Southern Nevada Health District

Memorandum #05-13

Date: May 23, 2012

To: **Southern Nevada District Board of Health**

From: **Dennis P. Campbell, R.E.H.S.,** *Environmental Health Manager*
Amy Irani, R.E.H.S., *Acting Director, Environmental Health Division*
Elaine Glaser, *Director of Administration*
John Middaugh, *Interim Chief Health Officer*

Subject: Adoption of the Proposed Solid Waste Management Plan for Clark County, Nevada

I. Background

Nevada Revised Statutes Chapter 444.510 requires that the Solid Waste Management Authority (SWMA) must develop a plan to provide for a solid waste management system which adequately provides for the management and disposal of solid waste within Clark County. For Clark County, the SWMA is the Southern Nevada District Board of Health.
Southern Nevada has had two previous formal Solid Waste Management Plans (SWMP): The first one entitled the *Clark County Comprehensive Solid Waste Management Plan* was written to describe the Clark County Health District's (the former name of the SNHD) then-existing solid waste conditions, practices, and problems and evaluations and recommendations for the timeframe between 1974 and the year 2000 (URS Systems Corporation, 1974). The second plan, dated March 15, 1995 entitled the *Solid Waste Management Plan for Clark County, Nevada,* was intended to be an update to address a 20-year planning period from 1995 to 2015, with a particular emphasis on the period of 1995 to 2000 (Harding Lawson Associates, 1995). This third proposed SWMP is intended to move forward from 2013 and to cover specifically the next five-year timeframe.

The proposed plan provides a description of the existing framework for solid waste management within the applicable laws, regulations and infrastructure within the State. The Plan describes governmental roles and responsibilities, statewide trends in solid waste management, the assessment of Clark County's municipal solid waste management systems, and solid waste management issues and future considerations.

While the plan is specific to Clark County, it follows the same basic format as the SWMPs developed for Washoe County and NDEP. The plan includes the following Chapters and Appendices:

Chapter 1: Introduction and Overview
Chapter 2: Solid Waste Generation
Chapter 3: Descriptions of Solid Waste Management Systems
Chapter 4: Laws and Regulations
Chapter 5: Financial Sustainability
Chapter 6: The Clark County Emergency Debris Management Plan
Chapter 7: Program Evaluation

Appendix A: Franchise Agreements
Appendix B: Municipal Solid Waste Code
Appendix C: Solid Waste Laws and Regulations
Appendix D: Permitted Solid Waste Disposal Sites and Management Facilities
Appendix E: Solid Waste Generation and Disposal Data
Appendix F: Additional Information and Guidelines

II. Public Review and Workshops

The March 19, 2013, Public Notice announcing the May 23, 2013, Public Hearing and upcoming public workshops was posted in lobbies of public buildings throughout Clark County and on the SNHD internet website and advertised in local newspapers as found in Attachment A. The Public Notice also provided SNHD contact names, addresses, phone numbers and the SNHD website address. Four information gathering workshops were scheduled. The recorded minutes from the April 24th workshops held at the SNHD South Valley View Public Health Center in Las Vegas, NV are found in Attachment B, the minutes from the May 1st workshop held in Mesquite, NV are found in Attachment C, and the minutes from the May 2nd workshop held in Laughlin, NV are found in Attachment D. Only two members of the public attended the workshop in Mesquite as documented in Attachment E, but had no comments on the plan. No members of the public appeared at either the Las Vegas or Laughlin workshops as documented on the sign-in sheets in Attachment E.

The original draft proposed Solid Waste Management Plan was reviewed and commented on by NDEP and SNHD staff (Attachment F). The current draft Plan reflects the changes made as a result of comments submitted by staff from NDEP (Attachment G).

No public comments (either written or oral) were received throughout the 30-day public review period or at the workshops. A response outline was prepared that listed the comment and SNHD's response.

III. Recommendations

The adoption of the proposed Solid Waste Management Plan would fulfill the requirements of NRS 444.510 and would allow the SWMA to move forward from 2013 and to cover specifically

the next five-year timeframe. This Plan is intended to be a guide and an informational resource to support solid waste management laws, regulations and policies. Key users are the Nevada Legislature, the State Environmental Commission, NDEP, the Southern Nevada Health District, and other state, and local agencies. The Plan may also be useful to Clark County's waste management service providers, including landfill operators, refuse collectors, and recyclers, as well as solid waste generators, including all of Clark County's industries, businesses, and residents. Implementation of items in the Plan that are identified for "future consideration" could further enhance a sound program of solid waste management in Clark County

Staff recommends the adoption of the proposed Solid Waste Management Plan for Clark County, Nevada.

IV. Conditions

The Solid Waste Management Plan will be added to the SNHD website for Solid Waste and Compliance and will take effect immediately upon approval of the Southern Nevada District Board of Health.

A Business Impact Statement addressing these Regulations is located in Attachment H

Attachments

Attachment A: SNHD Public Notice dated March 19, 2013
Attachment B: Workshop Minutes, April 24, 2013, 10:00 a.m. and 6:00 p.m. Southern Nevada Health District
Attachment C: Workshop Minutes, May 1, 2013, 10:00 a.m., Mesquite Government Center
Attachment D: Workshop Minutes, May 2, 2013, 10:00 a.m., Laughlin Government Center
Attachment E: Workshop Sign In Sheets
Attachment F: Proposed Solid Waste Management Plan for Clark County, Nevada (minus the 500 pages in the six Appendices)
Attachment G: Written comments from Nevada Division of Environmental Protection, Bureau of Waste Management
Attachment H: Business Impact Statement addressing proposed Solid Waste Management Plan for Clark County, Nevada.

ATTACHMENT A: SNHD PUBLIC NOTICE DATED MARCH 19, 2013

SNHD
Southern Nevada Health District

PUBLIC NOTICE

The Southern Nevada District Board of Health will conduct a PUBLIC HEARING on Thursday, May 23, 2013, at 8:30 a.m., during its regular monthly meeting at the Southern Nevada Health District (SNHD), Conference Room 4-4(a) (1st Floor), 330 S Valley View Blvd, Las Vegas, Nevada to take testimony and consider the adoption of the Southern Nevada Health District Solid Waste Management Plan. **Note**, if this Application is not presented at the May 23, 2013, meeting, it will be presented for PUBLIC HEARING at the Southern Nevada District Board of Health meeting scheduled for June 27, 2013, at the same time and location noted above until further notice.

