbered year for submission to the Legislature on the status of current and proposed programs for recycling and reuse of materials and on any other matter relating to recycling and reuse which he or she deems appropriate.

(Added to NRS by [1991, 1668](#))

NRS 444A.080 Adoption of regulations.

1. The State Environmental Commission shall adopt regulations necessary to enforce the provisions of [NRS 444A.010](#) to [444A.070](#), inclusive.

2. The State Environmental Commission may adopt any other regulations necessary to carry out the provisions of [NRS 444A.010](#) to [444A.070](#), inclusive.

(Added to NRS by [1991, 1670](#))

FEE FOR PURCHASE OF NEW TIRE

NRS 444A.090 Imposition and rate of fee; accounting for and disposition of money collected; powers and duties of Department of Taxation.

1. A person who sells a new tire for a vehicle to a customer for any purpose other than for resale by the customer in the ordinary course of business shall collect from the purchaser at the time the person collects the applicable sales taxes for the sale a fee of \$1 per tire. A person who did not pay the fee imposed by this section at the time of purchase because he or she purchased the new tire for resale and who then makes any use of that tire other than to resell it in the ordinary course of business, shall pay the fee imposed by this section to the Department of Taxation at the time of the first use of that tire for a purpose other than holding it for resale.

2. The seller shall account separately for all money received pursuant to subsection 1 as a deposit to be held in trust for the State. In accordance with the regulations adopted pursuant to subsection 3, the seller shall transmit 95 percent of the money held in trust pursuant to this section to the Department of Taxation for deposit with the State Treasurer for credit to the Solid Waste Management Account in the State General Fund. The remaining 5 percent and all interest

and income which accrued on the money while in trust with the seller become the property of the seller on the day the balance for the month is transmitted to the Department of Taxation and may be retained by the seller to cover his or her related administrative costs.

3. The Director of the Department of Taxation shall adopt regulations establishing acceptable methods for accounting for and transmitting to the Department money collected or required to be paid by retailers pursuant to subsection 1. The regulations must include a designation of the persons responsible for payment. The regulations must, in appropriate situations, allow for the transmission of that money together with the payment of the applicable sales and use taxes.

4. In collecting the fee, the Department of Taxation may employ any administrative and legal powers conferred upon it for the collection of the sales and use taxes by [chapters 360](#) and [372](#) of NRS.

5. The fee imposed pursuant to subsection 1 does not apply to any tire included in the sale of a new or used vehicle unless the tire is sold in a separate transaction.

(Added to NRS by [1991, 1667, 1677](#); A [1993, 18, 19, 1420](#))

PROGRAM OF PUBLIC EDUCATION

NRS 444A.110 Program of public education concerning disposal of solid waste, recycling, reuse and waste reduction; reduction of waste and litter; technical assistance; grants for projects concerning solid waste management systems and efficient use of resources; regulations governing administration of grants.

1. The Division 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 be designed in accordance with the plans to provide for a solid waste management system approved pursuant to [NRS 444.510](#) to communicate the importance of conserving natural resources, in addition to the importance of protecting public health and the environment. The program must include promotion of the private and public efforts to accomplish conservation, recovery and reuse.

2. The Division shall encourage the reduction of waste and litter by:

(a) Providing, upon request, advice to persons regarding techniques to reduce waste and general information on recycling.

(b) Establishing a computer database to process related information.

(c) Establishing a toll-free telephone line to assist in the dissemination of information.

(d) Sponsoring or cosponsoring technical workshops and seminars on waste reduction.

(e) Assisting local programs for the research and development of plans to reduce waste.

(f) Coordinating the dissemination of publications on waste reduction, regardless of the source of those publications.

(g) Assisting in the development and promotion of programs of continuing education for educators and administrators to enable them to teach and encourage methods of waste reduction.

(h) Developing an emblem to signify and advertise the efforts in Nevada to encourage recycling.

(i) Recommending to educational institutions courses and curricula relating to recycling and the reduction of waste.

(j) Assisting state agencies, upon request, to develop and carry out programs for recycling within state buildings.

(k) Encouraging the Nevada System of Higher Education to research and develop methods for the reduction, reclamation and conversion of solid waste, including, without limitation, encouraging the Nevada System of Higher Education to seek money from public and private sources for that purpose.

3. The Division shall coordinate the technical assistance available from the various state agencies. The Administrator of the Division shall prepare and deliver biennial reports to the Governor regarding the progress of the program.

4. The Division may award grants to municipalities, educational institutions and nonprofit organizations for projects that enhance solid waste management systems and promote the efficient use of resources. The Division shall consult a solid waste management authority before awarding a grant for a project within the jurisdiction of that solid waste management authority.

5. The State Environmental Commission shall adopt regulations governing the administration of grants awarded pursuant to subsection 4.

6. As used in this section, unless the context otherwise requires, "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NRS by [1991, 1676](#); A [1995, 646](#); [1999, 3180](#); [2005, 1503](#); [2007, 3014](#))

PROGRAM FOR COLLECTION AND SEPARATION OF RECYCLABLE MATERIAL WHICH MAY BE USED AS SOURCE OF RENEWABLE ENERGY

NRS 444A.120 Establishment in larger counties; activities to be included in program; program must not conflict with certain standards adopted by State Environmental Commission.

1. The board of county commissioners in a county whose population is 700,000 or more shall, in conjunction with each licensed hauler of garbage and refuse operating in the county, establish a pilot program for collecting and separating recyclable material that has the potential to be used as a source of renewable energy or converted into renewable fuel.

2. The pilot program must include, without limitation:

(a) An exploration of technologies and processes that are able to use recyclable material as a source of renewable energy or convert recyclable material into renewable fuel.

(b) The creation and maintenance of adequate records to allow an assessment of the feasibility of establishing a statewide recycling standard.

3. The pilot program must not conflict with the standards relating to recyclable material adopted by the State Environmental Commission pursuant to [NRS 444A.020](#).

4. As used in this section:

(a) "Licensed hauler of garbage and refuse" means a person who holds the licenses and permits required to operate a business of collecting and disposing of garbage and refuse. The term includes a person who is licensed to operate a business of collecting recyclable material.

(b) "Recyclable material" has the meaning ascribed to it in [NRS 444A.013](#).

(Added to NRS by [2007, 3007](#); A [2011, 1259](#))

Appendix 8

Recycling
Nevada Administrative Code
444A.005 – 444A.655

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CHAPTER 444A - PROGRAMS FOR RECYCLING

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- [444A.005](#) Definitions.
- [444A.011](#) “Department” defined.
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- [444A.035](#) “Vehicle” defined.
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- [444A.090](#) “Public building” defined.
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- [444A.200](#) Definitions.
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Permit to Operate Facility for Management of Waste Tires

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- [444A.290](#) Application for permit: Contents.
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- [444A.310](#) Application for permit: Evaluation by solid waste management authority; notice of intent to issue or deny application; public notice.
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- [444A.330](#) Issuance; revocation or suspension of permit; request for modification of permit.
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- [444A.350](#) Design and construction; attendants; equipment; final use of waste tires deposited at facility.

[444A.360](#) Storage of tires; compliance with regulations adopted by State Fire Marshal required.

[444A.370](#) Procedures to be used if fire occurs at facility.

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[444A.390](#) Annual report: Submission; contents.

Closure of Facility for Management of Waste Tires

[444A.400](#) Notice of closure; removal of waste tires and material derived from waste tires.

[444A.410](#) Estimate of costs for closure; demonstration of financial assurance; modification of estimate of costs for closure.

[444A.420](#) Mechanisms for demonstrating financial assurance; alternate plans for demonstrating financial assurance.

[444A.430](#) Inspection of facility after notification of closure; notification concerning demonstration of financial assurance.

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[444A.440](#) Registration number: Requirement; application; display.

[444A.450](#) Manifest to transport waste tires: Contents; copies to certain persons; penalty for noncompliance.

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PROGRAM OF STATE AGENCIES

[444A.500](#) Separation, collection and recycling of paper and paper products; expansion of program; technical assistance; coordination of efforts.

GRANTS TO ENHANCE SOLID WASTE MANAGEMENT SYSTEMS AND PROMOTE EFFICIENT USE OF RESOURCES

[444A.600](#) Definitions.

[444A.605](#) "Division" defined.

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[444A.635](#) Review of application: Determination of eligibility and adequacy.

[444A.640](#) Evaluation of application; consultation with solid waste management authority.

[444A.645](#) Awarding of grants and determination of amount

[444A.650](#) Agreement between Division and recipient; documents, statements and promotional items describing project.

[444A.655](#) Cancellation or termination of grant; disbursement of money; examination of recipient; return of unspent money.

FEE FOR PURCHASE OF NEW TIRE

NAC 444A.005 Definitions. ([NRS 444A.090](#)) As used in [NAC 444A.005](#) to [444A.051](#), inclusive, unless the context otherwise requires, the words and terms defined in [NAC 444A.011](#) to [444A.035](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.011 "Department" defined. ([NRS 444A.090](#)) "Department" means the Department of Taxation.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.015 "Retail sale" and "sale at retail" defined. ([NRS 444A.090](#)) "Retail sale" or "sale at retail" means a sale of tangible personal property for any purpose other than resale in the regular course of business.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.021 "Tire for a vehicle" defined. ([NRS 444A.090](#)) "Tire for a vehicle" means a new tire for a motorized vehicle that is 12 inches or larger in diameter. The term does not include a recapped tire or a used tire which is sold again.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.025 "Tire retailer" defined. ([NRS 444A.090](#)) "Tire retailer" includes:

1. Every person who:

(a) Is engaged in the business of selling tangible personal property of a kind, the gross receipts from the retail sale of which are required to be included in the measure of the sales tax; and

(b) Makes any retail sale or sales of tires for vehicles.

2. Every person engaged in the business of making retail sales at auction of tires for vehicles whether the tires are owned by the person or others.

3. Every person making more than two retail sales of tires for vehicles during any 12-month period, including sales made in the capacity of assignee for the benefit of creditors, or receiver or trustee in bankruptcy.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.031 "Tire surcharge" defined. ([NRS 444A.090](#)) "Tire surcharge" means the fee imposed pursuant to subsection 1 of [NRS 444A.090](#) on each tire for a vehicle that is sold.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.035 "Vehicle" defined. ([NRS 444A.090](#)) "Vehicle" has the meaning ascribed to it in [NRS 444A.017](#).

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.041 Registration of tire retailers: Requirement; procedure. ([NRS 444A.090](#))

1. A person shall not sell at retail a tire for a vehicle unless the person has registered with the Department as a tire retailer.

2. A person may register with the Department by submitting a copy of a properly completed application for a permit to engage in or conduct business as a seller, as that term is defined in [NRS 372.070](#), or by submitting a registration form. If a person registers by submitting a registration form, the form must:

(a) State the name under which the registrant transacts or intends to transact business.

(b) State the location and telephone number of the registrant's place or places of business.

(c) Be signed:

(1) If the owner is a natural person, by the owner.

(2) If the owner is an association or partnership, by a member or partner.

(3) If the owner is a corporation, by an executive officer or other person specifically authorized by the corporation to sign the registration form. The person signing shall attach to the registration form written evidence of his or her authority to sign.

3. As used in this section, "tire retailer" does not include a person who transports or stores tires for vehicles without selling them at retail.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.045 Collection and remittance of tire surcharge; submission of monthly returns; assessment of penalties and interest. ([NRS 444A.090](#))

1. A tire retailer shall collect the tire surcharge from the purchaser of each tire for a vehicle sold for the purchaser's use and not for resale.

2. The tire surcharge collected by the tire retailer from the purchaser must be displayed separately from the list price of the tire, the price of the tire advertised in the premises, the marked price of the tire or other price of the tire on the sales receipt or other proof of sale. The tire surcharge must be identified as the State Recycling Fee on the sales receipt or other proof of sale and must be added after the calculation of any tax.

3. The tire retailer shall hold in an account the tire surcharge collected pursuant to this section until remitted to the Department.

4. A tire retailer shall submit a monthly return on a form prescribed by the Department. The return must include:

(a) The total number of tires for vehicles sold at retail during the preceding month.

(b) The total amount of tire surcharges collected.

(c) The total amount of the tire surcharges retained by the tire retailer pursuant to [NRS 444A.090](#).

(d) The total amount of the tire surcharges payable to the Department pursuant to [NRS 444A.090](#).

(e) The signature of the person required to file the return or of the person's authorized agent.

5. Each tire retailer shall, on or before the last day of the month following the month in which the tire surcharges are collected, deliver to the Department the return and the remittance of the amount of the tire surcharges payable to the Department.

6. A check tendered before the due date prescribed in this section, but subsequently dishonored after the due date, does not constitute timely payment.

7. The Department may, for good cause, extend for a period not to exceed 1 month, the due date prescribed in this section for submitting a return or remittance of the tire surcharges.

8. The Department may assess all applicable penalties and interest pursuant to [chapters 360 and 372](#) of NRS for each month, or portion thereof, after the due date that the tire surcharges remain unpaid.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

NAC 444A.051 Maintenance of records regarding tire surcharges. ([NRS 444A.090](#))

1. A tire retailer shall keep records regarding the tire surcharges collected and reported pursuant to [NAC 444A.045](#). Upon request of the Department, the records must be made available for examination by an auditor on behalf of the Department.

2. Every tire retailer or person who files the returns required pursuant to [NAC 444A.045](#) shall keep the records for not less than 4 years from their making unless the Department in writing sooner authorizes their destruction.

3. Every tire retailer or person who fails to file the returns required pursuant to [NAC 444A.045](#) shall keep the records for not less than 8 years from their making unless the Department in writing sooner authorizes their destruction.

(Added to NAC by Dep't of Taxation, eff. 1-11-94)

PROGRAMS OF MUNICIPALITIES

NAC 444A.090 "Public building" defined. ([NRS 444A.020](#), [444A.080](#))

1. "Public building" means any building or office space occupied by:

(a) Any component of the Nevada System of Higher Education and used for any purpose related to the System; or

(b) The Federal Government, the State of Nevada or any county, city, school district or other political subdivision of the State of Nevada and used for any public purpose.

2. If only part of a building is occupied by an entity described in subsection 1, the term means only that portion of the building which is so occupied.

(Added to NAC by Environmental Comm'n by R038-01, 10-25-2001, eff. 7-1-2002)

NAC 444A.100 "Recyclable material" interpreted. ([NRS 444A.020](#), [444A.080](#))

1. As used in [NAC 444A.090](#) to [444A.140](#), inclusive, the State Environmental Commission will interpret the term "recyclable material" as defined in [NRS 444A.013](#) to include, without limitation:

- (a) Newspaper;
- (b) Corrugated cardboard;
- (c) Aluminum;
- (d) Yard debris;
- (e) Office paper;
- (f) Glass;
- (g) Tin and steel cans;
- (h) Metal;
- (i) Motor oil;
- (j) Plastic; and
- (k) Antifreeze.

2. As used in subsection 1, "yard debris" means material generated from plants, including trees, bushes and grass clippings on residential or business property.

(Added to NAC by Environmental Comm'n, eff. 11-10-92; A 10-3-96; R038-01, 10-25-2001, eff. 7-1-2002)

NAC 444A.110 Goal of provisions. ([NRS 444A.020](#), [444A.080](#)) The goal of [NAC 444A.110](#) to [444A.140](#), inclusive, is to adopt minimum standards which provide for the recycling of at least 25 percent of the total solid waste generated within a municipality by the end of the second full year following the adoption of the standards.

(Added to NAC by Environmental Comm'n, eff. 11-10-92)

NAC 444A.120 Approval of program: Submission of request for approval and other material; criterion for approval. ([NRS 444A.020](#), [444A.040](#), [444A.080](#))

1. A municipality which makes a program available pursuant to [NRS 444A.040](#) shall submit a request for approval of the program to the Department. The request must be accompanied by:

(a) In a municipality whose population is 45,000 or more but less than 100,000:

(1) A statement setting forth the location of and types of recyclable material collected by each recycling center.

(2) A description of the program for the disposal of hazardous household products which sets forth:

(I) The location of and types of material collected by each collection site; and

(II) The schedule for the collection of the hazardous household products.

(3) A copy of all ordinances which:

(I) Govern the program; or

(II) Provide for the participation of the municipality in a program adopted by an adjoining municipality.

(4) Any other documentation and information which demonstrates that the program will ensure that the municipality will meet the goal set forth in [NAC 444A.110](#).

(b) In a municipality whose population is 100,000 or more, in addition to the documentation and information required by paragraph (a), copies of all contracts and agreements to provide for the separation at the source of recyclable material from other solid waste originating from the residential premises, including, without limitation, apartment complexes and condominiums, and public buildings where services for the collection of solid waste are provided.

2. The Department shall approve a program if the Department determines that the program will contribute to the achievement of the municipality's goal set forth in [NAC 444A.110](#).

3. As used in subsection 1, "recycling center" means a facility designed and operated to receive, store, process or transfer recyclable material.

(Added to NAC by Environmental Comm'n, eff. 11-10-92; A 10-3-96; R038-01, 10-25-2001, eff. 7-1-2002; R049-11, 5-30-2012)

NAC 444A.130 Program for disposal of hazardous household products; program for separation at source of recyclable material at residential premises or public buildings. ([NRS 444A.020](#), [444A.080](#))

1. A municipality which makes available in that municipality a program for the disposal of hazardous household products shall provide for the collection at least semiannually of used or waste motor oil, motor vehicle batteries and:

(a) Paint and products associated with painting; or

(b) Any other household, garage or garden products which are capable of causing harmful physical effects if inhaled, absorbed or ingested.

➔ If a program for the disposal of hazardous household products is made available, it must be implemented on or before January 1, 1994.

2. A municipality which makes available in that municipality a program for the separation at the source of recyclable material at residential premises, including, without limitation, apartment complexes and condominiums, shall designate at least three recyclable materials to be so separated.

3. A municipality which makes available in that municipality a program for the separation at the source of recyclable material at public buildings shall designate at least three recyclable materials to be so separated.

(Added to NAC by Environmental Comm'n, eff. 11-10-92; A by R038-01, 10-25-2001, eff. 7-1-2002; R049-11, 5-30-2012)

NAC 444A.135 Annual report of municipality with approved program due February 15. ([NRS 444A.020](#), [444A.080](#))

1. Each recycling center located in a municipality whose program has been approved by the Department shall, not later than February 15 of each year, submit to the municipality, on a form approved by the Division, a report for the preceding calendar year. The report must be certified by the recycling center and include the number of tons of material recycled for each type of recycled material.

2. The recycling center shall, upon the request of the municipality, provide any information, including, but not limited to, bills of lading, manifests and certified receipts which the municipality determines may be necessary to verify the report.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

NAC 444A.140 Annual report of municipality with approved program due April 1. ([NRS 444A.020](#), [444A.050](#), [444A.080](#))

1. A municipality whose program has been approved by the Department shall submit a report to the Department on forms provided by the Department. The report must be submitted on or before April 1 of each year. Except as otherwise required in subsection 2, the report must contain documentation and information concerning the previous calendar year, including:

(a) The number of tons of material:

- (1) Disposed of in a landfill or other similar disposal facility;
- (2) Diverted from a landfill or other similar disposal facility; and
- (3) Recycled for each type of recycled material.

(b) An explanation and summary of any revision of the program.

(c) To determine whether the program provided for the recycling of at least 25 percent of the total solid waste generated within the municipality, a calculation in which the total weight of material diverted from a landfill or other similar disposal facility is divided by the sum of:

(1) The total weight of material diverted from a landfill or other similar disposal facility;
and

(2) The total weight of material disposed of in a landfill or other similar disposal facility.

2. If a program is implemented for less than a full year, the report required by subsection 1 must be based upon and the weights and calculation must reflect only that part of the year in which the program was implemented.

3. The report required by subsection 1 must be accompanied by verification of the number of tons of recycled material, generated within the municipality, which is sold or collected. The verification must be submitted on a form supplied by the Department and include a statement certified by the municipality that the reports submitted to it pursuant to [NAC 444A.135](#) have been certified by the recycling centers within the municipality.

4. As used in this section:

(a) “Material diverted from a landfill”:

(1) Includes:

(I) Recyclable material; and

(II) Material which was separated to be recycled from other waste material of the municipality.

(2) Does not include:

(I) Material not generated within the municipality; or

(II) Material that would not normally be disposed of in a landfill or other similar disposal facility.

(b) “Material disposed of in a landfill or other similar disposal facility” does not include material not generated within the municipality.

(Added to NAC by Environmental Comm’n, eff. 11-10-92; A 10-3-96)

MISCELLANEOUS PROVISIONS

NAC 444A.150 Appeal of final decision of State Department of Conservation and Natural Resources. ([NRS 233B.050](#), [444A.080](#))

1. Any person who requests a hearing before the State Environmental Commission concerning a final decision of the State Department of Conservation and Natural Resources pursuant to [chapter 444A](#) of NRS may do so by filing a request, within 10 days after notice of the

action of the Department, on form 3* with the State Environmental Commission, Bryan State Office Building, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249.

2. The provisions of [NAC 445B.875](#) to [445B.899](#), inclusive, apply to a hearing of the State Environmental Commission requested pursuant to subsection 1.

*(See adopting agency for form.)

(Added to NAC by Environmental Comm'n, eff. 10-29-93)

DISPOSAL OF WASTE TIRES

General Provisions

NAC 444A.200 Definitions. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) As used in [NAC 444A.200](#) to [444A.470](#), inclusive, unless the context otherwise requires, the words and terms defined in [NAC 444A.210](#) to [444A.270](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.210 "Facility for the management of waste tires" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Facility for the management of waste tires" means a site where waste tires are deposited for processing, recycling or use as a fuel.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.220 "Generator of waste tires" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Generator of waste tires" means a person who possesses a tire at the time it becomes a waste tire, or at any time thereafter, until it is deposited with a facility for the management of waste tires or given to a hauler of waste tires.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.230 "Hauler of waste tires" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Hauler of waste tires" means a person who transports waste tires or materials derived from waste tires over the highways of this State. The term does not include a:

1. Collector of solid waste who operates pursuant to a license issued by a local government;
2. Person who generates and transports his or her own waste tires;
3. Governmental agency;
4. Person who transports used tires to be resold or retreadable casings to be retreaded;
5. Person who transports tires across state boundaries, but does not load or unload waste tires within this State;
6. Person who is directed by a solid waste management authority to transport waste tires for disposal; or

7. Person who transports products made from recycled waste tires for sale or other distribution.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.240 "Passenger tire equivalent" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Passenger tire equivalent" means a measure of waste tires or material derived from waste tires that is expressed as an equivalent number of passenger tires, where one waste tire or 20 pounds of material derived from waste tires equals one passenger tire equivalent.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.250 "Processing" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Processing" means preparing a waste tire for recycling, use as a fuel or disposal in a landfill by chipping, splitting or otherwise altering the tire.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.260 "Solid waste management authority" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Solid waste management authority" has the meaning ascribed to it in [NAC 444.624](#).

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.270 "Waste tire" defined. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) "Waste tire" means a tire that is not fit for use as a tire.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

Permit to Operate Facility for Management of Waste Tires

NAC 444A.280 Permit required; exceptions. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. Except as otherwise provided in subsection 2, the owner or operator of a facility for the management of waste tires shall not accept waste tires for processing, recycling or for use as a fuel until he or she obtains a permit to operate a facility for the management of waste tires from the solid waste management authority.

2. The following businesses are not required to comply with subsection 1:

(a) A business which retreads tires and stores less than 3,000 passenger tire equivalents on the premises.

(b) A retail dealer of tires, or any other business that removes tires from motor vehicles, which stores less than 1,500 passenger tire equivalents on the premises.

(c) A disposal site which is authorized by the solid waste management authority to store waste tires or deposit waste tires in a landfill.

(d) Any business which stores less than 500 passenger tire equivalents on the premises.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.290 Application for permit: Contents. ([NRS 444.560](#), [444A.020](#), [444A.080](#))
Each applicant for a permit to operate a facility for the management of waste tires must complete an application on a form prescribed by the solid waste management authority. The application must include:

1. The name of the owner and operator of the facility;
 2. The address of the location of the facility;
 3. A plan of operation which complies with the requirements set forth in [NAC 444A.350](#) and [444A.360](#);
 4. A plan of the area where the tires will be stored at the facility which includes:
 - (a) The arrangement and size of the piles of tires in the storage area;
 - (b) The width of the fire lanes;
 - (c) The location of each building at the facility; and
 - (d) The methods to be used to control access to the facility;
 5. An estimate of the number of passenger tire equivalents the facility will receive each year;
 6. A description of the final use for the waste tires deposited or the available market for the material derived from tires after it is processed;
 7. Proof of compliance with any applicable ordinances or other requirements of the state or local governments for permits;
 8. Proof of compliance with any applicable ordinances or other requirements of the local fire authority;
 9. The procedures:
 - (a) For the prevention of fire; and
 - (b) To be used if a fire occurs at the facility,
- ↳ which must be approved by the local fire authority;
10. A copy of the plan to demonstrate financial assurance required by [NAC 444A.410](#) and [444A.420](#); and
 11. Any other information required by the solid waste management authority.

(Added to NAC by Environmental Comm'n, eff. 12-15-94; A 10-3-96)

NAC 444A.300 Application for permit: Notification of applicant; submission of additional information. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) A solid waste management authority shall, within 45 days after receiving an application for a permit to operate a facility for the management of waste tires, notify the applicant whether the application is complete. The solid waste management authority shall base its determination on whether the application contains all the documents and information required by [NAC 444A.290](#). The solid waste management authority may require the applicant to submit any additional documents or information it deems necessary.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.310 Application for permit: Evaluation by solid waste management authority; notice of intent to issue or deny application; public notice. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. A solid waste management authority shall complete an evaluation of an application for a permit to operate a facility for the management of waste tires within 30 days after notifying the applicant that the application is complete.

2. Upon completion of the evaluation, the solid waste management authority shall:

(a) Issue to the applicant a notice of intent to issue or deny the permit; and

(b) Issue a public notice stating whether it intends to issue or deny the permit. The public notice must include a fact sheet which describes:

(1) The proposed facility;

(2) The proposed action;

(3) The availability of the documents which were evaluated; and

(4) The procedures for public review and comment.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.320 Application for permit: Period for public review; duties of solid waste management authority following period for public review. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. A solid waste management authority shall provide a period for the public review of an application for a permit to operate a facility for the management of waste tires. The period for public review is 30 days and begins on the date the solid waste management authority issues public notice pursuant to subsection 2 of [NAC 444A.310](#). During this period, the applicant or any other interested person may submit to the solid waste management authority written comments concerning the permit. The period for public review may be concurrent with any other period for public review required by a local government for issuing permits.

2. Within 15 days after the period for public review has ended, the solid waste management authority shall issue the permit or provide written notice to the applicant which sets forth the reasons for the denial of the permit.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.330 Issuance; revocation or suspension of permit; request for modification of permit. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) A permit to operate a facility for the management of waste tires which is issued by a solid waste management authority:

1. Must be issued to a specific owner or operator;
2. Is not transferable;
3. Is valid for 5 years;
4. May be renewed;
5. May be modified by the solid waste management authority if the statutes or regulations upon which the permit is based are amended or if a modification is otherwise necessary to protect the environment or public health;
6. May be revoked or suspended upon written notice by the solid waste management authority if the holder of the permit does not comply with applicable statutes or regulations or the conditions upon which the solid waste management authority issued the permit; and
7. May be modified by the owner or operator if the modification is approved by the solid waste management authority. The owner or operator must submit a written request for a modification of the permit to the solid waste management authority. A proposed modification of a permit may be subject to public notice and 30 days of public review if the solid waste management authority so requires.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.340 Renewal of permit; operation of facility pending issuance of new permit. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. At least 120 days before a permit to operate a facility for the management of waste tires expires, the solid waste management authority shall send to the holder of the permit:
 - (a) A notice which informs the holder that he or she must renew the permit to continue operations; and
 - (b) An application to renew the permit.
2. The holder of a permit who wishes to renew his or her permit must:
 - (a) Submit an application for renewal to the solid waste management authority at least 60 days before the permit expires;
 - (b) Provide any information concerning the operation of the facility that was not submitted with the application for the initial permit or the renewal of the permit; and
 - (c) Revise any information that has changed since he or she last submitted an application for the permit to the solid waste management authority.

3. If the solid waste management authority does not renew the permit before its expiration, the holder of the permit may continue to operate the facility pursuant to the terms and conditions of the permit until the solid waste management authority issues or denies a new permit.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

Operation of Facility for Management of Waste Tires

NAC 444A.350 Design and construction; attendants; equipment; final use of waste tires deposited at facility. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. The owner or operator of a facility for the management of waste tires shall:

(a) Design and construct the facility to ensure that:

(1) Runoff of water from the surface of the property is directed away from the area used to store tires; and

(2) Waters of the State are protected from potential runoff resulting from extinguishing a fire at the facility. As used in this subparagraph, "waters of the State" has the meaning ascribed to it in [NRS 445A.415](#).

(b) Control vectors to protect public health and welfare. As used in this paragraph, "vector" has the meaning ascribed to it in [NAC 444.630](#).

2. If a facility for the management of waste tires receives tires from a person other than the operator of the facility, an attendant must be present when the facility is open for business.

3. Before the operator of a facility for the management of waste tires may begin operation of the facility, he or she shall ensure that each area where waste tires are cut, chipped, ground or otherwise altered has the equipment which is necessary to process waste tires in operating condition.

4. A facility for the management of waste tires must have a final use for the waste tires deposited or an available market for the material produced from processing the waste tires to ensure that at least 75 percent of the waste tires deposited are used or removed from the facility as processed material for recycling or disposal within 12 months after receipt.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.360 Storage of tires; compliance with regulations adopted by State Fire Marshal required. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. The owner or operator of a facility for the management of waste tires shall not store more than 5,000 passenger tire equivalents on the premises of the facility unless he or she has written approval from the solid waste management authority.

2. An owner or operator of a facility for the management of waste tires, upon request from the solid waste management authority, shall produce evidence that the facility complies with the provisions of [chapter 477](#) of NAC.

3. Any area in which tires are stored outside of a building located at the facility must be enclosed with a fence that limits access to the area.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.370 Procedures to be used if fire occurs at facility. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) The owner or operator of a facility for the management of waste tires shall adopt and carry out procedures to be used if a fire occurs at the facility. The procedures must include:

1. The name and telephone number of each person who will be notified if a fire occurs;
2. A list of the equipment to be used in response to a fire at the facility, the location of that equipment and the manner in which the equipment will be used if a fire occurs; and
3. A description of the procedure that must be followed if a fire occurs.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.380 Maintenance of records; availability of records for inspection by solid waste management authority. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. The owner or operator of a facility for the management of waste tires shall include in the records kept at the facility:

- (a) Copies of the manifests required by [NAC 444A.450](#); and
- (b) The following information, if applicable:

(1) The number of passenger tire equivalents or tons of material processed from tires received, stored and shipped at the facility.

(2) The names and registration numbers of haulers of waste tires who transport each shipment to and from the facility. If a hauler is not required to be registered, the record must include his or her address.

(3) The origin of each shipment of waste tires to the facility and the destination of each shipment from the facility.

(4) A copy of the plan for financial assurance required by [NAC 444A.410](#) and [444A.420](#).

2. The owner or operator of the facility shall maintain the records required by subsection 1 for at least 3 years, and make them available for inspection by the solid waste management authority during regular business hours.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.390 Annual report: Submission; contents. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) The owner or operator of a facility for the management of waste tires shall submit an annual report to the solid waste management authority not later than March 1 of each year. The owner or operator shall:

1. Submit the report on a form prescribed by the solid waste management authority;
2. Include a summary of the information described in subsection 1 of [NAC 444A.380](#) in the report; and
3. Include any other information in the report which is required by the solid waste management authority.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

Closure of Facility for Management of Waste Tires

NAC 444A.400 Notice of closure; removal of waste tires and material derived from waste tires. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. An owner or operator of a facility for the management of waste tires who wishes to close that facility shall:

(a) Prohibit public access to the facility; and

(b) Post a notice at the facility stating that the facility is closed and the name and address of the nearest facility for the management of waste tires.

2. Within 12 months after a facility for the management of waste tires is closed and, according to a schedule approved by the solid waste management authority, the owner or operator of the facility shall remove from the facility any waste tires and material derived from waste tires.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.410 Estimate of costs for closure; demonstration of financial assurance; modification of estimate of costs for closure. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. The owner or operator of a facility for the management of waste tires shall estimate the costs of processing and removing or disposing of all waste tires or material derived from waste tires at the facility. The owner or operator shall base the estimate on:

(a) The maximum amount of waste tires and material which is derived from waste tires stored at the facility at any time; and

(b) The possibility of having to hire another person to perform the work.

2. The estimate of costs must be approved by the solid waste management authority and revised annually to adjust for inflation.

3. The owner or operator of the facility shall demonstrate adequate financial assurance to close the facility based on the estimate of costs set forth in subsection 1.

4. The owner or operator of the facility shall increase the estimate of costs for closure and the amount of financial assurance provided if changes in the plan for closure or conditions at the facility increase the maximum costs of closure.

5. The owner or operator of the facility may reduce the estimate of costs for closure and the amount of financial assurance if the estimate of costs exceeds the maximum costs of closure at any time during which the facility will remain in operation. An owner or operator who wishes to reduce an estimate shall notify the solid waste management authority that the justification for reducing the estimate of costs for closure and the amount of financial assurance has been noted in the records required to be kept by [NAC 444A.380](#).

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.420 Mechanisms for demonstrating financial assurance; alternate plans for demonstrating financial assurance. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. Except as otherwise provided in subsection 2, the owner or operator of a facility for the management of waste tires shall demonstrate financial assurance in the manner prescribed in [NAC 444.68525](#).

2. The solid waste management authority may approve an alternate plan for demonstrating financial assurance if the alternate plan complies with the requirements set forth in [NAC 444.6859](#).

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

NAC 444A.430 Inspection of facility after notification of closure; notification concerning demonstration of financial assurance. ([NRS 444.560](#), [444A.020](#), [444A.080](#)) A solid waste management authority shall inspect a facility for the management of waste tires after it receives notification that closure of the facility has been completed. If the requirements of the plan for closure have been met, the solid waste management authority shall notify the owner or operator of the facility and the person who is providing financial assurance, in writing, that the person providing financial assurance is no longer required to continue to demonstrate financial assurance.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

Haulers of Waste Tires

NAC 444A.440 Registration number: Requirement; application; display. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. A hauler of waste tires shall obtain a registration number from the solid waste management authority by July 1, 1995, or 14 days before beginning operation, whichever is later. The hauler of waste tires shall display the registration number on the vehicle he or she uses to transport waste tires or material derived from waste tires.

2. Each hauler of waste tires who applies for a registration number must complete an application on a form prescribed by the solid waste management authority. The application must include the license number and the name of the registered owner of the vehicle used to transport waste tires or material derived from waste tires.

3. A registration number for a hauler of waste tires issued by a solid waste management authority must be recognized by any other solid waste management authority.

4. A hauler of waste tires who obtains a registration number pursuant to this section is required to comply with any other applicable requirements adopted by a local government for a permit.

(Added to NAC by Environmental Comm'n, eff. 12-15-94; A 10-3-96)

NAC 444A.450 Manifest to transport waste tires: Contents; copies to certain persons; penalty for noncompliance. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. A hauler of waste tires shall initiate a manifest to transport waste tires from the place where he or she takes possession of the waste tires from a generator of waste tires to the place where he or she deposits the waste tires at a facility for the management of waste tires or a disposal site approved by the solid waste management authority. The manifest must include the:

(a) Name of the generator of the waste tires;

(b) Passenger tire equivalents or total tons of waste tires to be transported;

(c) Name and registration number of the hauler of waste tires;

(d) Date of transport;

(e) Destination of the waste tires;

(f) Number of tires sold for reuse, if any; and

(g) Signatures of the generator of the waste tires, hauler of the waste tires and operator of the facility for the management of waste tires or disposal site approved by the solid waste management authority.

2. The hauler of waste tires shall:

(a) Provide the owner or operator of the facility for the management of waste tires or the disposal site approved by the solid waste management authority with a completed copy of the manifest; and

(b) Return a completed copy of the manifest to the generator of the waste tires not later than 30 days after the date the hauler of the waste tires takes possession of the waste tires.

3. A hauler of waste tires who fails to comply with the provisions of this section may be subject to enforcement action, including the revocation of his or her registration number.

(Added to NAC by Environmental Comm'n, eff. 12-15-94; A 10-3-96)

NAC 444A.460 Semiannual reports: Submission; contents. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. A hauler of waste tires shall submit semiannual reports with the solid waste management authority. The first report must be submitted for the reporting period beginning on July 1, 1995, and ending on December 31, 1995. Subsequent reports must be submitted semiannually thereafter. The hauler shall submit each report within 30 days after the end of the reporting period on a form prescribed by the solid waste management authority. The report must include:

- (a) The registration number of the hauler of waste tires;
- (b) The type and quantity of waste tires collected during the reporting period;
- (c) The destination of the waste tires collected; and
- (d) The names of the generators of the waste tires or premises from which the waste tires were collected.

2. A hauler of waste tires who fails to comply with the provisions of this section may be subject to enforcement action, including the revocation of his or her registration number.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

Generators of Waste Tires

NAC 444A.470 Transportation of waste tires. ([NRS 444.560](#), [444A.020](#), [444A.080](#))

1. Except as otherwise provided in subsection 2, a generator of waste tires shall not enter into a contract to have waste tires collected after July 1, 1995, with a person who is not a registered hauler of waste tires.

2. A generator of waste tires may haul the waste tires he or she generates or contract with a collector of solid waste who operates pursuant to a license issued by a local government to collect those waste tires. A generator of waste tires shall maintain receipts for the disposition of its waste tires for at least 3 years. The generator of waste tires shall make the receipts available for inspection by the solid waste management authority during regular business hours and shall list the number, weight or volume of waste tires disposed of in this manner.

(Added to NAC by Environmental Comm'n, eff. 12-15-94)

PROGRAM OF STATE AGENCIES

NAC 444A.500 Separation, collection and recycling of paper and paper products; expansion of program; technical assistance; coordination of efforts. ([NRS 232.007](#), [444.560](#), [444A.020](#), [444A.080](#))

1. A state agency shall provide for the separation, collection and recycling of paper and paper products that the agency generates in the course of its operations. To carry out this requirement, a state agency shall, for each facility it operates, determine:

- (a) What recycling services are available locally for the collection or aggregation of paper and paper products;
- (b) The types of paper and paper products for which recycling services are available;

(c) The types of paper and paper products generated by the agency for which recycling services are available;

(d) The cost to the agency, if any, or the reimbursement available to the agency, if any, for the paper and paper products separated by the agency; and

(e) Based on the information gathered pursuant to paragraphs (a) to (d), inclusive, what types of paper and paper products the agency should cause to be recycled at the facility.

2. Upon making its determination pursuant to subsection 1, a state agency shall take such actions at each of its facilities as are necessary to establish a system for the separation, collection, storage and transportation of the paper and paper products to be recycled. Such actions may include, without limitation:

(a) The placement of containers for the separation and aggregation of the paper and paper products in locations for the convenient use of all employees of the agency at the facility;

(b) If members of the public are commonly present at the facility of the agency and likely to generate recyclable paper and paper products, the placement of clearly labeled containers for use by the members of the public to separate the paper and paper products;

(c) Arrangements for the removal of the paper and paper products to a centralized location for collection; and

(d) Agreements with a service provider, or the assignment of such equipment and personnel as may be necessary, to transport the paper and paper products to a recycling center.

3. A state agency shall establish a program to encourage its personnel to recycle and to inform them how to recycle paper and paper products efficiently.

4. If a state agency determines that the cost to cause the recycling of paper and paper products generated by the agency at one of its facilities is unreasonable and would place an undue burden on the operations of the agency at that facility, the agency shall present supporting information to the Chief of the Budget Division of the Department of Administration and request a waiver in accordance with [NRS 232.007](#) from the requirement to recycle paper and paper products at the facility.

5. If a state agency determines that services are available locally for the recycling of recyclable materials generated by the agency other than paper and paper products, the agency may expand its program for recycling to include the recycling of those materials.

6. The Division of Environmental Protection of the State Department of Conservation and Natural Resources shall, upon request from a state agency, provide technical assistance concerning the establishment of programs for recycling and the reduction of waste.