The proposed Solid Waste Management Plan is available for review at http://www.southernnevadahealthdistrict.org/public-notices.php and is available for review at the SNHD, Environmental Health Division, 400 Shadow Lane, Suite 104, Las Vegas, Nevada. Please contact Carol Cottam at (702) 759-0661 to schedule an appointment to review the Solid Waste Management Plan during normal business hours of 8:00 a.m. to 4:30 p.m. or for special viewing needs. Copies of documents may be requested during that time at a charge of one dollar per page.

Interested persons may appear at the PUBLIC HEARING and present their views thereon. Written comments will also be considered and must be forwarded to Carol Cottam, Administrative Assistant, Southern Nevada Health District, Solid Waste and Compliance, P.O. Box 3902, Las Vegas, Nevada 89127-0902 or sent via email to cottam@snhdmail.org no later than May 3, 2013. If there are special viewing needs, please call (702) 759-0661 for accommodation.

-S-
Dennis Campbell, R.E.H.S.
Environmental Health Manager

March 19, 2013
Date

Prior to the above PUBLIC HEARING before the Board of Health on May 23, 2013, or June 27, 2013, there will be four Public Workshops for the public to present their views on the proposed Solid Waste Management Plan: 1) April 24, 2013, Wednesday, 10:00 a.m. at the Southern Nevada Health District, Conference Room 1 (1st Floor), 330 S Valley View Blvd, Las Vegas, Nevada; 2) April 24, 2013, Wednesday, 6:00 p.m. at the Southern Nevada Health District, Conference Room 1 (1st Floor), 330 S Valley View Blvd, Las Vegas, Nevada; 3) May 1, 2013, Wednesday, 10:00 a.m. at the City of Mesquite Town Hall, City Council Chambers, 10 E Mesquite Blvd, Mesquite, Nevada; 4) May 2, 2013, Thursday, 10:00 a.m. Laughlin Regional Government Center, 101 Civic Way, Laughlin, Nevada. Written submissions are encouraged. For additional information, call (702) 759-0661.

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (1 of 6)

SOLID WASTE MANAGEMENT PLAN
PUBLIC WORKSHOP MINUTES
330 S Valley View
APRIL 24, 2013, 10:00 A.M.

PUBLIC PRESENT: No public present

SNHD STAFF PRESENT: Dennis Campbell, Eddie Ridenour, Nancy Hall, Carol Cottam

I. INTRODUCTORY REMARKS

Mr. Campbell opened the workshop at 10:05 a.m. by introducing himself as the Manager of Solid Waste and Compliance. Mr. Campbell asked that everyone please turn off their cell phones.

Mr. Campbell welcomed all attendees and explained that the purpose of this public workshop is to collect public comments on the proposed Solid Waste Management Plan for Clark County.

Mr. Campbell announced that he would be conducting this workshop and since this is a public workshop it is required that we record all of the proceedings and enter all the comments that we receive this morning into the record that goes before the District Board of Health at the public hearing scheduled for May 23 or if necessary June 27.

Mr. Campbell informed all attending that copies of the Agenda and Public Notice are available at the table near the entrance. Please sign in on the sign in sheet. A copy of the Solid Waste Management Plan for Clark County is also here and available for viewing.

Mr. Campbell introduced the Environmental Health staff: Eddie Ridenour, Solid Waste and Compliance Supervisor; Nancy Hall, Senior Environmental Health Specialist and Technical Writer for this plan; and Administrative Assistant, Carol Cottam who will be recording the minutes of the workshop.

Mr. Campbell announced that the purpose of this workshop is to solicit comments on the Solid Waste Management Plan.

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (2 of 6)

II. DESCRIPTION OF SOLID WASTE MANAGEMENT PLAN

Mr. Campbell gave the following description of the Solid Waste Management Plan.

The Southern Nevada Health District Board of Health (BOH) is designated as the Solid Waste Management Authority (SWMA) for Clark County under NRS 444.495. Under NRS 444.580 the BOH may adopt standards and regulations for the location, design, construction, operation, and maintenance of solid waste disposal sites and Solid Waste Management (SWM) systems and may issue permits there under.

Under this authority and per NRS 444.510, he SWMA must develop a plan to provide for a Solid Waste Management System which adequately provides for the management and disposal of solid waste within Clark County. This plan is termed the Solid Waste Management Plan (SWMP).

Southern Nevada has had two previous formal SWMPs: The first one entitle *Clark County Comprehensive Solid Waste Management Plan* was written in 1974 by URS Systems Corporation to describe the Clark County Health District's (the former name of the Southern Nevada Health District) then-existing solid waste conditions, practices, and problems and evaluations and recommendations for the time frame between 1974 and the year 2000. The second plan, dated March 15, 1995, entitled *Solid Waste Management Plan for Clark County, Nevada*, and was intended to be an update to address a 20-year planning period from 1995 to 2015, with a particular emphasis on the period of 1995 to 2000 (Harding Lawson Associates, 1995). This third current updated plan is intended to move forward from 2013 and to cover specifically the next five-year timeframe.

III. PUBLIC COMMENTS ON THE APPLICATION

Mr. Campbell announced that he would go over each of the Plan Chapters.

Chapter 1: Introduction and Overview –*no comment*
Chapter 2: Solid Waste Generation – *no comment*
Chapter 3: Descriptions of Solid Waste Management Systems – *no comment*
Chapter 4: Laws and Regulations – *no comment*
Chapter 5: Financial Sustainability – *no comment*
Chapter 6: The Clark County Emergency Debris Management Plan – *no comment*
Chapter 7: Program Element – *no comment*

IV. SUMMARY AND FINAL COMMENTS

Mr. Campbell announced that we hold this workshop to satisfy the requirements established by the Board of Health to make sure that we solicit public comments on this Solid Waste Management Plan.

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (3 of 6)

The next step is to discuss and resolve the comments received at the workshop. Currently the SWMP is scheduled to go before the BOH Thursday, May 23, at 8:30 a.m. during their regular meeting.

Mr. Campbell announced that we'd wait until at least 10:35 to allow for late comers.

Break until 10:35

Mr. Campbell stated that it was now 10:35 a.m. and the process has been completed to this point. The proposed plan will go forward to the Board of Health Hearing when all comments have been received and approved by the Southern Nevada Health District staff.

Mr. Campbell announced that this workshop was advertised by Public Notice in the Las Vegas Review Journal on March 24, 2013, which opened the public comment period. The public comment period will end on May 7, 2013.

Mr. Campbell announced that we hold this workshop to satisfy the requirements established by the Board of Health to make sure we solicit public comments on the proposed Solid Waste Management Plan. The next step is to resolve and discuss any comments that we receive during the workshop. Currently the proposed Solid Waste Management Plan is scheduled to go before the Board of Health on Thursday, May 23, at 8:30 a.m. at their regular meeting or if necessary June 27

V. **ADJOURNMENT**

Mr. Campbell thanked everyone for attending and adjourned the workshop at 10:40 a.m.

[redacted]
Carol Cottam, Administrative Assistant

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (4 of 6)

SOLID WASTE MANAGEMENT PLAN
PUBLIC WORKSHOP MINUTES
330 S VALLEY VIEW, LAS VEGAS, NEVADA

APRIL 24, 2013, 6:00 P.M.

PUBLIC PRESENT: No public present

SNHD STAFF PRESENT: Dennis Campbell, Eddie Ridenour, Carol Cottam, Edie Mattox

I. INTRODUCTORY REMARKS

Mr. Campbell opened the workshop at 6:00 p.m. by introducing himself as the Manager of Solid Waste and Compliance. Mr. Campbell asked that everyone please turn off their cell phones.

Mr. Campbell welcomed all attendees and explained that the purpose of this public workshop is to collect public comments on the proposed Solid Waste Management Plan for Clark County.

Mr. Campbell announced that he would be conducting this workshop and since this is a public workshop it is required that we record all of the proceedings and enter all the comments that we receive this morning into the record that goes before the District Board of Health at the public hearing scheduled for May 23 or if necessary June 27.

Mr. Campbell informed all attending that copies of the Agenda and Public Notice are available at the table near the entrance. Please sign in on the sign in sheet. A copy of the Solid Waste Management Plan for Clark County is also here and available for viewing.

Mr. Campbell introduced the Environmental Health staff: Eddie Ridenour, Solid Waste and Compliance Supervisor; and Administrative Assistants, Carol Cottam and Edie Mattox who will be recording the minutes of the workshop.

Mr. Campbell announced that the purpose of this workshop is to solicit comments on the Solid Waste Management Plan.

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (5 of 6)

II. DESCRIPTION OF SOLID WASTE MANAGEMENT PLAN

Mr. Campbell gave the following description of the Solid Waste Management Plan.

The Southern Nevada Health District Board of Health is designated as the Solid Waste Management Authority for Clark County under NRS 444.495. Under NRS 444.580 the Board of Health may adopt standards and regulations for the location, design, construction, operation, and maintenance of solid waste disposal sites and Solid Waste Management systems and may issue permits there under.

Under this authority and per NRS 444.510, he Solid Waste Management Authority must develop a plan to provide for a Solid Waste Management System which adequately provides for the management and disposal of solid waste within Clark County. This plan is termed the Solid Waste Management Plan.

Southern Nevada has had two previous formal SWMPs: The first one entitle *Clark County Comprehensive Solid Waste Management Plan* was written in 1974 by URS Systems Corporation to describe the Clark County Health District's (the former name of the Southern Nevada Health District) then-existing solid waste conditions, practices, and problems and evaluations and recommendations for the time frame between 1974 and the year 2000. The second plan, dated March 15, 1995, entitled *Solid Waste Management Plan for Clark County, Nevada*, and was intended to be an update to address a 20-year planning period from 1995 to 2015, with a particular emphasis on the period of 1995 to 2000 (Harding Lawson Associates, 1995). This third current updated plan is intended to move forward from 2013 to cover specifically the next five-year timeframe. The Solid Waste Management Plan provides a description of the existing framework of the existing solid waste management with the applicable laws, regulations, and infrastructure within the state. The Plan describes governmental roles and responsibilities, statewide trends in solid waste management, the assessment-Nevada's Municipal Solid Waste Management Systems, and Solid Waste Management issues and future considerations.

III. PUBLIC COMMENTS ON THE APPLICATION

Mr. Campbell announced that at this point in time, what we do is we review the chapters of the plan and invite the public to comment. As I read off each of the chapter descriptions anybody from the general public who wishes to comment, step forward, identify yourself and also the organization that you represent, also please give your name and address for the record.

Chapter 1: Introduction and Overview –*no comment*
Chapter 2: Solid Waste Generation – *no comment*
Chapter 3: Descriptions of Solid Waste Management Systems – *no comment*
Chapter 4: Laws and Regulations – *no comment*
Chapter 5: Financial Sustainability – *no comment*
Chapter 6: The Clark County Emergency Debris Management Plan – *no comment*
Chapter 7: Program Element – *no comment*

ATTACHMENT B: WORKSHOP MINTUES, APRIL 24, 2013, 10:00 A.M. AND 6:00 P.M. SOUTHERN NEVADA HEALTH DISTRICT (6 of 6)

Mr. Campbell announced that there is also an extensive list of appendices that highlight a number of different areas.

IV. SUMMARY AND FINAL COMMENTS

Mr. Campbell announced that we hold this workshop to satisfy the requirements established by the Board of Health to make sure that we solicit public comments on this Solid Waste Management Plan.

The next step is to discuss and resolve the comments received at the workshop. Currently the Solid Waste Management Plan is scheduled to go before the Board of Health Thursday, May 23, at 8:30 a.m. during their regular meeting.

Mr. Campbell announced that we'd wait until at least 6:30 p.m. to allow for late comers.

Break until 6:35 p.m.

Mr. Campbell stated that it was now 6:35 p.m. and the process has been completed to this point. The proposed plan will go forward to the Board of Health Hearing when all comments have been received and approved by the Southern Nevada Health District staff.