7. If a state agency is composed of more than one bureau, board, commission, department, division or office, the entities that compose the agency shall coordinate efforts to establish a single program for the recycling of paper, paper products and, if applicable, other recyclable materials.

8. As used in this section:

- (a) "Paper" has the meaning ascribed to it in [NRS 232.007](#).
- (b) "Paper product" has the meaning ascribed to it in [NRS 232.007](#).
- (c) "Recyclable material" has the meaning ascribed to it in [NAC 444A.100](#).

(d) "State agency" means every public agency, bureau, board, commission, department, division or office of the Executive Department of State Government.

(Added to NAC by Environmental Comm'n by R039-01, eff. 10-25-2001)

GRANTS TO ENHANCE SOLID WASTE MANAGEMENT SYSTEMS AND PROMOTE EFFICIENT USE OF RESOURCES

NAC 444A.600 Definitions. ([NRS 444A.110](#)) As used in [NAC 444A.600](#) to [444A.655](#), inclusive, unless the context otherwise requires, the words and terms defined in [NAC 444A.605](#) to [444A.625](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.605 "Division" defined. ([NRS 444A.110](#)) "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.610 "Municipality" defined. ([NRS 444A.110](#)) "Municipality" has the meaning ascribed to it in [NRS 444A.012](#).

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.615 "Solid waste" defined. ([NRS 444A.110](#)) "Solid waste" has the meaning ascribed to it in [NRS 444.490](#).

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.620 "Solid waste management authority" defined. ([NRS 444A.110](#)) "Solid waste management authority" has the meaning ascribed to it in [NRS 444.495](#).

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.625 "Solid waste management system" defined. ([NRS 444A.110](#)) "Solid waste management system" has the meaning ascribed to it in [NRS 444.500](#).

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.630 Applications for grants: Solicitation; submission; form and contents. ([NRS 444A.110](#))

1. The Division may solicit applications for grants to enhance solid waste management systems and promote the efficient use of resources, including, without limitation, the recycling of solid waste. The Division may establish deadlines for applications by giving public notice of the

availability of grants and the deadlines. An application received after 5 p.m. on the last business day of the application period will be returned to the applicant.

2. An application for a grant may be submitted to the Division by:

- (a) A municipality;
- (b) An educational institution; or
- (c) A nonprofit organization.

3. An application for a grant must be submitted in the form specified by the Division in its solicitation for the grant and must include:

(a) A one-page cover letter setting forth:

(1) The name, address, telephone number, facsimile number and electronic mail address of the municipality, educational institution or nonprofit organization submitting the application;

(2) The name of the proposed project;

(3) A summary of the proposed project; and

(4) The name, address and telephone number of a contact person for the proposed project;

(b) A description of:

(1) The managerial and technical ability of the applicant to carry out the proposed project; and

(2) The extent of any assistance that a consultant may provide for the proposed project;

(c) A proposed schedule for the project which includes, without limitation, a beginning and an ending date for the project;

(d) A work plan setting forth the principal objectives of the proposed project, including, without limitation, a description of the background, goals, deliverables and need for the proposed project;

(e) The criteria according to which the success of the proposed project will be measured;

(f) A budget for the proposed project prepared on a form furnished by the Division; and

(g) Any other information required by the Division in the solicitation for the grant.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.635 Review of application: Determination of eligibility and adequacy. ([NRS 444A.110](#))

1. The Division shall review each application to determine:

- (a) The eligibility of the applicant;
- (b) The eligibility of the proposed project specified in the application;
- (c) The eligibility of the costs specified in the application; and
- (d) The adequacy of the supporting documentation.

2. Any proposal that is designed to enhance solid waste management systems or promote the efficient use of resources is eligible for the award of a grant pursuant to [NAC 444A.600](#) to [444A.655](#), inclusive.

3. Any costs incurred in carrying out the purposes specified in subsection 2 are eligible for the grant program.

4. Documentation is considered adequate if it is submitted in the form required by subsection 3 of [NAC 444A.630](#) and enables the Division to:

- (a) Determine whether the proposed project is feasible;
- (b) Determine whether the applicant has the managerial and technical ability and experience to carry out the proposed project; and
- (c) Evaluate the proposed project pursuant to [NAC 444A.640](#).

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.640 Evaluation of application; consultation with solid waste management authority. ([NRS 444A.110](#))

1. In evaluating an application, the Division shall consider:

- (a) The goals and policies of the Bureau of Waste Management of the Division;
- (b) Whether the proposed project is consistent with:
 - (1) The State's plan for the management of solid waste; and
 - (2) The plan for the management of solid waste adopted by the municipality in which the proposed project is located;
- (c) If the applicant is a municipality, whether the municipality has adopted a plan for the management of solid waste that has been updated at least once within the immediately preceding 5 years;
- (d) Whether the proposed project is likely to improve solid waste management systems within this State or a municipality;
- (e) Whether the proposed project will increase opportunities for the recycling and reuse of solid waste;

(f) Whether the proposed project is likely to increase public awareness of the importance of conserving natural resources or the reuse, recycling and appropriate disposal of solid waste;

(g) Whether the proposed budget is reasonable for the proposed work plan for the project;

(h) Whether any alternative source of financial and technical support is available for use by the applicant;

(i) Whether the proposed project may be completed without financial assistance from the Division;

(j) The managerial and technical ability of the applicant to carry out the proposed project; and

(k) Whether the proposed project is likely to require continuing financial assistance after the expiration of the term of the grant for the proposed project.

2. The Division shall consult with a solid waste management authority concerning the proposed project pursuant to subsection 4 of [NRS 444A.110](#). After notifying the solid waste management authority of the proposed project, the Division shall allow the solid waste management authority at least 30 days to provide comments on the proposed project.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.645 Awarding of grants and determination of amount. ([NRS 444A.110](#))

1. The Division shall award grants for proposed projects that, as determined by the Division, best meet the factors set forth in [NAC 444A.640](#).

2. The Division shall determine the amount of a grant based upon a review of the factors specified in subsection 1. The Division may grant multiple awards to a single applicant.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.650 Agreement between Division and recipient; documents, statements and promotional items describing project. ([NRS 444A.110](#)) The Division and the recipient of a grant shall enter into an agreement which must:

1. Establish the term of the grant, not to exceed 2 years, unless otherwise determined by the Division;

2. Establish a schedule and the terms for the payment of the grant;

3. Unless otherwise specified by the Division, require payments to be based upon completion of all or some of the objectives identified in the work plan for the project;

4. Provide that the recipient may enter into contracts to complete the work specified in the agreement;

5. Require the recipient to submit the results of all studies and analyses performed under the agreement to the Division; and

6. Require the recipient to include in any document, statement or promotional item issued by the recipient that describes the project a statement indicating that money for the project was provided through a grant from the Division. Before issuing any such document, statement or promotional item, the recipient must submit the document, statement or promotional item to the Division for its approval. Any document, statement or promotional item submitted for approval pursuant to this subsection shall be deemed approved if the Division fails to approve or disapprove the document, statement or promotional item within 30 days after receiving the document, statement or promotional item.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

NAC 444A.655 Cancellation or termination of grant; disbursement of money; examination of recipient; return of unspent money. ([NRS 444A.110](#))

1. Unless the Division determines that a variance is justified, the Division shall cancel a grant that is not completed in accordance with the terms and conditions of the grant, including, without limitation, time schedules.

2. If the Division determines that a project is no longer beneficial, the Division may, upon its own initiative or at the request of the recipient of the grant for the project, terminate the grant 30 days after giving notice of the termination to the recipient. The Division may order a recipient to cease expending money awarded by the grant, effective on the date of issuance of the notice of termination.

3. The Division shall disburse the money awarded by a grant in accordance with the schedule for payments set forth in the grant agreement.

4. If the books, records, documents and accounting procedures and practices of a recipient of a grant are relevant to the grant, they are subject to examination at any time by the Division and other appropriate state officers. The recipient shall reimburse the Division for any costs that have been paid which, as determined by the Division, are ineligible for payment.

5. If the Division makes payments to the recipient of a grant before completion of the project, the recipient shall, upon completion of the project, cancellation of the grant or termination of the project, return to the Division any money that has not been spent. The money must be returned in accordance with the procedure for returning the money set forth in the grant agreement.

(Added to NAC by Environmental Comm'n by R176-05, eff. 5-4-2006)

Appendix 9

U.S. EPA, 40 CFR, part 258
Criteria for Municipal Solid Waste Landfills

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PART 258—CRITERIA FOR MUNICIPAL SOLID WASTE LANDFILLS

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Appendix I to Part 258—Constituents for Detection Monitoring

Appendix II to Part 258—List of Hazardous Inorganic and Organic Constituents

AUTHORITY: 33 U.S.C. 1345(d) and (e); 42 U.S.C. 6902(a), 6907, 6912(a), 6944, 6945(c) and 6949a(c), 6981(a).

SOURCE: 56 FR 51016, Oct. 9, 1991, unless otherwise noted.

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Subpart A—General

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§258.1 Purpose, scope, and applicability.

(a) The purpose of this part is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clean Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.

(b) These Criteria apply to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, except as otherwise specifically provided in this part; all other solid waste disposal facilities and practices that are not regulated under subtitle C of RCRA are subject to the criteria contained in part 257 of this chapter.

(c) These Criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991.

(d)(1) MSWLF units that meet the conditions of §258.1(e)(2) and receive waste after October 9, 1991 but stop receiving waste before April 9, 1994, are exempt from all the requirements of this part 258, except the final cover requirement specified in §258.60(a). The final cover must be installed by October 9, 1994. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation by October 9, 1994 will be subject to all the requirements of this part 258, unless otherwise specified.

(2) MSWLF units that meet the conditions of §258.1(e)(3) and receive waste after October 9, 1991 but stop receiving waste before the date designated by the state pursuant to §258.1(e)(3), are exempt from all the requirements of this part 258, except the final cover requirement specified in §258.60(a). The final cover must be installed within one year after the date designated by the state pursuant to §258.1(e)(3). Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation within one year after the date designated by the state pursuant to §258.1(e)(3) will be subject to all the requirements of this part 258, unless otherwise specified.

(3) MSWLF units that meet the conditions of paragraph (f)(1) of this section and receive waste after October 9, 1991 but stop receiving waste before October 9, 1997, are exempt from all the requirements of this part 258, except the final cover requirement specified in §258.60(a). The final cover must be installed by October 9, 1998. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation by October 9, 1998 will be subject to all the requirements of this part 258, unless otherwise specified.

(4) MSWLF units that do not meet the conditions of §258.1 (e)(2), (e)(3), or (f) and receive waste after October 9, 1991 but stop receiving waste before October 9, 1993, are exempt from all the requirements this part 258, except the final cover requirement specified in §258.60(a). The final cover must be installed by October 9, 1994. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation by October 9, 1994 will be subject to all the requirements of this part 258, unless otherwise specified.

(e)(1) The compliance date for all requirements of this part 258, unless otherwise specified, is October 9, 1993 for all MSWLF units that receive waste on or after October 9, 1993, except those units that qualify for an extension under (e)(2), (3), or (4) of this section.

(2) The compliance date for all requirements of this part 258, unless otherwise specified, is April 9, 1994 for an existing MSWLF unit or a lateral expansion of an existing MSWLF unit that meets the following conditions:

(i) The MSWLF unit disposed of 100 tons per day or less of solid waste during a representative period prior to October 9, 1993;

(ii) The unit does not dispose of more than an average of 100 TPD of solid waste each month between October 9, 1993 and April 9, 1994;

(iii) The MSWLF unit is located in a state that has submitted an application for permit program approval to EPA by October 9, 1993, is located in the state of Iowa, or is located on Indian Lands or Indian Country; and

(iv) The MSWLF unit is not on the National Priorities List (NPL) as found in appendix B to 40 CFR part 300.

(3) The compliance date for all requirements of this part 258, unless otherwise specified, for an existing MSWLF unit or lateral expansion of an existing MSWLF unit receiving flood-related waste from federally-designated areas within the major disasters declared for the states of Iowa, Illinois, Minnesota, Wisconsin, Missouri, Nebraska, Kansas, North Dakota, and South Dakota by the President during the summer of 1993 pursuant to 42 U.S.C. 5121 *et seq.*, shall be designated by the state in which the MSWLF unit is located in accordance with the following:

(i) The MSWLF unit may continue to accept waste up to April 9, 1994 without being subject to part 258, if the state in which the MSWLF unit is located determines that the MSWLF unit is needed to receive flood-related waste from a federally-designated disaster area as specified in (e)(3) of this section.

(ii) The MSWLF unit that receives an extension under paragraph (e)(3)(i) of this section may continue to accept waste up to an additional six months beyond April 9, 1994 without being subject to part 258, if the state in which the MSWLF unit is located determines that the MSWLF unit is needed to receive flood-related waste from a federally-designated disaster area specified in (e)(3) of this section.

(iii) In no case shall a MSWLF unit receiving an extension under paragraph (e)(3) (i) or (ii) of this section accept waste beyond October 9, 1994 without being subject to part 258.

(4) For a MSWLF unit that meets the conditions for the exemption in paragraph (f)(1) of this section, the compliance date for all applicable requirements of part 258, unless otherwise specified, is October 9, 1997.

(f)(1) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that dispose of less than twenty (20) tons of municipal solid waste daily, based on an annual average, are exempt from subparts D and E of this part, so long as there is no evidence of ground-water contamination from the MSWLF unit, and the MSWLF unit serves:

(i) A community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility, or

(ii) A community that has no practicable waste management alternative and the landfill unit is located in an area that annually receives less than or equal to 25 inches of precipitation.

(2) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that meet the criteria in paragraph (f)(1)(i) or (f)(1)(ii) of this section must place in the operating record information demonstrating this.

(3) If the owner or operator of a new MSWLF unit, existing MSWLF unit, or lateral expansion has knowledge of ground-water contamination resulting from the unit that has asserted the exemption in paragraph (f)(1)(i) or (f)(1)(ii) of this section, the owner or operator must notify the state Director of such contamination and, thereafter, comply with subparts D and E of this part.

(g) Municipal solid waste landfill units failing to satisfy these criteria are considered open dumps for purposes of State solid waste management planning under RCRA.

(h) Municipal solid waste landfill units failing to satisfy these criteria constitute open dumps, which are prohibited under section 4005 of RCRA.

(i) Municipal solid waste landfill units containing sewage sludge and failing to satisfy these Criteria violate sections 309 and 405(e) of the Clean Water Act.

(j) Subpart G of this part is effective April 9, 1995, except for MSWLF units meeting the requirements of paragraph (f)(1) of this section, in which case the effective date of subpart G is October 9, 1995.

[56 FR 51016, Oct. 9, 1991, as amended at 58 FR 51546, Oct. 1, 1993; 60 FR 52342, Oct. 6, 1995; 61 FR 50413, Sept. 25, 1996]

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§258.2 Definitions.

Unless otherwise noted, all terms contained in this part are defined by their plain meaning. This section contains definitions for terms that appear throughout this part; additional definitions appear in the specific sections to which they apply.

Active life means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with §258.60 of this part.

Active portion means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with §258.60 of this part.

Aquifer means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of ground water to wells or springs.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Construction and demolition (C&D) landfill means a solid waste disposal facility subject to the requirements in part 257, subparts A or B of this chapter that receives construction and demolition waste and does not receive hazardous waste (defined in §261.3 of this chapter) or industrial solid waste (defined in this section). Only a C&D landfill that meets the requirements of 40 CFR part 257, subpart B may receive very small quantity generator waste (defined in §260.10 of this chapter). A C&D landfill typically receives any one or more of the

following types of solid wastes: Roadwork material, excavated material, demolition waste, construction/renovation waste, and site clearance waste.

Director of an Approved State means the chief administrative officer of a state agency responsible for implementing the state permit program that is deemed to be adequate by EPA under regulations published pursuant to sections 2002 and 4005 of RCRA.

Existing MSWLF unit means any municipal solid waste landfill unit that is receiving solid waste as of the appropriate dates specified in §258.1(e). Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.

Facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Ground water means water below the land surface in a zone of saturation.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

Indian lands or Indian country means:

(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running throughout the reservation;

(2) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of the State; and

(3) All Indian allotments, the Indian titles to which have not been extinguished, including rights of way running through the same.

Indian Tribe or Tribe means any Indian tribe, band, nation, or community recognized by the Secretary of the Interior and exercising substantial governmental duties and powers on Indian lands.

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSWLF unit.

Leachate means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under §257.2 of this chapter. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

New MSWLF unit means any municipal solid waste landfill unit that has not received waste prior to October 9, 1993, or prior to October 9, 1997 if the MSWLF unit meets the conditions of §258.1(f)(1).

Open burning means the combustion of solid waste without:

- (1) Control of combustion air to maintain adequate temperature for efficient combustion,
- (2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and
- (3) Control of the emission of the combustion products.

Operator means the person(s) responsible for the overall operation of a facility or part of a facility.

Owner means the person(s) who owns a facility or part of a facility.

Residential lead-based paint waste means waste containing lead-based paint, which is generated as a result of activities such as abatement, rehabilitation, renovation and remodeling in homes and other residences. The term residential lead-based paint waste includes, but is not limited to, lead-based paint debris, chips, dust, and sludges.

Run-off means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-on means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Saturated zone means that part of the earth's crust in which all voids are filled with water.

Sludge means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

State means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Director means the chief administrative officer of the lead state agency responsible for implementing the state permit program for 40 CFR part 257, subpart B and 40 CFR part 258 regulated facilities.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

Waste management unit boundary means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

[56 FR 51016, Oct. 9, 1991; 57 FR 28627, June 26, 1992, as amended at 58 FR 51547, Oct. 1, 1993; 60 FR 52342, Oct. 6, 1995; 63 FR 57044, Oct. 23, 1998; 68 FR 36495, June 18, 2003; 81 FR 85805, Nov. 28, 2016]

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§258.3 Consideration of other Federal laws.

The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.

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§258.4 Research, development, and demonstration permits.

(a) Except as provided in paragraph (f) of this section, the Director of an approved State may issue a research, development, and demonstration permit for a new MSWLF unit, existing MSWLF unit, or lateral expansion, for which the owner or operator proposes to utilize innovative and new methods which vary from either or both of the following criteria provided that the MSWLF unit has a leachate collection system designed and constructed to maintain less than a 30-cm depth of leachate on the liner:

(1) The run-on control systems in §258.26(a)(1); and

(2) The liquids restrictions in §258.28(a).

(b) The Director of an approved State may issue a research, development, and demonstration permit for a new MSWLF unit, existing MSWLF unit, or lateral expansion, for which the owner or operator proposes to utilize innovative and new methods which vary from the final cover criteria of §258.60(a)(1), (a)(2) and (b)(1), provided the MSWLF unit owner/operator demonstrates that the infiltration of liquid through the alternative cover system will not cause contamination of groundwater or surface water, or cause leachate depth on the liner to exceed 30-cm.

(c) Any permit issued under this section must include such terms and conditions at least as protective as the criteria for municipal solid waste landfills to assure protection of human health and the environment. Such permits shall:

(1) Provide for the construction and operation of such facilities as necessary, for not longer than three years, unless renewed as provided in paragraph (e) of this section;

(2) Provide that the MSWLF unit must receive only those types and quantities of municipal solid waste and non-hazardous wastes which the State Director deems appropriate for the purposes of determining the efficacy and performance capabilities of the technology or process;

(3) Include such requirements as necessary to protect human health and the environment, including such requirements as necessary for testing and providing information to the State Director with respect to the operation of the facility;

(4) Require the owner or operator of a MSWLF unit permitted under this section to submit an annual report to the State Director showing whether and to what extent the site is progressing in attaining project goals. The report will also include a summary of all monitoring and testing results, as well as any other operating information specified by the State Director in the permit; and

(5) Require compliance with all criteria in this part, except as permitted under this section.

(d) The Director of an approved State may order an immediate termination of all operations at the facility allowed under this section or other corrective measures at any time the State Director determines that the overall goals of the project are not being attained, including protection of human health or the environment.

(e) Any permit issued under this section shall not exceed three years and each renewal of a permit may not exceed three years.

(1) The total term for a permit for a project including renewals may not exceed twenty-one (21) years; and

(2) During permit renewal, the applicant shall provide a detailed assessment of the project showing the status with respect to achieving project goals, a list of problems and status with respect to problem resolutions, and other any other requirements that the Director determines necessary for permit renewal.