V. ADJOURNMENT

Mr. Campbell thanked everyone for attending and adjourned the workshop at 6:35 p.m.

[redacted]
Carol Cottam, Administrative Assistant

ATTACHMENT C: WORKSHOP MINUTES, MAY 1, 2013, 10:00 A.M. MESQUITE GOVERNMENT CENTER (1 of 4)

SNHD
Southern Nevada Health District

SOLID WASTE MANAGEMENT PLAN
PUBLIC WORKSHOP MINUTES
MESQUITE GOVERNMENT CENTER

MAY 1, 2013, 10:00 A.M.

PUBLIC PRESENT: Bill Tanner, COM Public Works Director
Shawn Hughes, Virgin Valley Disposal

SNHD STAFF PRESENT: Dennis Campbell Eddie Ridenour
Carol Cottam

I. INTRODUCTORY REMARKS

Mr. Campbell opened the workshop at 10:00 a.m. by introducing himself as the Manager of Solid Waste and Compliance. Mr. Campbell asked that everyone please turn off their cell phones.

Mr. Campbell welcomed all attendees and explained that the purpose of this public workshop is to collect public comments on the proposed Solid Waste Management Plan for Clark County.

Mr. Campbell announced that he would be conducting this workshop and since this is a public workshop it is required that we record all of the proceedings and enter all the comments that we receive today into the record that goes before the District Board of Health at the public hearing scheduled for May 23 or if necessary June 27.

Mr. Campbell informed all attending that copies of the Agenda and Public Notice are available at the table in the front. Please sign in on the sign in sheet. A copy of the Solid Waste Management Plan for Clark County is here and available for viewing.

Mr. Campbell introduced the Environmental Health staff: Eddie Ridenour, Solid Waste and Compliance Supervisor; and Administrative Assistant, Carol Cottam who will be recording the minutes of the workshop.

Mr. Campbell announced that the workshop was advertised by Public Notice in the Mesquite Local News on April 4, 2013, which opened the period for the public to make

ATTACHMENT C: WORKSHOP MINUTES, MAY 1, 2013, 10:00 A.M. MESQUITE GOVERNMENT CENTER (2 of 4)

comments on this proposed Solid Waste Management Plan. The period for the public review and comment will end on May 7, 2013.

The workshop will be open for approximately thirty minutes to allow for late arrivals.

II. DESCRIPTION OF SOLID WASTE MANAGEMENT PLAN

Mr. Campbell gave the following description of the Solid Waste Management Plan.

The Southern Nevada Health District Board of Health is designated as the Solid Waste Management Authority for Clark County under NRS 444.495. Under this designation the BOH may adopt standards and regulations for the location, design, construction, operation, and maintenance of solid waste disposal sites and Solid Waste Management systems and may issue permits there under.

Under this authority and per NRS 444.510, the SWMA must develop a plan to provide for a Solid Waste Management System which adequately provides for the management and disposal of solid waste within Clark County. This plan is termed the Solid Waste Management Plan.

Southern Nevada Health District has had two previous formal Solid Waste Management Plans: The first one entitle *Clark County Comprehensive Solid Waste Management Plan* was written in 1974 by URS Systems Corporation to describe the Clark County Health District's then-existing solid waste conditions, practices, and problems and evaluations and recommendations for the time frame between 1974 and the year 2000. The second plan, dated March 15, 1995, entitled *Solid Waste Management Plan for Clark County, Nevada*, was intended to be an update to address a 20-year planning period from 1995 to 2015, with a particular emphasis on the period of 1995 to 2000. This third proposed plan is intended to move forward from 2013 and to cover specifically the next five-year timeframe. We're operating under an edict from NDEP that they want to see a SWMP every five years.

The proposed Management Plan provides a description of the existing framework for solid waste management within the applicable laws, regulations, and infrastructure within Clark County. The Plan describes governmental roles and responsibilities, statewide trends in solid waste management, the assessment of Clark County's municipal solid waste management systems, and solid waste management issues and future considerations.

III. PUBLIC COMMENTS ON THE APPLICATION

Mr. Campbell announced that at this point in time, what we do is we review the chapters of the plan and invite the public to comment. As I read off each of the chapter descriptions anybody from the general public who wishes to comment, step forward, identify yourself and also the organization that you represent, also please give your name and address for the record.

ATTACHMENT C: WORKSHOP MINUTES, MAY 1, 2013, 10:00 A.M. MESQUITE GOVERNMENT CENTER (3 of 4)

Chapter 1: Introduction and Overview – *no comment*
Importance of proper solid waste management and provides an overview of the major components in the system to effectively manage solid waste in the community.

Bill Tanner, City of Mesquite asked if the Solid Waste Management Plan was on the website.
Mr. Campbell responded that yes it was on the website under Public Notices.
Mr. Tanner had trouble finding the plan on SNHD's website
Mr. Campbell told Mr. Tanner that this would be looked into.

Chapter 2: Solid Waste Generation – *no comment*
This Chapter discusses future and current waste generation. The impacts of current waste flows in Southern Nevada the importation and exportation of waste from other areas in Southern Nevada as well as e-waste, recycling waste, waste diversion, solid waste characterization, and wastes requiring special handling.

Chapter 3: Descriptions of Solid Waste Management Systems – *no comment*
This chapter provides for the evaluation of the types of definitions of solid waste; residential, commercial, and industrial solid waste. Solid Waste collection and franchises within the various corporate and incorporated areas within Clark County. This Chapter talks about the franchise agreement between the City of Mesquite and Virgin Valley Disposal. This is the section where the representative from the City of Mesquite would need to look through and verify that everything looks okay.

Chapter 4: Laws and Regulations – *no comment*
This chapter provides a detailed discussion on the relevant federal, state, local, and Solid Waste Management Authority regulations affecting solid waste management systems in Southern Nevada.

Chapter 5: Financial Sustainability – *no comment*
This chapter discusses current funding sources for solid waste management programs in Southern Nevada; this includes permits, fees, waste tire fund, grants, and tipping fees. It also provides recommendations for management funding in the current financial atmosphere with limitations on government entities.

Chapter 6: The Clark County Emergency Debris Management Plan – *no comment*
This chapter outlines the role of this plan in managing and disposing of waste resulting in area wide emergencies or catastrophes. It also includes an annual State of Nevada evaluation of the Debris Management Plan.

Chapter 7: Program Element - *no comment*
This chapter discusses future considerations for the next five years with regards to the management of solid waste in Southern Nevada.

ATTACHMENT C: WORKSHOP MINUTES, MAY 1, 2013, 10:00 A.M. MESQUITE GOVERNMENT CENTER (4 of 4)

Mr. Campbell explained that in addition to the Chapters noted that there six appendices that highlight a number of different areas such as Franchise agreements in Appendix A.

Appendix B: Municipal Solid Waste Codes
Appendix C: Solid Waste Laws and Regulations
Appendix D: Permitted Solid Waste Disposal Sites and Management Facilities
Appendix E: Solid Waste Generation and Disposal Data
Appendix F: Additional Information and Guidelines

Mr. Campbell asked if anyone from the public had any comments. *No comments made.*

IV. SUMMARY AND FINAL COMMENTS

Mr. Campbell announced that we hold this workshop to satisfy the requirements established by the Board of Health to make sure that we solicit public comments on this proposed Solid Waste Management Plan.

The next step is to discuss and resolve the comments received at the workshop. Currently the Solid Waste Management Plan is scheduled to go before the Board of Health Thursday, May 23, at 8:30 a.m. during their regular meeting.

Mr. Campbell announced that we'd wait until at least 10:30 to allow for late arrivals.

Break until 10:30

Mr. Campbell stated that it was now 10:30 a.m. and the process has been completed to this point. The proposed plan will go forward to the Board of Health Hearing on May 23, when all comments have been received and approved by the Southern Nevada Health District staff.

V. ADJOURNMENT

Mr. Campbell thanked everyone for attending and adjourned the workshop at 10:33 a.m.

[redacted]
Carol Cottam, Administrative Assistant

ATTACHMENT D: WORKSHOP MINUTES, MAY 2, 2013, 10:00 A.M. LAUGHLIN GOVERNMENT CENTER (1 of 2)

SOLID WASTE MANAGEMENT PLAN
PUBLIC WORKSHOP MINUTES
LAUGHLIN GOVERNMENT CENTER

MAY 2, 2013, 10:00 A.M.

PUBLIC PRESENT: No public present

SNHD STAFF PRESENT: Dennis Campbell, Eddie Ridenour, Carol Cottam

I. INTRODUCTORY REMARKS

Mr. Campbell opened the workshop at 10:00 a.m. by introducing himself as the Manager of Solid Waste and Compliance. Mr. Campbell asked that everyone please turn off their cell phones.

Mr. Campbell welcomed all attendees and explained that the purpose of this public workshop is to collect public comments on the proposed Solid Waste Management Plan for Clark County.

Mr. Campbell announced that he would be conducting this workshop and since this is a public workshop it is required that we record all of the proceedings and enter all the comments that we receive today into the record that goes before the District Board of Health at the public hearing scheduled for May 23 or if necessary June 27.

Mr. Campbell informed all attending that copies of the Agenda and Public Notice are available at the table near the entrance. Please sign in on the sign in sheet. A copy of the Solid Waste Management Plan for Clark County is here and available for viewing.

Mr. Campbell introduced the Environmental Health staff: Eddie Ridenour, Solid Waste and Compliance Supervisor; and Administrative Assistant, Carol Cottam who will be recording the minutes of the workshop.

Mr. Campbell announced that the workshop was advertised by Public Notice in the Laughlin Nevada Times on April 3, 2013, which opened the period for the public to make comments on this proposed plan. The period for the public review and comment will end on May 7, 2013.

ATTACHMENT D: WORKSHOP MINUTES, MAY 2, 2013, 10:00 A.M. LAUGHLIN GOVERNMENT CENTER (2 of 2)

As required the workshop will be open for approximately thirty minutes to allow for late arrivals.

IV. SUMMARY AND FINAL COMMENTS

Mr. Campbell announced that since there was no one from the public present that we'd wait until at least 10:30 a.m. to allow for late arrivals.

Break until 10:30

Mr. Campbell stated that it was now 10:35 a.m. and time to reconvene the workshop.

Mr. Campbell announced that we hold this workshop to satisfy the requirements established by the Board of Health to make sure that we solicit public comments on this Solid Waste Management Plan.

Mr. Campbell announced the next step is to discuss and resolve the comments received at the workshops or via the website. Currently the SWMP is scheduled to go before the BOH Thursday, May 23, at 8:30 a.m. during their regular meeting. With that the process has been completed to this point.

V. ADJOURNMENT

Mr. Campbell thanked everyone for attending and adjourned the workshop at 10:33 a.m.

[redacted]
Carol Cottam, Administrative Assistant

ATTACHMENT E: WORKSHOP SIGN IN SHEETS (1 of 4)

Southern Nevada Health District
Environmental Health Division
Solid Waste Plan Review
PUBLIC WORKSHOP
Southern Nevada Health District/SNHD Conference Room #1
April 24, 2013, 10:00 a.m.

Solid Waste Management Plan

NAME, TITLE (Print Please)	BUSINESS/AGENCY	PHONE NUMBER	E-MAIL ADDRESS
Dennis Campbell EH Manager	SNHD	702-759-0600	campbell@snhdmail.org
Eddie Ridenour EH Supervisor	SNHD	702-759-0600	ridenour@snhdmail.org
Carol Cottam Administrative Assistant	SNHD	702-759-0661	cottam@snhdmail.org
Nancy-Ann Hall Senior EHS	SNHD	702-759-0654	Hall@snhdmail.org

ATTACHMENT E: WORKSHOP SIGN IN SHEETS (2 of 4)

Southern Nevada Health District
Environmental Health Division
Solid Waste Plan Review
PUBLIC WORKSHOP
Southern Nevada Health District/SNHD Conference Room #1
April 24, 2013, 6:00 p.m.