(f) *Small MSWLF units.* (1) An owner or operator of a MSWLF unit operating under an exemption set forth in §258.1(f)(1) is not eligible for any variance from §§258.26(a)(1) and 258.28(a) of the operating criteria in subpart C of this part.

(2) An owner or operator of a MSWLF unit that disposes of 20 tons of municipal solid waste per day or less, based on an annual average, is not eligible for a variance from §258.60 (b)(1), except in accordance with §258.60(b)(3).

[69 FR 13255, Mar. 22, 2004, as amended at 81 FR 28724, May 10, 2016]

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§§258.5-258.9 [Reserved]

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Subpart B—Location Restrictions

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§258.10 Airport safety.

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.

(b) Owners or operators proposing to site new MSWLF units and lateral expansions within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).

(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.

(d) For purposes of this section:

(1) *Airport* means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(2) *Bird hazard* means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

NOTE TO §258.10: A prohibition on locating a new MSWLF near certain airports was enacted in Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Ford Act), Pub. L. 106-181 (49 U.S.C. 44718 note). Section 503 prohibits the "construction or establishment" of new MSWLFs after April 5, 2000 within six miles of certain smaller public airports. The Federal Aviation Administration (FAA) administers the Ford Act and has issued guidance in FAA Advisory Circular 150/5200-34, dated August 26, 2000. For further information, please contact the FAA.

[56 FR 51016, Oct. 9, 1991, as amended at 68 FR 59335, Oct. 15, 2003]

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§258.11 Floodplains.

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.

(b) For purposes of this section:

(1) *Floodplain* means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.

(2) *100-year flood* means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

(3) *Washout* means the carrying away of solid waste by waters of the base flood.

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§258.12 Wetlands.

(a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:

(1) Where applicable under section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that practicable alternative to the proposed landfill is available which does not involve wetlands is clearly rebutted;

(2) The construction and operation of the MSWLF unit will not:

(i) Cause or contribute to violations of any applicable State water quality standard,

(ii) Violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act,

(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, and

(iv) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;

(3) The MSWLF unit will not cause or contribute to significant degradation of wetlands. The owner or operator must demonstrate the integrity of the MSWLF unit and its ability to protect ecological resources by addressing the following factors:

(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the MSWLF unit;

(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the MSWLF unit;

(iii) The volume and chemical nature of the waste managed in the MSWLF unit;

(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;

(v) The potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and

(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

(4) To the extent required under section 404 of the Clean Water Act or applicable State wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and

(5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.

(b) For purposes of this section, *wetlands* means those areas that are defined in 40 CFR 232.2(r).

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§258.13 *Fault areas.*

(a) New MSWLF units and lateral expansions shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the Director of an approved State that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the MSWLF unit and will be protective of human health and the environment.

(b) For the purposes of this section:

(1) *Fault* means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(2) *Displacement* means the relative movement of any two sides of a fault measured in any direction.

(3) *Holocene* means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

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§258.14 *Seismic impact zones.*

(a) New MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.

(b) For the purposes of this section:

(1) *Seismic impact zone* means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 250 years.

(2) *Maximum horizontal acceleration in lithified earth material* means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

(3) *Lithified earth material* means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

[56 FR 51016, Oct. 9, 1991; 57 FR 28627, June 26, 1992]

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§258.15 *Unstable areas.*

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the State Director that it has

been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:

- (1) On-site or local soil conditions that may result in significant differential settling;
- (2) On-site or local geologic or geomorphologic features; and
- (3) On-site or local human-made features or events (both surface and subsurface).

(b) For purposes of this section:

(1) *Unstable area* means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and Karst terranes.

(2) *Structural components* means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.

(3) *Poor foundation conditions* means those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of an MSWLF unit.

(4) *Areas susceptible to mass movement* means those areas of influence (*i.e.*, areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

(5) *Karst terranes* means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

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§258.16 Closure of existing municipal solid waste landfill units.

(a) Existing MSWLF units that cannot make the demonstration specified in §258.10(a), pertaining to airports, §258.11(a), pertaining to floodplains, or §258.15(a), pertaining to unstable areas, must close by October 9, 1996, in accordance with §258.60 of this part and conduct post-closure activities in accordance with §258.61 of this part.

(b) The deadline for closure required by paragraph (a) of this section may be extended up to two years if the owner or operator demonstrates to the Director of an approved State that:

- (1) There is no available alternative disposal capacity;
- (2) There is no immediate threat to human health and the environment.

NOTE TO SUBPART B: Owners or operators of MSWLFs should be aware that a State in which their landfill is located or is to be located, may have adopted a state wellhead protection program in accordance with section 1428 of the Safe Drinking Water Act. Such state wellhead protection programs may impose additional requirements on owners or operators of MSWLFs than those set forth in this part.

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§§258.17-258.19 [Reserved]

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Subpart C—Operating Criteria

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§258.20 Procedures for excluding the receipt of hazardous waste.

(a) Owners or operators of all MSWLF units must implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes as defined in part 261 of this chapter and polychlorinated biphenyls (PCB) wastes as defined in part 761 of this chapter. This program must include, at a minimum:

(1) Random inspections of incoming loads unless the owner or operator takes other steps to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;

(2) Records of any inspections;

(3) Training of facility personnel to recognize regulated hazardous waste and PCB wastes; and

(4) Notification of State Director of authorized States under Subtitle C of RCRA or the EPA Regional Administrator if in an unauthorized State if a regulated hazardous waste or PCB waste is discovered at the facility.

(b) For purposes of this section, *regulated hazardous waste* means a solid waste that is a hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) or was not generated by a very small quantity generator as defined in §260.10 of this chapter.

[56 FR 51016, Oct. 9, 1991, as amended at 81 FR 85805, Nov. 28, 2016]

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§258.21 Cover material requirements.

(a) Except as provided in paragraph (b) of this section, the owners or operators of all MSWLF units must cover disposed solid waste with six inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.

(b) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the Director of an approved State if the owner or operator demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.

(c) The Director of an approved State may grant a temporary waiver from the requirement of paragraph (a) and (b) of this section if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

(d) The Director of an Approved State may establish alternative frequencies for cover requirements in paragraphs (a) and (b) of this section, after public review and comment, for any owners or operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less, based on an annual average. Any alternative requirements established under this paragraph must:

(1) Consider the unique characteristics of small communities;

(2) Take into account climatic and hydrogeologic conditions; and

(3) Be protective of human health and the environment.

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§258.22 Disease vector control.

(a) Owners or operators of all MSWLF units must prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.

(b) For purposes of this section, *disease vectors* means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.

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§258.23 Explosive gases control.

(a) Owners or operators of all MSWLF units must ensure that:

(1) The concentration of methane gas generated by the facility does not exceed 25 percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components); and

(2) The concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary.

(b) Owners or operators of all MSWLF units must implement a routine methane monitoring program to ensure that the standards of paragraph (a) of this section are met.

(1) The type and frequency of monitoring must be determined based on the following factors:

(i) Soil conditions;

(ii) The hydrogeologic conditions surrounding the facility;

(iii) The hydraulic conditions surrounding the facility; and

(iv) The location of facility structures and property boundaries.

(2) The minimum frequency of monitoring shall be quarterly.

(c) If methane gas levels exceeding the limits specified in paragraph (a) of this section are detected, the owner or operator must:

(1) Immediately take all necessary steps to ensure protection of human health and notify the State Director;

(2) Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and

(3) Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the State Director that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.

(4) The Director of an approved State may establish alternative schedules for demonstrating compliance with paragraphs (c) (2) and (3) of this section.

(d) For purposes of this section, *lower explosive limit* means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25 °C and atmospheric pressure.

(e) The Director of an approved State may establish alternative frequencies for the monitoring requirement of paragraph (b)(2) of this section, after public review and comment, for any owners or operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less, based on an annual average. Any alternative monitoring frequencies established under this paragraph must:

- (1) Consider the unique characteristics of small communities;
- (2) Take into account climatic and hydrogeologic conditions; and
- (3) Be protective of human health and the environment.

[56 FR 51016, Oct. 9, 1991, as amended at 62 FR 40713, July 29, 1997]

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§258.24 *Air criteria.*

(a) Owners or operators of all MSWLFs must ensure that the units not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to section 110 of the Clean Air Act, as amended.

(b) Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency cleanup operations, is prohibited at all MSWLF units.

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§258.25 *Access requirements.*

Owners or operators of all MSWLF units must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.

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§258.26 *Run-on/run-off control systems.*

(a) Owners or operators of all MSWLF units must design, construct, and maintain:

- (1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm;
- (2) A run-off control system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(b) Run-off from the active portion of the landfill unit must be handled in accordance with §258.27(a) of this part.

[56 FR 51016, Oct. 9, 1991; 57 FR 28627, June 26, 1992]

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§258.27 *Surface water requirements.*

MSWLF units shall not:

(a) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to section 402.

(b) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or State-wide water quality management plan that has been approved under section 208 or 319 of the Clean Water Act, as amended.

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§258.28 Liquids restrictions.

(a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:

(1) The waste is household waste other than septic waste;

(2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF, or lateral expansion, is designed with a composite liner and leachate collection system as described in §258.40(a)(2) of this part. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record; or

(3) The MSWLF unit is a Project XL MSWLF and meets the applicable requirements of §258.41. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in the operating record.

(b) Containers holding liquid waste may not be placed in a MSWLF unit unless:

(1) The container is a small container similar in size to that normally found in household waste;

(2) The container is designed to hold liquids for use other than storage; or

(3) The waste is household waste.

(c) For purposes of this section:

(1) *Liquid waste* means any waste material that is determined to contain “free liquids” as defined by Method 9095B (Paint Filter Liquids Test), included in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (EPA Publication SW-846) which is incorporated by reference. A suffix of “B” in the method number indicates revision two (the method has been revised twice). Method 9095B is dated November 2004. This incorporation by reference was approved by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR part 51. This material is incorporated as it exists on the date of approval and a notice of any change in this material will be published in the FEDERAL REGISTER. A copy may be inspected at the Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW. (3403T), Washington, DC 20460, libraryhq@epa.gov; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) *Gas condensate* means the liquid generated as a result of gas recovery process(es) at the MSWLF unit.

[56 FR 51016, Oct. 9, 1991, as amended at 66 FR 42449, Aug. 13, 2001; 70 FR 34555, June 14, 2005]

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§258.29 Recordkeeping requirements.

(a) The owner or operator of a MSWLF unit must record and retain near the facility in an operating record or in an alternative location approved by the Director of an approved State the following information as it becomes available:

- (1) Any location restriction demonstration required under subpart B of this part;
 - (2) Inspection records, training procedures, and notification procedures required in §258.20 of this part;
 - (3) Gas monitoring results from monitoring and any remediation plans required by §258.23 of this part;
 - (4) Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under §258.28(a)(2) of this part;
 - (5) Any demonstration, certification, finding, monitoring, testing, or analytical data required by subpart E of this part;
 - (6) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by §§258.60 and 258.61 of this part; and
 - (7) Any cost estimates and financial assurance documentation required by subpart G of this part.
 - (8) Any information demonstrating compliance with small community exemption as required by §258.1(f)(2).
- (b) The owner/operator must notify the State Director when the documents from paragraph (a) of this section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the State Director or be made available at all reasonable times for inspection by the State Director.
- (c) The Director of an approved State can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (a) and (b) of this section, except for the notification requirements in §258.10(b) and §258.55(g)(1)(iii).
- (d) The Director of an approved state program may receive electronic documents only if the state program includes the requirements of 40 CFR Part 3—(Electronic reporting).

[56 FR 51016, Oct. 9, 1991, as amended at 70 FR 59888, Oct. 13, 2005]

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§§258.30-258.39 [Reserved]

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Subpart D—Design Criteria

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§258.40 Design criteria.

- (a) New MSWLF units and lateral expansions shall be constructed:
- (1) In accordance with a design approved by the Director of an approved State or as specified in §258.40(e) for unapproved States. The design must ensure that the concentration values listed in Table 1 of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Director of an approved State under paragraph (d) of this section, or
 - (2) With a composite liner, as defined in paragraph (b) of this section and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.
- (b) For purposes of this section, *composite liner* means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7}

cm/sec. FML components consisting of high density polyethylene (HDPE) shall be at least 60-mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

(c) When approving a design that complies with paragraph (a)(1) of this section, the Director of an approved State shall consider at least the following factors:

(1) The hydrogeologic characteristics of the facility and surrounding land;

(2) The climatic factors of the area; and

(3) The volume and physical and chemical characteristics of the leachate.

(d) The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance State Director shall consider at least the following factors:

(1) The hydrogeologic characteristics of the facility and surrounding land;

(2) The volume and physical and chemical characteristics of the leachate;

(3) The quantity, quality, and direction, of flow of ground water;

(4) The proximity and withdrawal rate of the ground-water users;

(5) The availability of alternative drinking water supplies;

(6) The existing quality of the ground water, including other sources of contamination and their cumulative impacts on the ground water, and whether the ground water is currently used or reasonably expected to be used for drinking water;

(7) Public health, safety, and welfare effects; and

(8) Practicable capability of the owner or operator.

(e) If EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA section 4005(c)(1)(B) by October 9, 1993, owners and operators in unapproved States may utilize a design meeting the performance standard in §258.40(a)(1) if the following conditions are met:

(1) The State determines the design meets the performance standard in §258.40(a)(1);

(2) The State petitions EPA to review its determination; and

(3) EPA approves the State determination or does not disapprove the determination within 30 days.

NOTE TO SUBPART D: 40 CFR part 239 is reserved to establish the procedures and requirements for State compliance with RCRA section 4005(c)(1)(B).

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005

Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.05
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloromethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

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§258.41 Project XL Bioreactor Landfill Projects.

(a) Buncombe County, North Carolina Project XL Bioreactor Landfill Requirements. Paragraph (a) of this section applies to Cells 1, 2, 3, 4, and 5 of the Buncombe County Solid Waste Management Facility located in the County of Buncombe, North Carolina, owned and operated by the Buncombe County Solid Waste Authority, or its successors. This paragraph (a) will also apply to Cells 6, 7, 8, 9, and 10, provided that the EPA Regional Administrator for Region 4 and the State Director determine that the pilot project in Cells 3, 4, and 5 is performing as expected and that the pilot project has not exhibited detrimental environmental results.

(1) The Buncombe County Solid Waste Authority is allowed to place liquid waste in the Buncombe County Solid Waste Management Facility, provided that the provisions of paragraphs (a)(2) through (9) of this section are met.

(2) The only liquid waste allowed under this section is leachate or gas condensate derived from the MSWLF, which may be supplemented with water from the French Broad River. The owner or operator shall control any liquids to the landfill to assure that the average moisture content of the landfill does not exceed 50% by weight. Liquid addition and recirculation is allowed only to the extent that the integrity of the landfill including its liner system is maintained, as determined by the State Director.

(3) The MSWLF unit shall be designed and constructed with a liner and leachate collection system as described in §258.40(a)(2) or paragraphs (a)(4) and (5) of this section. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in operating record;

(4) Cells 3-10 shall be constructed with a liner system consisting of the components described in paragraphs (a)(4)(i) through (v) of this section, or an equivalent or superior liner system as determined by the State Director:

(i) A lower component consisting of at least 18 inches of compacted soil with a hydraulic conductivity of no more than 1×10^{-5} cm/sec., and

(ii) An upper component consisting of a minimum 30-millimeter ("mil") flexible membrane liner (FML) or 60-mil if High Density Polyethylene ("HDPE") is used, and

(iii) A geosynthetic clay liner (GCL) overlaying and in direct contact with the 18 inches of compacted soil in paragraph (a)(4) of this section and having the following properties:

(A) The GCL shall be formulated and manufactured from polypropylene geotextiles and high swelling containment resistant sodium bentonite. The bentonite-geotextile liner shall be manufactured using a minimum of one pound per square foot as determined using the Standard Test Method for Measuring Mass per Unit Area of Geotextiles, ASTM D-5261-92 (reapproved in 1996). The high swelling sodium montmorillonite clay shall be at 12% moisture content as determined by the Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass, ASTM D2216-98. The Director of the Federal Register approves this incorporation by reference with 5 U.S.C. 552(a) and 1 CFR part 51. These methods are available from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. These methods may be inspected at EPA's docket office located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(B) The encapsulating geotextile shall be polypropylene and shall have a minimum weight of 6 oz./square yard.

(iv) The upper component shall be installed in direct and uniform contact with an overlaying soil cushioning component.

(v) Underlying the above liner system, there shall also be installed a leak detection system consisting of a 60-mil HDPE liner placed on a prepared subgrade.

(A) A 4 inch capped pipe will drain liquid collected in the sump out beyond the footprint of the landfill cell.

(B) Water collected on the leak detection liner shall be monitored at least semi-annually as directed by the State Director to determine whether any leachate escaped the liner system.

(5) Cells 3-10 shall be designed and constructed with a leachate collection system to maintain less than 30 centimeters depth of leachate is present at the sump location. The leachate collection system shall include a continuous monitoring system to monitor depth of leachate.

(6) The owner/operator shall keep the Federally Enforceable State Operating Permit (FESOP) issued by the Western North Carolina Air Quality Agency for the Buncombe County Solid Waste Management Facility in effect, and shall comply with the provisions of the FESOP, during the entire period of leachate recirculation and the post closure period. The FESOP was issued on November 13, 2000 and contains the air quality requirements for the Buncombe County Landfill XL project.

(7) Monitoring and reporting requirements. The owner or operator of the Buncombe County Solid Waste Management Facility shall monitor for the parameters listed in paragraphs (a)(7)(i) through (xiii) of this section and submit an annual report on the XL project to the EPA Regional Administrator for Region 4 and the State Director. The first report is due coincident with the October 2001 report to the state. The report should state what progress has been made toward the superior environmental performance and other commitments as stated in the Final Project Agreement. The report shall include, at a minimum, the following data:

(i) Amount of landfill gas generated;

(ii) Percent capture of landfill gas, if known;

(iii) Quality of the landfill gas, amount and type of liquids applied to the landfill;

(iv) Method of liquids application to the landfill;

- (v) Quantity of waste placed in the landfill;
- (vi) Quantity and quality of leachate collected;
- (vii) Quantity of leachate recirculated back into the landfill;
- (viii) Information on the pretreatment of waste applied to the landfill;
- (ix) Data collected on landfill temperature and moisture content;
- (x) Data on the leachate pressure (head) on the liner;
- (xi) Observations, information, and studies made on the physical stability of the MSWLF units that are developed during the project term, if any.
- (xii) The above data may be summarized, and, at a minimum shall contain, the minimum, maximum, median, and average data points as well as the frequency of monitoring as applicable.
- (xiii) The method and frequency of monitoring shall be specified by the State Director.

(8) *Termination and withdrawal.* (i) Paragraph (a) of this section will terminate August 22, 2026, unless a subsequent rulemaking is issued or terminated earlier pursuant to paragraph (a)(8)(ii) of this section.

(ii) In the event of noncompliance with paragraph (a) of this section, EPA may terminate the authority under paragraph (a) of this section and the authority to add liquid wastes to all or part of cells 3-10 under §258.28(a)(3). The EPA Regional Administrator will provide written notice of intent to terminate to the Buncombe County Solid Waste Authority with a copy to the State Director. The notice will state EPA's intent to terminate under the rules and will include a brief statement of EPA's reasons for its action. The termination will take effect 60 days from the date of the notice, unless the EPA Regional Administrator for Region 4 issues a written notice rescinding the termination.

(9) *Compliance requirements in the event of termination or withdrawal.* The Buncombe County Solid Waste Management Facility will be subject to all regulatory provisions applicable to MSWLFs upon termination of authority under this section. In the event of early termination of this section, the EPA Regional Administrator for Region 4 may provide an interim period of compliance to allow Buncombe County a reasonable period of time for transition following cessation of liquids addition.

(b) This section applies solely to Module D of the Yolo County Central Landfill owned and operated by the County of Yolo, California, or its successors. It allows the Yolo County Central Landfill to add bulk or noncontainerized liquid wastes to Module D under the following conditions:

(1) Module D shall be designed and constructed with a composite liner as defined in §258.40(b) and a leachate collection system that functions and continuously monitors to ensure that less than 30 centimeters depth of leachate is maintained over the liner.

(2) The owner or operator of the Yolo County Central Landfill must ensure that the concentration values listed in Table 1 of §258.40 are not exceeded in the uppermost aquifer at the relevant point of compliance for the landfill as specified by the State Director under §258.40(d).