Solid Waste Management Plan

NAME, TITLE (Print Please)	BUSINESS/AGENCY	PHONE NUMBER	E-MAIL ADDRESS
Dennis Campbell EH Manager	SNHD	702-759-0600	campbell@snhdmail.org
Eddie Ridenour EH Supervisor	SNHD	702-759-0600	ridenour@snhdmail.org
Carol Cottam Administrative Assistant	SNHD	702-759-0661	cottam@snhdmail.org
Edie Mattox administrative assistant	SNHD	702-759-0600	Mattox@snhdmail.org

ATTACHMENT E: WORKSHOP SIGN IN SHEETS (3 of 4)

Southern Nevada Health District
Environmental Health Division
Solid Waste Plan Review
PUBLIC WORKSHOP
City of Mesquite Town Hall/City Council Chambers
May 1, 2013, 10:00 a.m.

Solid Waste Management Plan

NAME, TITLE (Print Please)	BUSINESS/AGENCY	PHONE NUMBER	E-MAIL ADDRESS
Dennis Campbell EH Manager	SNHD	702-759-0600	campbell@snhdmail.org
Eddie Ridenour EH Supervisor	SNHD	702-759-0600	ridenour@snhdmail.org
Carol Cottam Administrative Assistant	SNHD	702-759-0661	cottam@snhdmail.org
Brett	City of Mesq.	[redacted]	
Shawn Hughes	Virgin Valley Disposal		

ATTACHMENT E: WORKSHOP SIGN IN SHEETS (4 of 4)

Southern Nevada Health District
Environmental Health Division
Solid Waste Plan Review
PUBLIC WORKSHOP
Laughlin Regional Government Center
May 2, 2013, 10:00 a.m.

Solid Waste Management Plan

NAME, TITLE (Print Please)	BUSINESS/AGENCY	PHONE NUMBER	E-MAIL ADDRESS
Dennis Campbell EH Manager	SNHD	702-759-0600	campbell@snhdmail.org
Eddie Ridenour EH Supervisor	SNHD	702-759-0600	ridenour@snhdmail.org
Carol Cottam Administrative Assistant	SNHD	702-759-0661	cottam@snhdmail.org

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (1 of 99)

SOLID WASTE MANAGEMENT PLAN

for

CLARK COUNTY, NEVADA

2013

Prepared by

Southern Nevada Health District
330 S. Valley View Blvd
Las Vegas, NV 89107

for submittal to

Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249

Approved by the Southern Nevada District Board of Health on **May 23, 2013**
Approved by the State of Nevada Department of Conservation and Natural Resources, Division of Environmental Protection on XXXXXXXXXXX

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (2 of 99)

TABLE OF CONTENTS-Solid Waste Management Plan for Clark County, NV

SOLID WASTE MANAGEMENT PLAN
for
Clark County, Nevada

TABLE OF CONTENTS

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (3 of 99)

TABLE OF CONTENTS-Solid Waste Management Plan for Clark County, NV

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (4 of 99)

TABLE OF CONTENTS-Solid Waste Management Plan for Clark County, NV

TABLES

FIGURES

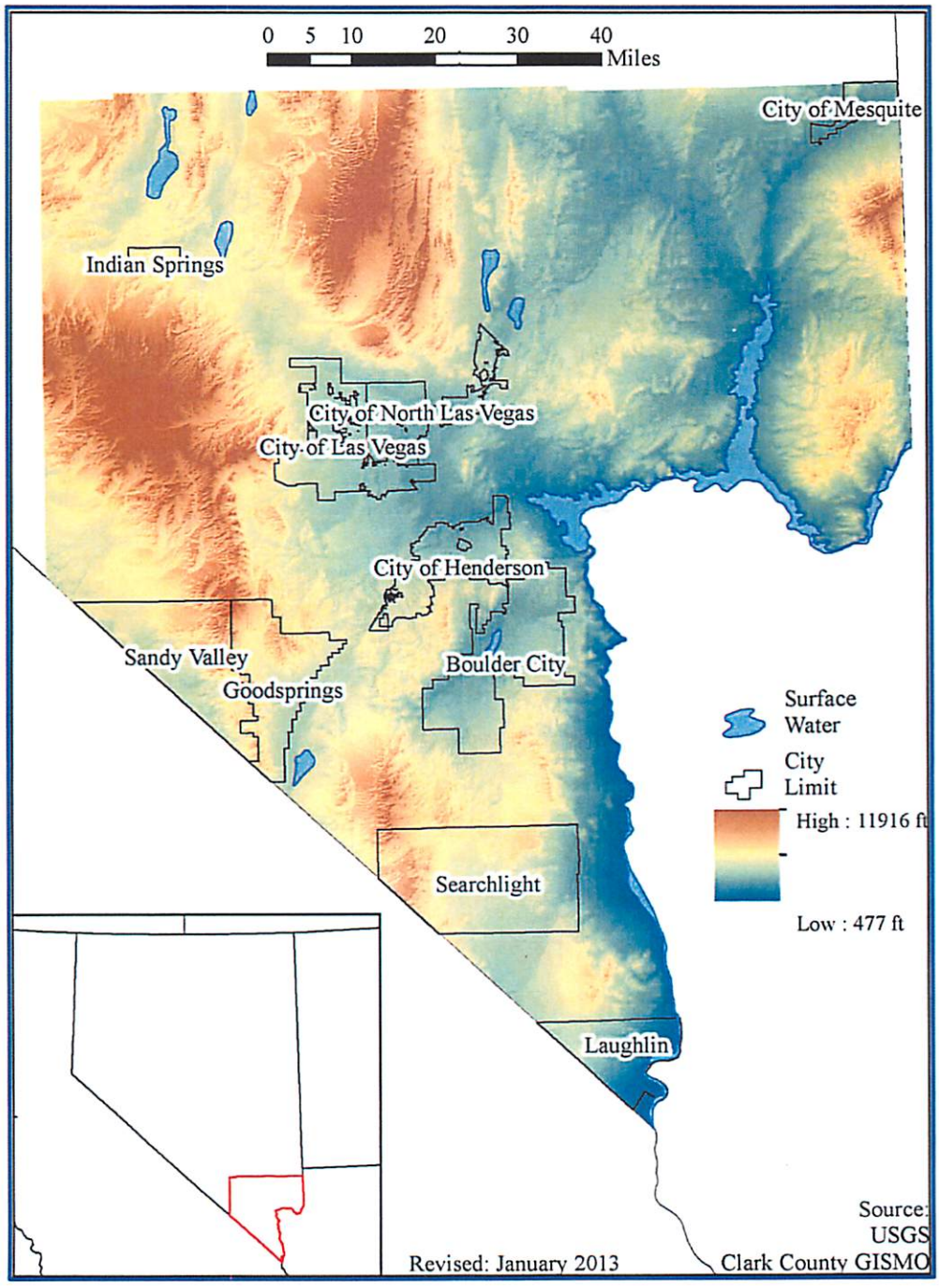
ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (5 of 99)