(3) The owner or operator of the Yolo County Central Landfill shall demonstrate that the addition of any liquids to Module D does not result in an increased leakage rate, and does not result in liner slippage, or otherwise compromise the integrity of the landfill and its liner system, as determined by the State Director.

(4) The owner or operator of the Yolo County Central Landfill must ensure that Module D is operated in such a manner so as to prevent any landfill fires from occurring.

(5) The owner or operator of the Yolo County Central Landfill shall submit an annual report to the EPA Regional Administrator and the State Director. The first report is due within 18 months after August 13, 2001. The report shall state what progress the Project is making towards the superior environmental performance as stated in the Final Project Agreement. The data in paragraphs (b)(5)(i) through (xvi) of this section may be summarized, but,

at a minimum, shall contain the minimum, maximum, median, and average data points as well as the frequency of monitoring, as applicable. These reporting provisions shall remain in effect for as long as the owner or operator of the Yolo County Central Landfill continues to add liquid waste to Module D. Additional monitoring, record keeping and reporting requirements related to landfill gas will be contained in a permit executed by the local air quality management district pursuant to the Clean Air Act, 42 U.S.C. 7401 *et seq.* Application of this site-specific rule to the Yolo County Central Landfill is conditioned upon the issuance of such permit. The annual report will include, at a minimum, the following data:

(i) Amount of landfill gas generated;

(ii) Percent capture of landfill gas;

(iii) Quality of the landfill gas;

(iv) Amount and type of liquids applied to the landfill;

(v) Method of liquids application to the landfill;

(vi) Quantity of waste placed in the landfill;

(vii) Quantity and quality of leachate collected, including at least the following parameters, monitored, at a minimum, on an annual basis:

(A) pH;

(B) Conductivity;

(C) Dissolved oxygen;

(D) Dissolved solids;

(E) Biochemical oxygen demand;

(F) Chemical oxygen demand;

(G) Organic carbon;

(H) Nutrients, (including ammonia ["NH₃"], total kjeldahl nitrogen ["TKN"], and total phosphorus ["TP"]);

(I) Common ions;

(J) Heavy metals;

(K) Organic priority pollutants; and

(L) Flow rate;

(viii) Quantity of leachate recirculated back into the landfill;

(ix) Information on the pretreatment of solid and liquid waste applied to the landfill;

(x) Landfill temperature;

(xi) Landfill moisture content;

(xii) Data on the leachate pressure (head) on the liner;

(xiii) The amount of aeration of the waste;

(xiv) Data on landfill settlement;

(xv) Any information on the performance of the landfill cover; and

(xvi) Observations, information, or studies made on the physical stability of the landfill.

(6) This section will remain in effect until August 13, 2006. By August 13, 2006, Yolo County Central Landfill shall return to compliance with the regulatory requirements which would have been in effect absent the flexibility provided through this Project XL site-specific rule. This section applies to Phase I of Module D. This section also will apply to any phase of Module D beyond Phase I only if a second Final Project Agreement that describes the additional phase has been signed by representatives of EPA Region 9, Yolo County, and the State of California. Phase I of Module D is defined as the operation of twelve acres of the twenty acre Module D.

(c) *Virginia Landfills XL Project Requirements.* Paragraph (c) of this section applies solely to two Virginia landfills operated by the Waste Management, Inc. or its successors: The Maplewood Recycling and Waste Disposal Facility, located in Amelia County, Virginia ("Maplewood Landfill"); and the King George County Landfill and Recycling Facility, located in King George County, Virginia ("King George Landfill") collectively hereinafter, "the VA Project XL Landfills or landfill." The VA Project XL Landfills are allowed to add non-hazardous bulk or non-containerized liquids including, leachate, storm water and truck wash water, hereinafter, "liquid or liquids", to Cell 3 of the King George Landfill (hereinafter "Cell 3") and Phases 1 and 2 of the Maplewood Landfill (hereinafter "Phases 1 and 2") under the following conditions:

(1) The operator of the landfill shall maintain the liners underlying Cell 3 and Phases 1 and 2, which were designed and constructed with an alternative liner as defined in §258.40(a)(1) in accord with their current installed design in order to maintain the integrity of the liner system and keep it and the leachate collection system in good operating order. The operator of the landfill shall ensure that the addition of any liquids does not result in an increased leakage rate, and does not result in liner slippage, or otherwise compromise the integrity of the landfill and its liner system, as determined by the State Director. In addition, the leachate collection system shall be operated, monitored and maintained to ensure that less than 30 cm depth of leachate is maintained over the liner.

(2) The operator of the landfill shall ensure that the concentration values listed in Table 1 of §258.40 are not exceeded in the uppermost aquifer at the relevant point of compliance for the landfill, as specified by the State Director, under §258.40(d).

(3) The operator of the landfill shall monitor and report whether surface seeps are occurring and determine whether they are attributable to operation of the liquid application system. EPA and VADEQ shall be notified in the semi-annual report of the occurrence of any seeps.

(4) The operator of the landfill shall determine on a monthly basis the leachate quality in test and control areas with and without liquid addition. The operator of the landfill shall collect monthly samples of the landfill leachate and analyze them for the following parameters: pH, Conductivity, Dissolved Oxygen, Dissolved Solids, Biochemical Oxygen Demand, Chemical Oxygen Demand, Organic Carbon, Nutrients (ammonia, total kjeldahl nitrogen, total phosphorus), Common Ions, Heavy Metals and Organic Priority Pollutants.

(5) The operator of the landfill shall determine on a semi-annual basis the total quantity of leachate collected in test and control areas; the total quantity of liquids applied in the test areas and determination of any changes in this quantity over time; the total quantity of leachate in on-site storage structures and any leachate taken for offsite disposal.

(6) Prior to the addition of any liquid to the landfill, the operator of the landfill shall perform an initial characterization of the liquid and notify EPA and VADEQ of the liquid proposed to be added. The parameters for the initial characterization of liquids shall be the same as the monthly parameters for the landfill leachate specified in paragraph (c)(4) of this section. The operator shall annually test all liquids added to the landfill and compare these results to the initial characterization.

(7) The operator of the landfill shall ensure that Cell 3 and Phases 1 and 2 are operated in such a manner so as to prevent any landfill fires from occurring. The operator of the landfill shall monitor the gas temperature at well heads, at a minimum, on a monthly basis.

(8) The operator of the landfill shall perform an annual surface topographic survey to determine the rate of the settlement of the waste in the test and control areas.

(9) The operator of the landfill shall monitor and record the frequency of odor complaints during and after liquid application events. EPA and VADEQ shall be notified of the occurrence of any odor complaints in the semi-annual report.

(10) The operator of the landfill shall collect representative samples of the landfill waste in the test areas on an annual basis and analyze the samples for the following solid waste stabilization and decomposition parameters: Moisture Content, Biochemical Methane Potential, Cellulose, Lignin, Hemi-cellulose, Volatile Solids and pH.

(11) The operator of the landfill shall report to the EPA Regional Administrator and the State Director on the information described in paragraphs (c)(1) through (10) of this section on a semi-annual basis. The first report is due within 6 months after the effective date of this section. These reporting provisions shall remain in effect for the duration of the project term.

(12) Additional monitoring, record keeping and reporting requirements related to landfill gas will be contained in a Federally Enforceable State Operating Permit ("FESOP") for the VA Project XL Landfills issued pursuant to the Clean Air Act, 42 U.S.C. 7401 *et seq.* Application of this site-specific rule to the VA Project XL Landfills is conditioned upon the issuance of such a FESOP.

(13) This section applies until July 18, 2012. By July 18, 2012, the VA Project XL Landfills must return to compliance with the regulatory requirements which would have been in effect absent the flexibility provided through this section. If EPA Region 3's Regional Administrator, the Commonwealth of Virginia and Waste Management agree to an amendment of the project term, the parties must enter into an amended or new Final Project Agreement for any such amendment.

(14) The authority provided by this section may be terminated before the end of the 10 year period in the event of noncompliance with the requirements of paragraph (c) of this section, the determination by the EPA Region 3's Regional Administrator that the project has failed to achieve the expected level of environmental performance, or the promulgation of generally applicable requirements that would apply to all landfills that meet or exceed the performance standard set forth in §258.40(a)(1). In the event of early termination EPA in consultation with the Commonwealth of Virginia will determine an interim compliance period to provide sufficient time for the operator to return the landfills to compliance with the regulatory requirements which would have been in effect absent the authority provided by this section. The interim compliance period shall not exceed six months.

[66 FR 42449, Aug. 13, 2001, as amended at 66 FR 44069, Aug. 22, 2001; 67 FR 47319, July 18, 2002; 69 FR 18803, Apr. 9, 2004]

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§258.42 Approval of site-specific flexibility requests in Indian country.

(a) Salt River Pima-Maricopa Indian Community (SRPMIC), Salt River Landfill Research, Development, and Demonstration Project Requirements. Paragraph (a) of this section applies to the Salt River Landfill, a municipal solid waste landfill owned and operated by the SRPMIC on the SRPMIC's reservation in Arizona, which includes waste disposal areas identified as "Phases I-VI." The application submitted by SRPMIC, "Research, Development, and Demonstration Permit Application Salt River Landfill," dated September 24, 2007 and amended on April 8, 2008 is hereby incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may inspect or obtain a copy at the Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA, or by calling the Docket Facility at (415) 947-4406, or go to <http://www.regulations.gov>, Docket ID No. EPA-R09-RCRA-2008-0354. You may also inspect a copy at the National Archives and Records Administration (NARA). For information on the availability at NARA, call (202) 741-6030 or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. The facility owner and/or operator may operate the facility in accordance with this application, including the following activities more generally described as follows:

(1) The owner and/or operator may install a geosynthetic clay liner as an alternative bottom liner system in Phase VI.

(2) The owner and/or operator may operate Phase VI as a bioreactor by recirculating leachate and landfill gas condensate, and by adding storm water and groundwater, to the below grade portions of Phase VI.

(3) The owner and/or operator may increase the moisture content of the waste mass in Phases IIIB and IVA by recirculating leachate and landfill gas condensate, and by adding storm water and groundwater, to the below grade portions of Phases IIIB and IVA.

(4) The owner and/or operator shall maintain less than a 30-cm depth of leachate on the liner.

(5) The owner and/or operator shall submit reports to the Director of the Waste Management Division at EPA Region 9 as specified in "Research, Development, and Demonstration Permit Application Salt River Landfill," dated September 24, 2007 and amended on April 8, 2008 including an annual report showing whether and to what extent the site is progressing in attaining project goals. The annual report will also include a summary of all monitoring and testing results, as specified in the application.

(6) The owner and/or operator may not operate the facility pursuant to the authority granted by this section if there is any deviation from the terms, conditions, and requirements of this section unless the operation of the facility will continue to conform to the standards set forth in §258.4 of this chapter and the owner and/or operator has obtained the prior written approval of the Director of the Waste Management Division at EPA Region 9 or his or her designee to implement corrective measures or otherwise operate the facility subject to such deviation. The Director of the Waste Management Division or designee shall provide an opportunity for the public to comment on any significant deviation prior to providing his or her written approval of the deviation.

(7) Paragraphs (a)(2), (3), (5), (6) and (9) of this section will terminate 36 months after date of publication in the FEDERAL REGISTER unless the Director of the Waste Management Division at EPA Region 9 or his or her designee renews this authority in writing. Any such renewal may extend the authority granted under paragraphs (a)(2), (3), (5), (6) and (9) of this section for up to an additional three years, and multiple renewals (up to a total of 12 years) may be provided. The Director of the Waste Management Division or designee shall provide an opportunity for the public to comment on any renewal request prior to providing his or her written approval or disapproval of such request.

(8) In no event will the provisions of paragraphs (a)(2), (3), (5), (6) or (9) of this section remain in effect after 12 years after date of publication in the FEDERAL REGISTER. Upon termination of paragraphs (a)(2), (3), (5), (6) and (9) of this section, and except with respect to paragraphs (a)(1) and (4) of this section, the owner and/or operator shall return to compliance with the regulatory requirements which would have been in effect absent the flexibility provided through this site-specific rule.

(9) In seeking any renewal of the authority granted under or other requirements of paragraphs (a)(2), (3), (5) and (6) of this section, the owner and/or operator shall provide a detailed assessment of the project showing the status with respect to achieving project goals, a list of problems and status with respect to problem resolutions, and any other requirements that the Director of the Waste Management Division at EPA Region 9 or his or her designee has determined are necessary for the approval of any renewal and has communicated in writing to the owner and operator.

(10) The owner and/or operator's authority to operate the landfill in accordance with paragraphs (a)(2), (3), (5), (6) and (9) of this section shall terminate if the Director of the Waste Management Division at EPA Region 9 or his or her designee determines that the overall goals of the project are not being attained, including protection of human health or the environment. Any such determination shall be communicated in writing to the owner and operator.

(b) [Reserved]

[74 FR 11680, Mar. 19, 2009]

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§§258.43-258.49 [Reserved]

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Subpart E—Ground-Water Monitoring and Corrective Action

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§258.50 Applicability.

(a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.

(b) Ground-water monitoring requirements under §258.51 through §258.55 of this part may be suspended by the Director of an approved State for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in §258.2) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified ground-water scientist and approved by the Director of an approved State, and must be based upon:

(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(c) Owners and operators of MSWLF units, except those meeting the conditions of §258.1(f), must comply with the ground-water monitoring requirements of this part according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:

(1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§258.51-258.55 by October 9, 1994;

(2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§258.51-258.55 by October 9, 1995;

(3) Existing MSWLF units and lateral expansions greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§258.51-258.55 by October 9, 1996.

(4) New MSWLF units must be in compliance with the ground-water monitoring requirements specified in §§258.51-258.55 before waste can be placed in the unit.

(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the ground-water monitoring requirements specified in §§258.51-258.55. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:

(1) Proximity of human and environmental receptors;

(2) Design of the MSWLF unit;

(3) Age of the MSWLF unit;

(4) The size of the MSWLF unit; and

(5) Types and quantities of wastes disposed including sewage sludge; and

(6) Resource value of the underlying aquifer, including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users; and

(iii) Ground-water quality and quantity.

(e) Owners and operators of all MSWLF units that meet the conditions of §258.1(f)(1) must comply with all applicable ground-water monitoring requirements of this part by October 9, 1997.

(f) Once established at a MSWLF unit, ground-water monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in §258.61.

(g) For the purposes of this subpart, a *qualified ground-water scientist* is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional Certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground-water monitoring, contaminant fate and transport, and corrective-action.

(h) The Director of an approved State may establish alternative schedules for demonstrating compliance with §258.51(d)(2), pertaining to notification of placement of certification in operating record; §258.54(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; §258.54(c) (2) and (3), pertaining to an assessment monitoring program; §258.55(b), pertaining to sampling and analyzing appendix II constituents; §258.55(d)(1), pertaining to placement of notice (appendix II constituents detected) in record and notification of notice in record; §258.55(d)(2), pertaining to sampling for appendix I and II to this part; §258.55(g), pertaining to notification (and placement of notice in record) of SSI above ground-water protection standard; §§258.55(g)(1)(iv) and 258.56(a), pertaining to assessment of corrective measures; §258.57(a), pertaining to selection of remedy and notification of placement in record; §258.58(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and §258.58(f), pertaining to notification of placement in record (certification of remedy completed).

[56 FR 51016, Oct. 9, 1991; 57 FR 28628, June 26, 1992, as amended at 58 FR 51547, Oct. 1, 1993; 60 FR 52342, Oct. 6, 1995]

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§258.51 Ground-water monitoring systems.

(a) A ground-water monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer (as defined in §258.2) that:

(1) Represent the quality of background ground water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background ground-water quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Represent the quality of ground water passing the relevant point of compliance specified by Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of ground-water contamination in the uppermost aquifer. When physical obstacles preclude installation of ground-water monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from

the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer.

(b) The Director of an approved State may approve a multiunit ground-water monitoring system instead of separate ground-water monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit ground-water monitoring system meets the requirement of §258.51(a) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:

- (1) Number, spacing, and orientation of the MSWLF units;
- (2) Hydrogeologic setting;
- (3) Site history;
- (4) Engineering design of the MSWLF units, and
- (5) Type of waste accepted at the MSWLF units.

(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (*i.e.*, the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water.

(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(d) The number, spacing, and depths of monitoring systems shall be:

(1) Determined based upon site-specific technical information that must include thorough characterization of:

(i) Aquifer thickness, ground-water flow rate, ground-water flow direction including seasonal and temporal fluctuations in ground-water flow; and

(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: Thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(2) Certified by a qualified ground-water scientist or approved by the Director of an approved State. Within 14 days of this certification, the owner or operator must notify the State Director that the certification has been placed in the operating record.

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§258.52 [Reserved]

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§258.53 Ground-water sampling and analysis requirements.

(a) The ground-water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of ground-water quality at the background and downgradient wells installed in compliance with §258.51(a) of this part. The owner or operator

must notify the State Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:

- (1) Sample collection;
- (2) Sample preservation and shipment;
- (3) Analytical procedures;
- (4) Chain of custody control; and
- (5) Quality assurance and quality control.

(b) The ground-water monitoring program must include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents and other monitoring parameters in ground-water samples. Ground-water samples shall not be field-filtered prior to laboratory analysis.

(c) The sampling procedures and frequency must be protective of human health and the environment.

(d) Ground-water elevations must be measured in each well immediately prior to purging, each time ground water is sampled. The owner or operator must determine the rate and direction of ground-water flow each time ground water is sampled. Ground-water elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in ground-water flow which could preclude accurate determination of ground-water flow rate and direction.

(e) The owner or operator must establish background ground-water quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular ground-water monitoring program that applies to the MSWLF unit, as determined under §258.54(a) or §258.55(a) of this part. Background ground-water quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit if it meets the requirements of §258.51(a)(1).

(f) The number of samples collected to establish ground-water quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (g) of this section. The sampling procedures shall be those specified under §258.54(b) for detection monitoring, §258.55 (b) and (d) for assessment monitoring, and §258.56(b) of corrective action.

(g) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method that meets the performance standards of §258.53(h). The owner or operator must place a justification for this alternative in the operating record and notify the State Director of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of §258.53(h).

(h) Any statistical method chosen under §258.53(g) shall comply with the following performance standards, as appropriate:

(1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(3) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(4) If a tolerance interval or a predictional interval is used to evaluate ground-water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(i) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular ground-water monitoring program that applies to the MSWLF unit, as determined under §§258.54(a) or 258.55(a) of this part.

(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the ground-water quality of each parameter or constituent at each monitoring well designated pursuant to §258.51(a)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.

(2) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.

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§258.54 Detection monitoring program.

(a) Detection monitoring is required at MSWLF units at all ground-water monitoring wells defined under §§258.51 (a)(1) and (a)(2) of this part. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in appendix I to this part.

(1) The Director of an approved State may delete any of the appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

(2) The Director of an approved State may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in appendix I to this part), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the ground water. In determining alternative parameters, the Director shall consider the following factors:

- (i) The types, quantities, and concentrations of constituents in wastes managed at the MSWLF unit;
- (ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;
- (iii) The detectability of indicator parameters, waste constituents, and reaction products in the ground water; and
- (iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(b) The monitoring frequency for all constituents listed in appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events. The Director of an approved State may specify an appropriate alternative frequency for repeated sampling and analysis for appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

- (1) Lithology of the aquifer and unsaturated zone;
- (2) Hydraulic conductivity of the aquifer and unsaturated zone;
- (3) Ground-water flow rates;
- (4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and
- (5) Resource value of the aquifer.

(c) If the owner or operator determines, pursuant to §258.53(g) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in appendix I to this part or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under §258.51(a)(2), the owner or operator:

(1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the State director that this notice was placed in the operating record; and

(2) Must establish an assessment monitoring program meeting the requirements of §258.55 of this part within 90 days except as provided for in paragraph (c)(3) of this section.

(3) The owner/operator may demonstrate that a source other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Director of an approved State and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in §258.55.

§258.55 Assessment monitoring program.

(a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in the appendix I to this part or in the alternative list approved in accordance with §258.54(a)(2).

(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the ground water for all constituents identified in appendix II to this part. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as a result of the complete appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the constituents. The Director of an approved State may specify an appropriate subset of wells to be sampled and analyzed for appendix II constituents during assessment monitoring. The Director of an approved State may delete any of the appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

(c) The Director of an approved State may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of appendix II constituents required by §258.55(b) of this part, during the active life (including closure) and post-closure care of the unit considering the following factors:

- (1) Lithology of the aquifer and unsaturated zone;
- (2) Hydraulic conductivity of the aquifer and unsaturated zone;
- (3) Ground-water flow rates;
- (4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);
- (5) Resource value of the aquifer; and
- (6) Nature (fate and transport) of any constituents detected in response to this section.

(d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must:

- (1) Within 14 days, place a notice in the operating record identifying the appendix II constituents that have been detected and notify the State Director that this notice has been placed in the operating record;
- (2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by §258.51(a), conduct analyses for all constituents in appendix I to this part or in the alternative list approved in accordance with §258.54(a)(2), and for those constituents in appendix II to this part that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events. The Director of an approved State may specify an alternative monitoring frequency during the active life (including closure) and the post-closure period for the constituents referred to in this paragraph. The alternative frequency for appendix I constituents, or the alternative list approved in accordance with §258.54(a)(2), during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (c) of this section;
- (3) Establish background concentrations for any constituents detected pursuant to paragraph (b) or (d)(2) of this section; and
- (4) Establish ground-water protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The ground-water protection standards shall be established in accordance with paragraphs (h) or (i) of this section.

(e) If the concentrations of all appendix II constituents are shown to be at or below background values, using the statistical procedures in §258.53(g), for two consecutive sampling events, the owner or operator must notify the State Director of this finding and may return to detection monitoring.

(f) If the concentrations of any appendix II constituents are above background values, but all concentrations are below the ground-water protection standard established under paragraphs (h) or (i) of this section, using the statistical procedures in §258.53(g), the owner or operator must continue assessment monitoring in accordance with this section.

(g) If one or more appendix II constituents are detected at statistically significant levels above the ground-water protection standard established under paragraphs (h) or (i) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the appendix II constituents that have exceeded the ground-water protection standard and notify the State Director and all appropriate local government officials that the notice has been placed in the operating record. The owner or operator also:

(1)(i) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(ii) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with §258.55(d)(2);

(iii) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with §258.55 (g)(1); and

(iv) Must initiate an assessment of corrective measures as required by §255.56 of this part within 90 days; or

(2) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Director of an approved State and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to §258.55, and may return to detection monitoring if the appendix II constituents are at or below background as specified in §258.55(e). Until a successful demonstration is made, the owner or operator must comply with §258.55(g) including initiating an assessment of corrective measures.

(h) The owner or operator must establish a ground-water protection standard for each appendix II constituent detected in the ground-water. The ground-water protection standard shall be:

(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;

(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with §258.51(a)(1); or

(3) For constituents for which the background level is higher than the MCL identified under paragraph (h)(1) of this section or health based levels identified under §258.55(i)(1), the background concentration.

(i) The Director of an approved State may establish an alternative ground-water protection standard for constituents for which MCLs have not been established. These ground-water protection standards shall be appropriate health based levels that satisfy the following criteria:

(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, Sept. 24, 1986);

(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;

(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and

(4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(ii) [Reserved]

(j) In establishing ground-water protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:

- (1) Multiple contaminants in the ground water;
- (2) Exposure threats to sensitive environmental receptors; and
- (3) Other site-specific exposure or potential exposure to ground water.

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§258.56 *Assessment of corrective measures.*

(a) Within 90 days of finding that any of the constituents listed in appendix II to this part have been detected at a statistically significant level exceeding the ground-water protection standards defined under §258.55 (h) or (i) of this part, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in §258.55.

(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under §258.57, addressing at least the following:

- (1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
 - (2) The time required to begin and complete the remedy;
 - (3) The costs of remedy implementation; and
 - (4) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).
- (d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

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§258.57 *Selection of remedy.*

(a) Based on the results of the corrective measures assessment conducted under §258.56, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the State Director, within 14 days of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.

(b) Remedies must:

(1) Be protective of human health and the environment;

(2) Attain the ground-water protection standard as specified pursuant to §§258.55 (h) or (i);

(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of appendix II constituents into the environment that may pose a threat to human health or the environment; and

(4) Comply with standards for management of wastes as specified in §258.58(d).

(c) In selecting a remedy that meets the standards of §258.57(b), the owner or operator shall consider the following evaluation factors:

(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

(i) Magnitude of reduction of existing risks;

(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;

(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal of containment;

(v) Time until full protection is achieved;

(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

(vii) Long-term reliability of the engineering and institutional controls; and

(viii) Potential need for replacement of the remedy.

(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

(i) The extent to which containment practices will reduce further releases;

(ii) The extent to which treatment technologies may be used.

(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

(i) Degree of difficulty associated with constructing the technology;

(ii) Expected operational reliability of the technologies;

(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(iv) Availability of necessary equipment and specialists; and

(v) Available capacity and location of needed treatment, storage, and disposal services.

(4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

(5) The degree to which community concerns are addressed by a potential remedy(s).

(d) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d) (1)-(8) of this section. The owner or operator must consider the following factors in determining the schedule of remedial activities:

(1) Extent and nature of contamination;

(2) Practical capabilities of remedial technologies in achieving compliance with ground-water protection standards established under §258.55 (g) or (h) and other objectives of the remedy;

(3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

(4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

(5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(6) Resource value of the aquifer including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users;

(iii) Ground-water quantity and quality;

(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent;

(v) The hydrogeologic characteristic of the facility and surrounding land;

(vi) Ground-water removal and treatment costs; and

(vii) The cost and availability of alternative water supplies.

(7) Practicable capability of the owner or operator.

(8) Other relevant factors.

(e) The Director of an approved State may determine that remediation of a release of an appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the satisfaction of the Director of the approved State that:

(1) The ground-water is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or

(2) The constituent(s) is present in ground water that:

(i) Is not currently or reasonably expected to be a source of drinking water; and

(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the ground-water protection standards established under §258.55 (h) or (i); or

(3) Remediation of the release(s) is technically impracticable; or

(4) Remediation results in unacceptable cross-media impacts.

(f) A determination by the Director of an approved State pursuant to paragraph (e) of this section shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the ground-water, to prevent exposure to the ground-water, or to remediate the ground-water to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

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§258.58 *Implementation of the corrective action program.*

(a) Based on the schedule established under §258.57(d) for initiation and completion of remedial activities the owner/operator must:

(1) Establish and implement a corrective action ground-water monitoring program that:

(i) At a minimum, meet the requirements of an assessment monitoring program under §258.55;

(ii) Indicate the effectiveness of the corrective action remedy; and

(iii) Demonstrate compliance with ground-water protection standard pursuant to paragraph (e) of this section.

(2) Implement the corrective action remedy selected under §258.57; and

(3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to §258.57. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

(i) Time required to develop and implement a final remedy;

(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iv) Further degradation of the ground-water that may occur if remedial action is not initiated expeditiously;

(v) Weather conditions that may cause hazardous constituents to migrate or be released;

(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

(vii) Other situations that may pose threats to human health and the environment.

(b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of §258.57(b) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under §258.58(c).

(c) If the owner or operator determines that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods, the owner or operator must:

(1) Obtain certification of a qualified ground-water scientist or approval by the Director of an approved State that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods;

(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

(i) Technically practicable; and

(ii) Consistent with the overall objective of the remedy.

(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(d) All solid wastes that are managed pursuant to a remedy required under §258.57, or an interim measure required under §258.58(a)(3), shall be managed in a manner:

(1) That is protective of human health and the environment; and

(2) That complies with applicable RCRA requirements.

(e) Remedies selected pursuant to §258.57 shall be considered complete when:

(1) The owner or operator complies with the ground-water protection standards established under §§258.55(h) or (i) at all points within the plume of contamination that lie beyond the ground-water monitoring well system established under §258.51(a).

(2) Compliance with the ground-water protection standards established under §§258.55(h) or (i) has been achieved by demonstrating that concentrations of appendix II constituents have not exceeded the ground-water protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in §258.53(g) and (h). The Director of an approved State may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of appendix II constituents have not exceeded the ground-water protection standard(s) taking into consideration:

(i) Extent and concentration of the release(s);

(ii) Behavior characteristics of the hazardous constituents in the ground-water;

(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

(iv) Characteristics of the ground-water.

(3) All actions required to complete the remedy have been satisfied.

(f) Upon completion of the remedy, the owner or operator must notify the State Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of §258.58(e) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified ground-water scientist or approved by the Director of an approved State.

(g) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (e) of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under §258.73.

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§258.59 [Reserved]

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Subpart F—Closure and Post-Closure Care

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§258.60 Closure criteria.

(a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be designed and constructed to:

(1) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and

(2) Minimize infiltration through the closed MSWLF by the use of an infiltration layer that contains a minimum 18-inches of earthen material, and

(3) Minimize erosion of the final cover by the use of an erosion layer that contains a minimum 6-inches of earthen material that is capable of sustaining native plant growth.

(b) The Director of an approved State may approve an alternative final cover design that includes:

(1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (a)(1) and (a)(2) of this section, and

(2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in paragraph (a)(3) of this section.

(3) The Director of an approved State may establish alternative requirements for the infiltration barrier in a paragraph (b)(1) of this section, after public review and comment, for any owners or operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less, based on an annual average. Any alternative requirements established under this paragraph must:

(i) Consider the unique characteristics of small communities;

(ii) Take into account climatic and hydrogeologic conditions; and

(iii) Be protective of human health and the environment.

(c) The owner or operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during their active life in accordance with the cover design requirements in §258.60(a) or (b), as applicable. The closure plan, at a minimum, must include the following information:

(1) A description of the final cover, designed in accordance with §258.60(a) and the methods and procedures to be used to install the cover;

(2) An estimate of the largest area of the MSWLF unit ever requiring a final cover as required under §258.60(a) at any time during the active life;

(3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and

(4) A schedule for completing all activities necessary to satisfy the closure criteria in §258.60.

(d) The owner or operator must notify the State Director that a closure plan has been prepared and placed in the operating record no later than the effective date of this part, or by the initial receipt of waste, whichever is later.

(e) Prior to beginning closure of each MSWLF unit as specified in §258.60(f), an owner or operator must notify the State Director that a notice of the intent to close the unit has been placed in the operating record.

(f) The owner or operator must begin closure activities of each MSWLF unit no later than 30 days after the date on which the MSWLF unit receives the known final receipt of wastes or, if the MSWLF unit has remaining capacity and there is a reasonable likelihood that the MSWLF unit will receive additional wastes, no later than one year after the most recent receipt of wastes. Extensions beyond the one-year deadline for beginning closure may be granted by the Director of an approved State if the owner or operator demonstrates that the MSWLF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed MSWLF unit.

(g) The owner or operator of all MSWLF units must complete closure activities of each MSWLF unit in accordance with the closure plan within 180 days following the beginning of closure as specified in paragraph (f) of this section. Extensions of the closure period may be granted by the Director of an approved State if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed MSWLF unit.

(h) Following closure of each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by Director of an approved State, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.

(i)(1) Following closure of all MSWLF units, the owner or operator must record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the State Director that the notation has been recorded and a copy has been placed in the operating record.

(2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:

(i) The land has been used as a landfill facility; and

(ii) Its use is restricted under §258.61(c)(3).

(j) The owner or operator may request permission from the Director of an approved State to remove the notation from the deed if all wastes are removed from the facility.

[56 FR 51016, Oct. 9, 1991; 57 FR 28628, June 26, 1992, as amended at 62 FR 40713, July 29, 1997]

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§258.61 *Post-closure care requirements.*

(a) Following closure of each MSWLF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for 30 years, except as provided under paragraph (b) of this section, and consist of at least the following:

(1) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;

(2) Maintaining and operating the leachate collection system in accordance with the requirements in §258.40, if applicable. The Director of an approved State may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;

(3) Monitoring the ground water in accordance with the requirements of subpart E of this part and maintaining the ground-water monitoring system, if applicable; and

(4) Maintaining and operating the gas monitoring system in accordance with the requirements of §258.23.

(b) The length of the post-closure care period may be:

(1) Decreased by the Director of an approved State if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Director of an approved State; or

(2) Increased by the Director of an approved State if the Director of an approved State determines that the lengthened period is necessary to protect human health and the environment.

(c) The owner or operator of all MSWLF units must prepare a written post-closure plan that includes, at a minimum, the following information:

(1) A description of the monitoring and maintenance activities required in §258.61(a) for each MSWLF unit, and the frequency at which these activities will be performed;

(2) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and

(3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this part 258. The Director of an approved State may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.

(d) The owner or operator must notify the State Director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this part, October 9, 1993, or by the initial receipt of waste, whichever is later.

(e) Following completion of the post-closure care period for each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by the Director of an approved State, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

[56 FR 51016, Oct. 9, 1991; 57 FR 28628, June 26, 1992]

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§258.62 Approval of site-specific flexibility requests in Indian country.

[Link to an amendment published at 82 FR 25535, June 2, 2017.](#)

(a) *Lake County Municipal Landfill final cover requirements.* Paragraph (a) of this section applies to the Lake County Landfill, a municipal solid waste landfill owned and operated by Lake County on the Confederated Salish and Kootenai Tribes' Flathead Reservation in Montana. The alternative final cover request submitted by Lake County, Montana, consisting of the "Lake County Landfill Alternative Cover," dated May 2007, the "Construction Quality Assurance & Control Plan for the Lake County Class II Landfill Unit Landfill Closure Project" and the "Lake County Landfill Plans for Final Closure January 2009," dated January 2009, is hereby incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may inspect or obtain a copy at the Environmental Protection Agency, Region VIII, Montana Office, 10 West 15th St., Suite 3200, Helena, MT or by calling 406-457-5000. You may also inspect a copy at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. The facility owner and/or operator may close the facility in accordance with this application, including the following activities more generally described as follows:

(1) The owner and operator may install an evapotranspiration system as an alternative final cover for the 15.4 acre active area.

(2) The final cover system shall consist of a 5.5-foot-thick multi-layer cover system comprised, from bottom to top, of an 18-inch intermediate and gas vent layer, a 24-inch native sand layer, an 18-inch imported silt layer and a 6-inch topsoil layer, as well as seeding and erosion control.

(3) The final cover system shall be constructed to achieve an equivalent reduction in infiltration as the infiltration layer specified in §258.60(a)(1) and (a)(2), and provide an equivalent protection from wind and water erosion as the erosion layer specified in paragraph (a)(3) of this section.

(4) In addition to meeting the specifications of the "Lake County Landfill Alternative Cover" dated May 2007, and the "Construction Quality Assurance & Control Plan for the Lake County Class II Landfill Unit Landfill Closure Project" dated January 2009, the owner and operator shall:

(i) At 50% final design, submit to EPA for approval an Operations and Maintenance Plan that includes an inspection schedule (at least quarterly) and remediation plan to address any potential rodent damage to the final cover; and

(ii) Achieve re-vegetation rates greater than 50% by the end of the first season and a complete stand of native grasses by the end of the third season.

(5) The owner and operator shall place documentation demonstrating compliance with the provisions of this Section in the operating record.

(6) All other applicable provisions of 40 CFR part 258 remain in effect.

(b) *Picacho Municipal Solid Waste Landfill—alternative list of detection monitoring parameters and alternative final cover.* This paragraph (b) applies to the Picacho Landfill, a Municipal Solid Waste Landfill operated by Imperial County on the Quechan Indian Tribe of the Fort Yuma Indian Reservation in California.

(1) In accordance with §258.54(a), the owner and operator may modify the list of heavy metal detection monitoring parameters specified in appendix I of this part, as required during Post-Closure Care by §258.61(a)(3), by replacing monitoring of the inorganic constituents, with the exception of arsenic, with the inorganic indicator parameters chloride, nitrate as nitrogen, sulfate, and total dissolved solids.

(2) In accordance with §258.60(b), the owner and operator may replace the prescriptive final cover set forth in §258.60(a), with an alternative final cover as follows:

(i) The owner and operator may install an evapotranspiration cover system as an alternative final cover for the 12.5 acre site.

(ii) The alternative final cover system shall be constructed to achieve an equivalent reduction in infiltration as the infiltration layer specified in §258.60(a)(1) and (2), and provide an equivalent protection from wind and water erosion as the erosion layer specified in §258.60(a)(3).

(iii) The final cover system shall consist of a minimum three-foot-thick multi-layer cover system comprised, from bottom to top, of:

(A) A minimum 30-inch thick infiltration layer consisting of:

(1) Existing intermediate cover; and

(2) Additional cover soil which, prior to placement, shall be wetted to optimal moisture and thoroughly mixed to near uniform condition, and the material shall then be placed in lifts with an uncompacted thickness of six to eight inches, spread evenly and compacted to 90 percent of the maximum dry density, and shall:

(i) Exhibit a grain size distribution that excludes particles in excess of three inches in diameter;

(ii) Have a minimum fines content (percent by weight passing U.S. No. 200 Sieve) of seven percent for an individual test and eight percent for the average of ten consecutive tests;

(iii) Have a grain size distribution with a minimum of five percent smaller than five microns for an individual test and six percent for the average of ten consecutive tests; and

(iv) Exhibit a maximum saturated hydraulic conductivity on the order of 1.0E-03 cm/sec.; and

(3) A minimum six-inch surface erosion layer comprised of a rock/soil admixture. The surface erosion layer admixture and gradations for 3% slopes and 3:1 slopes are detailed below:

(i) 3% slopes: For the 3% slopes the surface admixture shall be composed of pea gravel ($\frac{3}{8}$ -inch to $\frac{1}{2}$ -inch diameter) mixed with cover soil at the ratio of 25% rock to soil by volume with a minimum six-inch erosion layer.

(ii) For the 3:1 side slopes the surface admixture shall be composed of either: gravel/rock ($\frac{3}{4}$ -inch to one-inch diameter) mixed with additional cover soil as described in paragraph (b)(2)(iii)(A)(2) of this section at the ratio of 50% rock to soil by volume and result in a minimum six-inch erosion layer, or gravel/rock ($\frac{3}{4}$ -inch to two-inch diameter) mixed with additional cover soil as described in paragraph (b)(2)(iii)(A)(2) of this section at the ratio of 50% rock to soil by volume and result in a minimum 12-inch erosion layer.

(iii) The owner and operator shall place documentation demonstrating compliance with the provisions of this section in the operating record.

(iv) All other applicable provisions of this part remain in effect.

(B) [Reserved]

[75 FR 50932, Aug. 18, 2010, as amended at 81 FR 69409, Oct. 6, 2016]

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§§258.63-258.69 [Reserved]

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Subpart G—Financial Assurance Criteria

SOURCE: 56 FR 51029, Oct. 9, 1991, unless otherwise noted.

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§258.70 Applicability and effective date.

(a) The requirements of this section apply to owners and operators of all MSWLF units, except owners or operators who are State or Federal government entities whose debts and liabilities are the debts and liabilities of a State or the United States.

(b) The requirements of this section are effective April 9, 1997 except for MSWLF units meeting the conditions of §258.1(f)(1), in which case the effective date is October 9, 1997.

(c) The Director of an approved State may waive the requirements of this section for up to one year until April 9, 1998 for good cause if an owner or operator demonstrates to the Director's satisfaction that the April 9, 1997 effective date for the requirements of this section does not provide sufficient time to comply with these requirements and that such a waiver will not adversely affect human health and the environment.

[56 FR 51029, Oct. 9, 1991, as amended at 60 FR 52342, Oct. 6, 1995; 61 FR 60337, Nov. 27, 1996]

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§258.71 Financial assurance for closure.

(a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of hiring a third party to close the largest area of all MSWLF units ever requiring a final cover as required under §258.60 at any time during the active life in accordance with the closure plan. The owner or operator must notify the State Director that the estimate has been placed in the operating record.

(1) The cost estimate must equal the cost of closing the largest area of all MSWLF unit ever requiring a final cover at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see §258.60(c)(2) of this part).

(2) During the active life of the MSWLF unit, the owner or operator must annually adjust the closure cost estimate for inflation.

(3) The owner or operator must increase the closure cost estimate and the amount of financial assurance provided under paragraph (b) of this section if changes to the closure plan or MSWLF unit conditions increase the maximum cost of closure at any time during the remaining active life.