TABLE OF CONTENTS—APPENDICES

LISTING OF APPENDICES

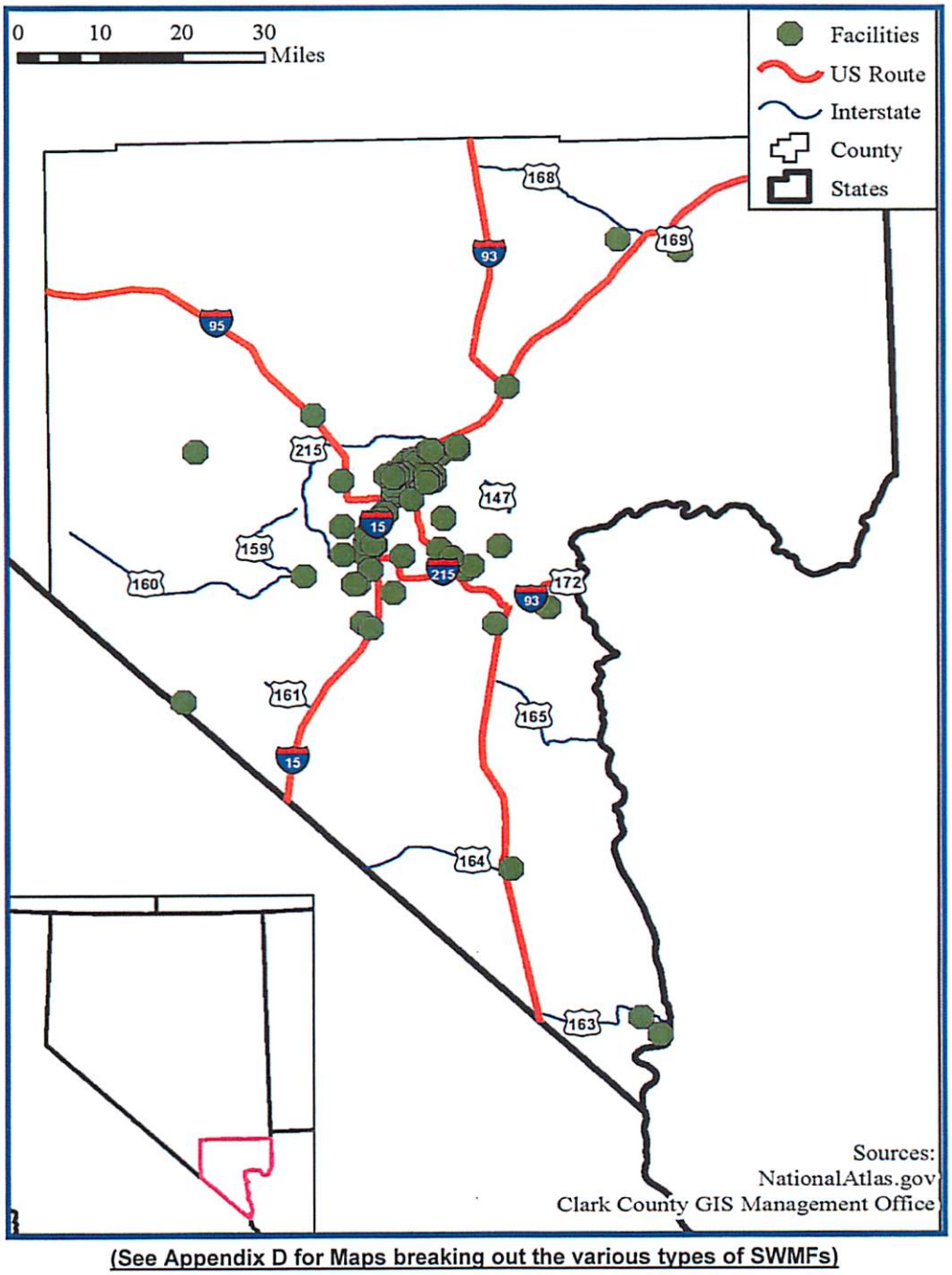
ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (6 of 99)

MAP—Clark County, Nevada and Incorporated Jurisdictions



ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (7 of 99)

MAP-Clark County, NV Solid Waste Management Facilities and Disposal Sites



(See Appendix D for Maps breaking out the various types of SWMFs)

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (8 of 99)

DEFINITIONS

Summary of acronyms and abbreviations of terms used in this Plan:

BOH	Southern Nevada District Board of Health
C&D	Construction and demolition
CESQG	Conditionally Exempt Small Quantity Generator
CFC	Chlorofluorocarbon
CFL	Compact Fluorescent Light Bulbs
CFR	Code of Federal Regulations
EHD	Environmental Health Division
EPA	United States Environmental Protection Agency
HHW	Household Hazardous Waste
ISDS	Individual Sewage Disposal System
LVUA	Las Vegas Urban Area
MOU	Memorandum of Understanding
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MSWLF	Municipal Solid Waste Landfill
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NRS	Nevada Revised Statutes
RCRA	Resource Conservation and Recovery Act
RSSN	Republic Services of Southern Nevada
SEC	Nevada State Environmental Commission
SNHD	Southern Nevada Health District
SQG	Small Quantity Generator
SWAC	Solid Waste and Compliance Section
SWM	Solid Waste Management
SWMA	Solid Waste Management Authority
SWMF	Solid Waste Management Facility
SWMP	Solid Waste Management Plan
VVD	Virgin Valley Disposal
WLN	Waste Logistics Nevada
WTH	Waste Tire Hauler
WTMF	Waste Tire Management Facility

DEFINITIONS in Appendix C, Part 1—(NRS Chapter 444)

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.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (9 of 99)

DEFINITIONS

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.