(4) The owner or operator may reduce the closure cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the MSWLF unit. The owner or operator must notify the State Director that the justification for the reduction of the closure cost estimate and the amount of financial assurance has been placed in the operating record.

(b) The owner or operator of each MSWLF unit must establish financial assurance for closure of the MSWLF unit in compliance with §258.74. The owner or operator must provide continuous coverage for closure until released from financial assurance requirements by demonstrating compliance with §258.60 (h) and (i).

[56 FR 51029, Oct. 9, 1991; 57 FR 28628, June 26, 1992]

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§258.72 Financial assurance for post-closure care.

(a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care for the MSWLF unit in compliance with the post-closure plan developed under §258.61 of this part. The post-closure cost estimate used to demonstrate financial assurance in paragraph (b) of this section must account for the total costs of conducting post-closure care, including annual and periodic costs as described in the post-closure plan over the entire post-closure care period. The owner or operator must notify the State Director that the estimate has been placed in the operating record.

(1) The cost estimate for post-closure care must be based on the most expensive costs of post-closure care during the post-closure care period.

(2) During the active life of the MSWLF unit and during the post-closure care period, the owner or operator must annually adjust the post-closure cost estimate for inflation.

(3) The owner or operator must increase the post-closure care cost estimate and the amount of financial assurance provided under paragraph (b) of this section if changes in the post-closure plan or MSWLF unit conditions increase the maximum costs of post-closure care.

(4) The owner or operator may reduce the post-closure cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum costs of post-closure care remaining over the post-closure care period. The owner or operator must notify the State Director that the justification for the reduction of the post-closure cost estimate and the amount of financial assurance has been placed in the operating record.

(b) The owner or operator of each MSWLF unit must establish, in a manner in accordance with §258.74, financial assurance for the costs of post-closure care as required under §258.61 of this part. The owner or

operator must provide continuous coverage for post-closure care until released from financial assurance requirements for post-closure care by demonstrating compliance with §258.61(e).

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§258.73 *Financial assurance for corrective action.*

(a) An owner or operator of a MSWLF unit required to undertake a corrective action program under §258.58 of this part must have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required under §258.58 of this part. The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period. The owner or operator must notify the State Director that the estimate has been placed in the operating record.

(1) The owner or operator must annually adjust the estimate for inflation until the corrective action program is completed in accordance with §258.58(f) of this part.

(2) The owner or operator must increase the corrective action cost estimate and the amount of financial assurance provided under paragraph (b) of this section if changes in the corrective action program or MSWLF unit conditions increase the maximum costs of corrective action.

(3) The owner or operator may reduce the amount of the corrective action cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum remaining costs of corrective action. The owner or operator must notify the State Director that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance has been placed in the operating record.

(b) The owner or operator of each MSWLF unit required to undertake a corrective action program under §258.58 of this part must establish, in a manner in accordance with §258.74, financial assurance for the most recent corrective action program. The owner or operator must provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with §258.58 (f) and (g).

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§258.74 *Allowable mechanisms.*

The mechanisms used to demonstrate financial assurance under this section must ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed. Owners and operators must choose from the options specified in paragraphs (a) through (j) of this section.

(a) *Trust Fund.* (1) An owner or operator may satisfy the requirements of this section by establishing a trust fund which conforms to the requirements of this paragraph. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. A copy of the trust agreement must be placed in the facility's operating record.

(2) Payments into the trust fund must be made annually by the owner or operator over the term of the initial permit or over the remaining life of the MSWLF unit, whichever is shorter, in the case of a trust fund for closure or post-closure care, or over one-half of the estimated length of the corrective action program in the case of corrective action for known releases. This period is referred to as the pay-in period.

(3) For a trust fund used to demonstrate financial assurance for closure and post-closure care, the first payment into the fund must be at least equal to the current cost estimate for closure or post-closure care, except as provided in paragraph (k) of this section, divided by the number of years in the pay-in period as defined in paragraph (a)(2) of this section. The amount of subsequent payments must be determined by the following formula:

Next Payment = [CE – CV]/Y

where CE is the current cost estimate for closure or post-closure care (updated for inflation or other changes), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(4) For a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current cost estimate for corrective action, except as provided in paragraph (k) of this section, divided by the number of years in the corrective action pay-in period as defined in paragraph (a)(2) of this section. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = [\text{RB} - \text{CV}]/\text{Y}$$

where RB is the most recent estimate of the required trust fund balance for corrective action (*i.e.*, the total costs that will be incurred during the second half of the corrective action period), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(5) The initial payment into the trust fund must be made before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997, or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1)), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58.

(6) If the owner or operator establishes a trust fund after having used one or more alternate mechanisms specified in this section, the initial payment into the trust fund must be at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of this paragraph and paragraph (a) of this section, as applicable.

(7) The owner or operator, or other person authorized to conduct closure, post-closure care, or corrective action activities may request reimbursement from the trustee for these expenditures. Requests for reimbursement will be granted by the trustee only if sufficient funds are remaining in the trust fund to cover the remaining costs of closure, post-closure care, or corrective action, and if justification and documentation of the cost is placed in the operating record. The owner or operator must notify the State Director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.

(8) The trust fund may be terminated by the owner or operator only if the owner or operator substitutes alternate financial assurance as specified in this section or if he is no longer required to demonstrate financial responsibility in accordance with the requirements of §§258.71(b), 258.72(b), or 258.73(b).

(b) Surety Bond Guaranteeing Payment or Performance. (1) An owner or operator may demonstrate financial assurance for closure or post-closure care by obtaining a payment or performance surety bond which conforms to the requirements of this paragraph. An owner or operator may demonstrate financial assurance for corrective action by obtaining a performance bond which conforms to the requirements of this paragraph. The bond must be effective before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997, or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1)), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58. The owner or operator must notify the State Director that a copy of the bond has been placed in the operating record. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The penal sum of the bond must be in an amount at least equal to the current closure, post-closure care or corrective action cost estimate, whichever is applicable, except as provided in §258.74(k).

(3) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(4) The owner or operator must establish a standby trust fund. The standby trust fund must meet the requirements of §258.74(a) except the requirements for initial payment and subsequent annual payments specified in §258.74 (a)(2), (3), (4) and (5).

(5) Payments made under the terms of the bond will be deposited by the surety directly into the standby trust fund. Payments from the trust fund must be approved by the trustee.

(6) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner and operator and to the State Director 120 days in advance of cancellation. If the surety cancels the bond, the owner or operator must obtain alternate financial assurance as specified in this section.

(7) The owner or operator may cancel the bond only if alternate financial assurance is substituted as specified in this section or if the owner or operator is no longer required to demonstrate financial responsibility in accordance with §258.71(b), §258.72(b) or §258.73(b).

(c) *Letter of credit.* (1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph. The letter of credit must be effective before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997, or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1)), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58. The owner or operator must notify the State Director that a copy of the letter of credit has been placed in the operating record. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) A letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: Name, and address of the facility, and the amount of funds assured, must be included with the letter of credit in the operating record.

(3) The letter of credit must be irrevocable and issued for a period of at least one year in an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable, except as provided in paragraph (k) of this section. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless the issuing institution has cancelled the letter of credit by sending notice of cancellation by certified mail to the owner and operator and to the State Director 120 days in advance of cancellation. If the letter of credit is cancelled by the issuing institution, the owner or operator must obtain alternate financial assurance.

(4) The owner or operator may cancel the letter of credit only if alternate financial assurance is substituted as specified in this section or if the owner or operator is released from the requirements of this section in accordance with §258.71(b), §258.72(b) or §258.73(b).

(d) *Insurance.* (1) An owner or operator may demonstrate financial assurance for closure and post-closure care by obtaining insurance which conforms to the requirements of this paragraph. The insurance must be effective before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997, or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1)), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States. The owner or operator must notify the State Director that a copy of the insurance policy has been placed in the operating record.

(2) The closure or post-closure care insurance policy must guarantee that funds will be available to close the MSWLF unit whenever final closure occurs or to provide post-closure care for the MSWLF unit whenever the post-closure care period begins, whichever is applicable. The policy must also guarantee that once closure or post-closure care begins, the insurer will be responsible for the paying out of funds to the owner or operator or other person authorized to conduct closure or post-closure care, up to an amount equal to the face amount of the policy.

(3) The insurance policy must be issued for a face amount at least equal to the current cost estimate for closure or post-closure care, whichever is applicable, except as provided in paragraph (k) of this section. The term *face amount* means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) An owner or operator, or any other person authorized to conduct closure or post-closure care, may receive reimbursements for closure or post-closure expenditures, whichever is applicable. Requests for reimbursement will be granted by the insurer only if the remaining value of the policy is sufficient to cover the remaining costs of closure or post-closure care, and if justification and documentation of the cost is placed in the operating record.

The owner or operator must notify the State Director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.

(5) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided that such consent is not unreasonably refused.

(6) The insurance policy must provide that the insurer may not cancel, terminate or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner and operator and to the State Director 120 days in advance of cancellation. If the insurer cancels the policy, the owner or operator must obtain alternate financial assurance as specified in this section.

(7) For insurance policies providing coverage for post-closure care, commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

(8) The owner or operator may cancel the insurance policy only if alternate financial assurance is substituted as specified in this section or if the owner or operator, is no longer required to demonstrate financial responsibility in accordance with the requirements of §258.71(b), §258.72(b) or §258.73(b).

(e) *Corporate financial test.* An owner or operator that satisfies the requirements of this paragraph (e) may demonstrate financial assurance up to the amount specified in this paragraph (e):

(1) *Financial component.* (i) The owner or operator must satisfy one of the following three conditions:

(A) A current rating for its senior unsubordinated debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; or

(B) A ratio of less than 1.5 comparing total liabilities to net worth; or

(C) A ratio of greater than 0.10 comparing the sum of net income plus depreciation, depletion and amortization, minus \$10 million, to total liabilities.

(ii) The tangible net worth of the owner or operator must be greater than: (A) The sum of the current closure, post-closure care, corrective action cost estimates and any other environmental obligations, including guarantees, covered by a financial test plus \$10 million except as provided in paragraph (e)(1)(ii)(B) of this section.

(B) \$10 million in net worth plus the amount of any guarantees that have not been recognized as liabilities on the financial statements provided all of the current closure, post-closure care, and corrective action costs and any other environmental obligations covered by a financial test are recognized as liabilities on the owner's or operator's audited financial statements, and subject to the approval of the State Director.

(iii) The owner or operator must have assets located in the United States amounting to at least the sum of current closure, post-closure care, corrective action cost estimates and any other environmental obligations covered by a financial test as described in paragraph (e)(3) of this section.

(2) *Recordkeeping and reporting requirements.* (i) The owner or operator must place the following items into the facility's operating record:

(A) A letter signed by the owner's or operator's chief financial officer that:

(1) Lists all the current cost estimates covered by a financial test, including, but not limited to, cost estimates required for municipal solid waste management facilities under this part 258, cost estimates required for UIC facilities under 40 CFR part 144, if applicable, cost estimates required for petroleum underground storage tank facilities under 40 CFR part 280, if applicable, cost estimates required for PCB storage facilities under 40 CFR

part 761, if applicable, and cost estimates required for hazardous waste treatment, storage, and disposal facilities under 40 CFR parts 264 and 265, if applicable; and

(2) Provides evidence demonstrating that the firm meets the conditions of either paragraph (e)(1)(i)(A) or (e)(1)(i)(B) or (e)(1)(i)(C) of this section and paragraphs (e)(1)(ii) and (e)(1)(iii) of this section.

(B) A copy of the independent certified public accountant's unqualified opinion of the owner's or operator's financial statements for the latest completed fiscal year. To be eligible to use the financial test, the owner's or operator's financial statements must receive an unqualified opinion from the independent certified public accountant. An adverse opinion, disclaimer of opinion, or other qualified opinion will be cause for disallowance, with the potential exception for qualified opinions provided in the next sentence. The Director of an approved State may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the Director deems that the matters which form the basis for the qualification are insufficient to warrant disallowance of the test. If the Director of an approved State does not allow use of the test, the owner or operator must provide alternate financial assurance that meets the requirements of this section.

(C) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that owner or operator satisfies paragraph (e)(1)(i)(B) or (e)(1)(i)(C) of this section that are different from data in the audited financial statements referred to in paragraph (e)(2)(i)(B) of this section or any other audited financial statement or data filed with the SEC, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based upon an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of that comparison, and the reasons for any differences.

(D) If the chief financial officer's letter provides a demonstration that the firm has assured for environmental obligations as provided in paragraph (e)(1)(ii)(B) of this section, then the letter shall include a report from the independent certified public accountant that verifies that all of the environmental obligations covered by a financial test have been recognized as liabilities on the audited financial statements, how these obligations have been measured and reported, and that the tangible net worth of the firm is at least \$10 million plus the amount of any guarantees provided.

(ii) An owner or operator must place the items specified in paragraph (e)(2)(i) of this section in the operating record and notify the State Director that these items have been placed in the operating record before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997 or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1)), whichever is later in the case of closure, and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58.

(iii) After the initial placement of items specified in paragraph (e)(2)(i) of this section in the operating record, the owner or operator must annually update the information and place updated information in the operating record within 90 days following the close of the owner or operator's fiscal year. The Director of a State may provide up to an additional 45 days for an owner or operator who can demonstrate that 90 days is insufficient time to acquire audited financial statements. The updated information must consist of all items specified in paragraph (e)(2)(i) of this section.

(iv) The owner or operator is no longer required to submit the items specified in this paragraph (e)(2) or comply with the requirements of this paragraph (e) when:

(A) He substitutes alternate financial assurance as specified in this section that is not subject to these recordkeeping and reporting requirements; or

(B) He is released from the requirements of this section in accordance with §258.71(b), §258.72(b), or §258.73(b).

(v) If the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must, within 120 days following the close of the owner or operator's fiscal year, obtain alternative financial assurance that meets the requirements of this section, place the required submissions for that assurance in the operating record, and notify the State Director that the owner or operator no longer meets the criteria of the financial test and that alternate assurance has been obtained.

(vi) The Director of an approved State may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (e)(1) of this section, require at any time the owner or operator to provide reports of its financial condition in addition to or including current financial test documentation as specified in paragraph (e)(2) of this section. If the Director of an approved State finds that the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must provide alternate financial assurance that meets the requirements of this section.

(3) *Calculation of costs to be assured.* When calculating the current cost estimates for closure, post-closure care, corrective action, or the sum of the combination of such costs to be covered, and any other environmental obligations assured by a financial test referred to in this paragraph (e), the owner or operator must include cost estimates required for municipal solid waste management facilities under this part, as well as cost estimates required for the following environmental obligations, if it assures them through a financial test: obligations associated with UIC facilities under 40 CFR part 144, petroleum underground storage tank facilities under 40 CFR part 280, PCB storage facilities under 40 CFR part 761, and hazardous waste treatment, storage, and disposal facilities under 40 CFR parts 264 and 265.

(f) *Local government financial test.* An owner or operator that satisfies the requirements of paragraphs (f)(1) through (3) of this section may demonstrate financial assurance up to the amount specified in paragraph (f)(4) of this section:

(1) *Financial component.* (i) The owner or operator must satisfy paragraph (f)(1)(i)(A) or (B) of this section as applicable:

(A) If the owner or operator has outstanding, rated, general obligation bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, it must have a current rating of Aaa, Aa, A, or Baa, as issued by Moody's, or AAA, AA, A, or BBB, as issued by Standard and Poor's on all such general obligation bonds; or

(B) The owner or operator must satisfy each of the following financial ratios based on the owner or operator's most recent audited annual financial statement:

(1) A ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05; and

(2) A ratio of annual debt service to total expenditures less than or equal to 0.20.

(ii) The owner or operator must prepare its financial statements in conformity with Generally Accepted Accounting Principles for governments and have its financial statements audited by an independent certified public accountant (or appropriate State agency).

(iii) A local government is not eligible to assure its obligations under §258.74(f) if it:

(A) Is currently in default on any outstanding general obligation bonds; or

(B) Has any outstanding general obligation bonds rated lower than Baa as issued by Moody's or BBB as issued by Standard and Poor's; or

(C) Operated at a deficit equal to five percent or more of total annual revenue in each of the past two fiscal years; or

(D) Receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant (or appropriate State agency) auditing its financial statement as required under paragraph (f)(1)(ii) of this section. However, the Director of an approved State may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the Director deems the qualification insufficient to warrant disallowance of use of the test.

(iv) The following terms used in this paragraph are defined as follows:

(A) *Deficit* equals total annual revenues minus total annual expenditures;

(B) *Total revenues* include revenues from all taxes and fees but does not include the proceeds from borrowing or asset sales, excluding revenue from funds managed by local government on behalf of a specific third party;

(C) *Total expenditures* include all expenditures excluding capital outlays and debt repayment;

(D) *Cash plus marketable securities* is all the cash plus marketable securities held by the local government on the last day of a fiscal year, excluding cash and marketable securities designated to satisfy past obligations such as pensions; and

(E) *Debt service* is the amount of principal and interest due on a loan in a given time period, typically the current year.

(2) *Public notice component.* The local government owner or operator must place a reference to the closure and post-closure care costs assured through the financial test into its next comprehensive annual financial report (CAFR) after the effective date of this section or prior to the initial receipt of waste at the facility, whichever is later. Disclosure must include the nature and source of closure and post-closure care requirements, the reported liability at the balance sheet date, the estimated total closure and post-closure care cost remaining to be recognized, the percentage of landfill capacity used to date, and the estimated landfill life in years. A reference to corrective action costs must be placed in the CAFR not later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58. For the first year the financial test is used to assure costs at a particular facility, the reference may instead be placed in the operating record until issuance of the next available CAFR if timing does not permit the reference to be incorporated into the most recently issued CAFR or budget. For closure and post-closure costs, conformance with Government Accounting Standards Board Statement 18 assures compliance with this public notice component.

(3) *Recordkeeping and reporting requirements.* (i) The local government owner or operator must place the following items in the facility's operating record:

(A) A letter signed by the local government's chief financial officer that:

(1) Lists all the current cost estimates covered by a financial test, as described in paragraph (f)(4) of this section;

(2) Provides evidence and certifies that the local government meets the conditions of paragraphs (f)(1)(i), (f)(1)(ii), and (f)(1)(iii) of this section; and

(3) Certifies that the local government meets the conditions of paragraphs (f)(2) and (f)(4) of this section.

(B) The local government's independently audited year-end financial statements for the latest fiscal year (except for local governments where audits are required every two years where unaudited statements may be used in years when audits are not required), including the unqualified opinion of the auditor who must be an independent, certified public accountant or an appropriate State agency that conducts equivalent comprehensive audits;

(C) A report to the local government from the local government's independent certified public accountant (CPA) or the appropriate State agency based on performing an agreed upon procedures engagement relative to the financial ratios required by paragraph (f)(1)(i)(B) of this section, if applicable, and the requirements of paragraphs (f)(1)(ii) and (f)(1)(iii) (C) and (D) of this section. The CPA or State agency's report should state the procedures performed and the CPA or State agency's findings; and

(D) A copy of the comprehensive annual financial report (CAFR) used to comply with paragraph (f)(2) of this section or certification that the requirements of General Accounting Standards Board Statement 18 have been met.

(ii) The items required in paragraph (f)(3)(i) of this section must be placed in the facility operating record as follows:

(A) In the case of closure and post-closure care, either before the effective date of this section, which is April 9, 1997, or prior to the initial receipt of waste at the facility, whichever is later, or

(B) In the case of corrective action, not later than 120 days after the corrective action remedy is selected in accordance with the requirements of §258.58.

(iii) After the initial placement of the items in the facility's operating record, the local government owner or operator must update the information and place the updated information in the operating record within 180 days following the close of the owner or operator's fiscal year.

(iv) The local government owner or operator is no longer required to meet the requirements of paragraph (f)(3) of this section when:

(A) The owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The owner or operator is released from the requirements of this section in accordance with §258.71(b), 258.72(b), or 258.73(b).

(v) A local government must satisfy the requirements of the financial test at the close of each fiscal year. If the local government owner or operator no longer meets the requirements of the local government financial test it must, within 210 days following the close of the owner or operator's fiscal year, obtain alternative financial assurance that meets the requirements of this section, place the required submissions for that assurance in the operating record, and notify the State Director that the owner or operator no longer meets the criteria of the financial test and that alternate assurance has been obtained.

(vi) The Director of an approved State, based on a reasonable belief that the local government owner or operator may no longer meet the requirements of the local government financial test, may require additional reports of financial condition from the local government at any time. If the Director of an approved State finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of the local government financial test, the local government must provide alternate financial assurance in accordance with this section.

(4) *Calculation of costs to be assured.* The portion of the closure, post-closure, and corrective action costs for which an owner or operator can assure under this paragraph is determined as follows:

(i) If the local government owner or operator does not assure other environmental obligations through a financial test, it may assure closure, post-closure, and corrective action costs that equal up to 43 percent of the local government's total annual revenue.

(ii) If the local government assures other environmental obligations through a financial test, including those associated with UIC facilities under 40 CFR 144.62, petroleum underground storage tank facilities under 40 CFR Part 280, PCB storage facilities under 40 CFR Part 761, and hazardous waste treatment, storage, and disposal facilities under 40 CFR Parts 264 and 265, it must add those costs to the closure, post-closure, and corrective action costs it seeks to assure under this paragraph. The total that may be assured must not exceed 43 percent of the local government's total annual revenue.

(iii) The owner or operator must obtain an alternate financial assurance instrument for those costs that exceed the limits set in paragraphs (f)(4) (i) and (ii) of this section.

(g) *Corporate Guarantee.* (1) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraph (e) of this section and must comply with the terms of the guarantee. A certified copy of the guarantee must be placed in the facility's operating record along with copies of the letter from the guarantor's chief financial officer and accountants' opinions. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter from the guarantor's chief financial officer must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(2) The guarantee must be effective and all required submissions placed in the operating record before the initial receipt of waste or before the effective date of the requirements of this section (April 9, 1997 or October 9, 1997 for MSWLF units meeting the conditions of §258.1(f)(1), whichever is later, in the case of closure and post-closure care, or in the case of corrective action no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58.

(3) The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform closure, post-closure care, and/or corrective action of a facility covered by the guarantee, the guarantor will:

(A) Perform, or pay a third party to perform, closure, post-closure care, and/or corrective action as required (performance guarantee); or

(B) Establish a fully funded trust fund as specified in paragraph (a) of this section in the name of the owner or operator (payment guarantee).

(ii) The guarantee will remain in force for as long as the owner or operator must comply with the applicable financial assurance requirements of this Subpart unless the guarantor sends prior notice of cancellation by certified mail to the owner or operator and to the State Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the State Director, as evidenced by the return receipts.

(iii) If notice of cancellation is given, the owner or operator must, within 90 days following receipt of the cancellation notice by the owner or operator and the State Director, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the State Director. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within 120 days of the cancellation notice, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the State Director.

(4) If a corporate guarantor no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must, within 90 days, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the State Director. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within the next 30 days.

(5) The owner or operator is no longer required to meet the requirements of this paragraph (g) when:

(i) The owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The owner or operator is released from the requirements of this section in accordance with §258.71(b), §258.72(b), or §258.73(b).

(h) *Local government guarantee.* An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by §§258.71, 258.72, and 258.73, by obtaining a written guarantee provided by a local government. The guarantor must meet the requirements of the local government financial test in paragraph (f) of this section, and must comply with the terms of a written guarantee.

(1) *Terms of the written guarantee.* The guarantee must be effective before the initial receipt of waste or before the effective date of this section, whichever is later, in the case of closure, post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58. The guarantee must provide that:

(i) If the owner or operator fails to perform closure, post-closure care, and/or corrective action of a facility covered by the guarantee, the guarantor will:

(A) Perform, or pay a third party to perform, closure, post-closure care, and/or corrective action as required; or

(B) Establish a fully funded trust fund as specified in paragraph (a) of this section in the name of the owner or operator.

(ii) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the State Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the State Director, as evidenced by the return receipts.

(iii) If a guarantee is cancelled, the owner or operator must, within 90 days following receipt of the cancellation notice by the owner or operator and the State Director, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the State Director. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within 120 days following the guarantor's notice of cancellation, place evidence of the alternate assurance in the facility operating record, and notify the State Director.

(2) *Recordkeeping and reporting.* (i) The owner or operator must place a certified copy of the guarantee along with the items required under paragraph (f)(3) of this section into the facility's operating record before the initial receipt of waste or before the effective date of this section, whichever is later, in the case of closure, post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58.

(ii) The owner or operator is no longer required to maintain the items specified in paragraph (h)(2) of this section when:

(A) The owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The owner or operator is released from the requirements of this section in accordance with §258.71(b), 258.72(b), or 258.73(b).

(iii) If a local government guarantor no longer meets the requirements of paragraph (f) of this section, the owner or operator must, within 90 days, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the State Director. If the owner or operator fails to obtain alternate financial assurance within that 90-day period, the guarantor must provide that alternate assurance within the next 30 days.

(i) *State-Approved mechanism.* An owner or operator may satisfy the requirements of this section by obtaining any other mechanism that meets the criteria specified in §258.74(1), and that is approved by the Director of an approved State.

(j) *State assumption of responsibility.* If the State Director either assumes legal responsibility for an owner or operator's compliance with the closure, post-closure care and/or corrective action requirements of this part, or assures that the funds will be available from State sources to cover the requirements, the owner or operator will be in compliance with the requirements of this section. Any State assumption of responsibility must meet the criteria specified in §258.74(l).

(k) *Use of multiple mechanisms.* An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by §§258.71, 258.72, and 258.73 by establishing more than one mechanism per facility, except that mechanisms guaranteeing performance rather than payment, may not be combined with other instruments. The mechanisms must be as specified in paragraphs (a), (b), (c), (d), (e), (f), (g), (h), (i), and (j) of this section, except that financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care, and/or corrective action may be provided by a combination of mechanisms rather than a single mechanism.

(l) The language of the mechanisms listed in paragraphs (a), (b), (c), (d), (e), (f), (g), (h), (i), and (j) of this section must ensure that the instruments satisfy the following criteria:

(1) The financial assurance mechanisms must ensure that the amount of funds assured is sufficient to cover the costs of closure, post-closure care, and corrective action for known releases when needed;

(2) The financial assurance mechanisms must ensure that funds will be available in a timely fashion when needed;

(3) The financial assurance mechanisms must be obtained by the owner or operator by the effective date of these requirements or prior to the initial receipt of solid waste, whichever is later, in the case of closure and post-closure care, and no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of §258.58, until the owner or operator is released from the financial assurance requirements under §§258.71, 258.72 and 258.73.

(4) The financial assurance mechanisms must be legally valid, binding, and enforceable under State and Federal law.

[56 FR 51029, Oct. 9, 1991, as amended at 58 FR 51547, Oct. 1, 1993; 60 FR 40105, Aug. 7, 1995; 60 FR 52342, Oct. 6, 1995; 61 FR 60337, Nov. 27, 1996; 63 FR 17729, Apr. 10, 1998]

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§258.75 Discounting.

The Director of an approved State may allow discounting of closure cost estimates in §258.71(a), post-closure cost estimates in §258.72(a), and/or corrective action costs in §258.73(a) up to the rate of return for essentially risk free investments, net of inflation, under the following conditions:

- (a) The State Director determines that cost estimates are complete and accurate and the owner or operator has submitted a statement from a Registered Professional Engineer so stating;
- (b) The State finds the facility in compliance with applicable and appropriate permit conditions;
- (c) The State Director determines that the closure date is certain and the owner or operator certifies that there are no foreseeable factors that will change the estimate of site life; and
- (d) Discounted cost estimates must be adjusted annually to reflect inflation and years of remaining life.

[61 FR 60339, Nov. 27, 1996]

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Appendix I to Part 258—Constituents for Detection Monitoring

Common name¹	CAS RN²
<i>Inorganic Constituents:</i>	
(1) Antimony	(Total)
(2) Arsenic	(Total)
(3) Barium	(Total)
(4) Beryllium	(Total)
(5) Cadmium	(Total)
(6) Chromium	(Total)
(7) Cobalt	(Total)
(8) Copper	(Total)
(9) Lead	(Total)
(10) Nickel	(Total)
(11) Selenium	(Total)
(12) Silver	(Total)
(13) Thallium	(Total)
(14) Vanadium	(Total)
(15) Zinc	(Total)
<i>Organic Constituents:</i>	
(16) Acetone	67-64-1

(17) Acrylonitrile	107-13-1
(18) Benzene	71-43-2
(19) Bromochloromethane	74-97-5
(20) Bromodichloromethane	75-27-4
(21) Bromoform; Tribromomethane	75-25-2
(22) Carbon disulfide	75-15-0
(23) Carbon tetrachloride	56-23-5
(24) Chlorobenzene	108-90-7
(25) Chloroethane; Ethyl chloride	75-00-3
(26) Chloroform; Trichloromethane	67-66-3
(27) Dibromochloromethane; Chlorodibromomethane	124-48-1
(28) 1,2-Dibromo-3-chloropropane; DBCP	96-12-8
(29) 1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4
(30) o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
(31) p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
(32) trans-1, 4-Dichloro-2-butene	110-57-6
(33) 1,1-Dichloroethane; Ethylidene chloride	75-34-3
(34) 1,2-Dichloroethane; Ethylene dichloride	107-06-2
(35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4
(36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2
(37) trans-1, 2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5
(38) 1,2-Dichloropropane; Propylene dichloride	78-87-5
(39) cis-1,3-Dichloropropene	10061-01-5
(40) trans-1,3-Dichloropropene	10061-02-6
(41) Ethylbenzene	100-41-4
(42) 2-Hexanone; Methyl butyl ketone	591-78-6
(43) Methyl bromide; Bromomethane	74-83-9
(44) Methyl chloride; Chloromethane	74-87-3
(45) Methylene bromide; Dibromomethane	74-95-3
(46) Methylene chloride; Dichloromethane	75-09-2
(47) Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
(48) Methyl iodide; Iodomethane	74-88-4
(49) 4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1
(50) Styrene	100-42-5
(51) 1,1,1,2-Tetrachloroethane	630-20-6
(52) 1,1,2,2-Tetrachloroethane	79-34-5
(53) Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4
(54) Toluene	108-88-3

(55) 1,1,1-Trichloroethane; Methylchloroform	71-55-6
(56) 1,1,2-Trichloroethane	79-00-5
(57) Trichloroethylene; Trichloroethene	79-01-6
(58) Trichlorofluoromethane; CFC-11	75-69-4
(59) 1,2,3-Trichloropropane	96-18-4
(60) Vinyl acetate	108-05-4
(61) Vinyl chloride	75-01-4
(62) Xylenes	1330-20-7

¹Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

²Chemical Abstract Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

[70 FR 34555, June 14, 2005; 70 FR 44150, Aug. 1, 2005]

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Appendix II to Part 258—List of Hazardous Inorganic and Organic Constituents

Common name¹	CAS RN²	Chemical abstracts service index name³
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-
Acenaphthylene	208-96-8	Acenaphthylene
Acetone	67-64-1	2-Propanone
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile
Acetophenone	98-86-2	Ethanone, 1-phenyl-
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-
Acrolein	107-02-8	2-Propenal
Acrylonitrile	107-13-1	2-Propenenitrile
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1,4,4a,5,8,8a)-
Allyl chloride	107-05-1	1-Propene, 3-chloro-
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine
Anthracene	120-12-7	Anthracene
Antimony	(Total)	Antimony
Arsenic	(Total)	Arsenic
Barium	(Total)	Barium
Benzene	71-43-2	Benzene
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene

Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene
Benzyl alcohol	100-51-6	Benzenemethanol
Beryllium	(Total)	Beryllium
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-,(1 α ,2 α ,3 β ,4 α ,5 β ,6 β)-
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-,(1 α ,2 β ,3 α ,4 β ,5 α ,6 β)-
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-,(1 α ,2 α ,3 α ,4 β ,5 α ,6 β)-
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6- hexachloro-,(1 α ,2 α , 3 β , 4 α ,5 α ,6 β)-
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis (oxy)]bis [2-chloro-
Bis(2-chloroethyl)ether; Dichloroethyl ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
Bis(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodiisopropyl ether; DCIP, See footnote 4	108-60-1	Propane, 2,2'-oxybis[1-chloro-
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester
Bromochloromethane; Chlorobromomethane	74-97-5	Methane, bromochloro-
Bromodichloromethane; Dibromochloromethane	75-27-4	Methane, bromodichloro-
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester
Cadmium	(Total)	Cadmium
Carbon disulfide	75-15-0	Carbon disulfide
Carbon tetrachloride	56-23-5	Methane, tetrachloro-
Chlordane	See footnote 5	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-
Chlorobenzene	108-90-7	Benzene, chloro-
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-(4-chlorophenyl)-hydroxy-, ethyl ester.
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	59-50-7	Phenol, 4-chloro-3-methyl-
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-
Chloroform; Trichloromethane	67-66-3	Methane, trichloro-
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-
2-Chlorophenol	95-57-8	Phenol, 2-chloro-
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-

Chromium	(Total)	Chromium
Chrysene	218-01-9	Chrysene
Cobalt	(Total)	Cobalt
Copper	(Total)	Copper
m-Cresol; 3-Methylphenol	108-39-4	Phenol, 3-methyl-
o-Cresol; 2-Methylphenol	95-48-7	Phenol, 2-methyl-
p-Cresol; 4-Methylphenol	106-44-5	Phenol, 4-methyl-
Cyanide	57-12-5	Cyanide
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-
4,4'-DDD	72-54-8	Benzene 1,1'-(2,2-dichloroethylidene) bis[4-chloro-
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloroethenylidene) bis[4-chloro-
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester.
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene
Dibenzofuran	132-64-9	Dibenzofuran
Dibromochloromethane; Chlorodibromomethane	124-48-1	Methane, dibromochloro-
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	Ethane, 1,2-dibromo-
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-
m-Dichlorobenzene; 1,3-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro-
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-
3,3'-Dichlorobenzidine	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-
Dichlorodifluoromethane; CFC 12	75-71-8	Methane, dichlorodifluoro-
1,1-Dichloroethane; Ethylidene chloride	75-34-3	Ethane, 1,1-dichloro-
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Ethane, 1,2-dichloro-
1,1-Dichloroethylene; 1,1-Dichloroethene;	75-35-4	Ethene, 1,1-dichloro-
Vinylidene chloride cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	Ethene, 1,2-dichloro-(Z)-
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	Ethene, 1,2-dichloro-, (E)-
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-
1,2-Dichloropropane	78-87-5	Propane, 1,2-dichloro-
1,3-Dichloropropane; Trimethylene dichloride	142-28-9	Propane, 1,3-dichloro-
2,2-Dichloropropane; Isopropylidene	594-20-7	Propane, 2,2-dichloro-

chloride		
1,1-Dichloropropene	563-58-6	1-Propene, 1,1-dichloro-
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1 α ,2 β ,2 α ,3 β ,6 β ,6 α ,7 β ,7 α)-
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester.
Dimethoate	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
p-(Dimethylamino)azobenzene	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
7,12-Dimethylbenz[a]anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
3,3'-Dimethylbenzidine	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
alpha, alpha-Dimethylphenethylamine	122-09-8	Benzeneethanamine, α,α -dimethyl-
2,4-Dimethylphenol; m-Xylenol	105-67-9	Phenol, 2,4-dimethyl-
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-
4,6-Dinitro-o-cresol; 4,6-Dinitro-2-methylphenol	534-52-1	Phenol, 2-methyl-4,6-dinitro-
2,4-Dinitrophenol	51-28-5	Phenol, 2,4-dinitro-
2,4-Dinitrotoluene	121-14-2	Benzene, 1-methyl-2,4-dinitro-
2,6-Dinitrotoluene	606-20-2	Benzene, 2-methyl-1,3-dinitro-
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
Diphenylamine	122-39-4	Benzenamine, N-phenyl-
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide,
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3 α ,5 α ,6 β ,9 β , 9 α)-
Endosulfan sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3,3-dioxide
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1 α , 2 β ,2 α β , 3 α ,6 α ,6 α β ,7 β ,7 α)-
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclo-penta[cd]pentalene-5-carboxaldehyde,2,2a,3,3,4,7-hexachlorodecahydro-(1 α ,2 β ,2 α β ,4 β ,4 α β ,5 β ,6 α β ,6 β β ,7R*)-

Ethylbenzene	100-41-4	Benzene, ethyl-
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester
Famphur	52-85-7	Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester
Fluoranthene	206-44-0	Fluoranthene
Fluorene	86-73-7	9H-Fluorene
Heptachlor	76-44-8	4,7-Methano-1H-indene,1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-
Heptachlor epoxide	1024-57- 3	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a,-hexahydro- (1 α ,1b β ,2 α ,5 α ,5a β ,6 β ,6a α)
Hexachlorobenzene	118-74-1	Benzene, hexachloro-
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
Hexachloroethane	67-72-1	Ethane, hexachloro-
Hexachloropropene	1888-71- 7	1-Propene, 1,1,2,3,3,3-hexachloro-
2-Hexanone; Methyl butyl ketone	591-78-6	2-Hexanone
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno[1,2,3-cd]pyrene
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,1 0,10-hexachloro- 1,4,4a,5,8,8a hexahydro-(1 α , 4 α , 4a β ,5 β ,8 β ,8a β)-
Isophorone	78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta-[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
Lead	(Total)	Lead
Mercury	(Total)	Mercury
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-
Methapyrilene	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2- thienylmethyl)-
Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2,2-trichloroethylidene)bis [4-methoxy-
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	2-Butanone
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-

Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, O,O-dimethyl
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-
Naphthalene	91-20-3	Naphthalene
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione
1-Naphthylamine	134-32-7	1-Naphthalenamine
2-Naphthylamine	91-59-8	2-Naphthalenamine
Nickel	(Total)	Nickel
o-Nitroaniline; 2-Nitroaniline	88-74-4	Benzenamine, 2-nitro-
m-Nitroaniline; 3-Nitroaniline	99-09-2	Benzenamine, 3-nitro-
p-Nitroaniline; 4-Nitroaniline	100-01-6	Benzenamine, 4-nitro-
Nitrobenzene	98-95-3	Benzene, nitro-
o-Nitrophenol; 2-Nitrophenol	88-75-5	Phenol, 2-nitro-
p-Nitrophenol; 4-Nitrophenol	100-02-7	Phenol, 4-nitro-
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso-
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-
N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine	621-64-7	1-Propanamine, N-nitroso-N-propyl-
N-Nitrosomethylethalamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-
Parathion	56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester
Pentachlorobenzene	608-93-5	Benzene, pentachloro-
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-
Pentachlorophenol	87-86-5	Phenol, pentachloro-
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenyl)
Phenanthrene	85-01-8	Phenanthrene
Phenol	108-95-2	Phenol
p-Phenylenediamine	106-50-3	1,4-Benzenediamine
Phorate	298-02-2	Phosphorodithioic acid, O,O-diethyl S- [(ethylthio)methyl] ester
Polychlorinated biphenyls; PCBs	See footnote 6	1,1'-Biphenyl, chloro derivatives
Pronamide	23950-	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-

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Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile
Pyrene	129-00-0	Pyrene
Safrole	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
Selenium	(Total)	Selenium
Silver	(Total)	Silver
Silvex; 2,4,5-TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
Styrene	100-42-5	Benzene, ethenyl-
Sulfide	18496-25-8	Sulfide
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
2,3,7,8-TCDD; 2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	Ethene, tetrachloro-
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-
Thallium	(Total)	Thallium
Tin	(Total)	Tin
Toluene	108-88-3	Benzene, methyl-
o-Toluidine	95-53-4	Benzenamine, 2-methyl-
Toxaphene	See footnote 7	Toxaphene
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-
1,1,1-Trichloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-
Trichloroethylene; Trichloroethene	79-01-6	Ethene, trichloro-
Trichlorofluoromethane; CFC-11	75-69-4	Methane, trichlorofluoro-
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-
O,O,O-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-
Vanadium	(Total)	Vanadium
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester
Vinyl chloride; Chloroethene	75-01-4	Ethene, chloro-
Xylene (total)	See footnote	Benzene, dimethyl-

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Zinc	(Total)	Zinc

¹Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

²Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

³CAS index names are those used in the 9th Cumulative Index.

⁴This substance is often called bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, propane, 2,2"-oxybis[2-chloro-(CAS RN 39638-32-9).

⁵Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6).

⁶Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).

⁷Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

⁸Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

[70 FR 34556, June 14, 2005; 70 FR 44150, Aug. 1, 2005]