DEFINITIONS in Appendix C, Part 2—(NAC Chapter 444)

NAC 444.5701 "Active life" defined.
NAC 444.5702 "Administrator" defined.
NAC 444.5703 "Appendix I" defined.
NAC 444.57035 "Appendix II" defined.
NAC 444.5704 "Aquifer" defined.
NAC 444.57048 "Cell" defined.
NAC 444.5705 "Class I site" defined.
NAC 444.571 "Class II site" defined.
NAC 444.5715 "Class III site" defined.
NAC 444.572 "Composting" defined.
NAC 444.573 "Contaminant" defined.
NAC 444.5735 "Cross-media" defined.
NAC 444.574 "Disposal site" defined.
NAC 444.576 "Division" defined.
NAC 444.577 "Existing municipal solid waste landfill unit" defined.
NAC 444.578 "Garbage" defined.
NAC 444.5785 "Gas condensate" defined.
NAC 444.579 "Groundwater" defined.
NAC 444.580 "Hazardous waste" defined.
NAC 444.581 "Household waste" defined.
NAC 444.584 "Incinerator" defined.
NAC 444.585 "Industrial solid waste" defined.
NAC 444.587 "Lateral expansion" defined.
NAC 444.5875 "Leachate" defined.
NAC 444.588 "Lift" defined.
NAC 444.589 "Medical waste" defined.
NAC 444.591 "Municipal solid waste landfill unit" defined.
NAC 444.592 "Municipality" defined.
NAC 444.593 "New municipal solid waste landfill unit" defined.
NAC 444.594 "Nuisance" defined.
NAC 444.596 "Open burning" defined.
NAC 444.598 "Open dump" defined.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (10 of 99)

DEFINITIONS

NAC 444.5985	**"Operator" defined.**
NAC 444.599	**"Owner" defined.**
NAC 444.600	**"Pathological wastes" defined.**
NAC 444.602	**"Percolation" defined.**
NAC 444.604	**"Person" defined.**
NAC 444.605	**"Pollutant" defined.**
NAC 444.6065	**"Postclosure" defined.**
NAC 444.607	**"Public waste storage bin facility" defined.**
NAC 444.608	**"Putrescible" defined.**
NAC 444.609	**"Qualified groundwater scientist" defined.**
NAC 444.610	**"Refuse" defined.**
NAC 444.612	**"Rubbish" defined.**
NAC 444.614	**"Salvage yard" defined.**
NAC 444.616	**"Salvaging" defined.**
NAC 444.620	**"Scavenging" defined.**
NAC 444.622	**"Solid waste" defined.**
NAC 444.624	**"Solid waste management authority" defined.**
NAC 444.626	**"Solid waste management system" defined.**
NAC 444.6265	**"Surface impoundment" defined.**
NAC 444.628	**"Transfer station" defined.**
NAC 444.629	**"Uppermost aquifer" defined.**
NAC 444.630	**"Vector" defined.**
NAC 444.631	**"Waters of the State" defined**
NAC 444.8509	**"Conditionally exempt small quantity generator" defined**

DEFINITIONS in Appendix C, Part 3 (NRS and NAC Chapter 444A)

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**
NAC 444A.210	**"Facility for the management of waste tires" defined.**
NAC 444A.220	**"Generator of waste tires" defined.**
NAC 444A.230	**"Hauler of waste tires" defined.**
NAC 444A.240	**"Passenger tire equivalent" defined.**

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (11 of 99)

DEFINITIONS

NAC 444A.250 "Processing" defined.
NAC 444A.260 "Solid waste management authority" defined.
NAC 444A.270 "Waste tire" defined
NAC 444A.605 "Division" defined.
NAC 444A.610 "Municipality" defined.
NAC 444A.615 "Solid waste" defined.
NAC 444A.620 "Solid waste management authority" defined.
NAC 444A.625 "Solid waste management system" defined.

Definitions in Appendix C, Part 4 (SNHD SWMA Regulations)

Definitions from SNHD/SWMA Regulations, as used in this SWMP, unless the context otherwise requires, the following words and terms defined have the meanings ascribed to them as they pertain to solid waste disposal sites:

1. **"Class I site" defined. A class I site [also known as a municipal solid waste (MSW) landfill] is a solid waste disposal site which:**
   (a) Is comprised of at least one MSW landfill unit including all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste; and
   (b) Is not a class II or class III site.

2. **"Class II site" defined. A class II site is a solid waste disposal site:**
   (a) Which is comprised of at least one MSW landfill unit;
   (b) Which accepts less than 20 tons of solid waste per day on an annual average;
   (c) For which there is no evidence of contamination of groundwater originating from the site;
   (d) Which serves a community that has no other practicable alternatives for waste management; and
   (e) 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.

3. **"Class III site" defined. A class III site (also known as an industrial waste landfill) is a solid waste disposal site which accepts only industrial solid waste.**

4. **"Compost plant" defined. A compost plant is a solid waste disposal site which uses controlled biological degradation to convert solid waste into an inoffensive humus-like product.**

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (12 of 99)

5. **"Construction and demolition waste" defined. Construction and demolition (C&D) waste** is non-hazardous solid waste resulting from the construction, remodeling, repair, and demolition of utilities and structures; and uncontaminated solid waste resulting from land clearing. Such waste includes, but is not limited to, wood (including painted, treated, and coated wood and wood products), land clearing debris, wall coverings, plaster, drywall, plumbing fixtures, non-asbestos insulation, roofing shingles and other roofing coverings, glass, plastics that are not sealed in a manner that conceals other wastes, empty buckets ten (10) gallons or less in size and having no more that one (1) inch of residue remaining on the bottom, electrical wiring and components containing no hazardous liquids, pipe and metals, corrugated container board, carpeting, furniture, and tires, that are incidental to any of the above. Solid waste that is not C&D debris, (even if resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads and land clearing) includes, but is not limited to, asbestos waste, garbage, electrical fixtures containing hazardous liquids such as fluorescent light ballasts or transformers, fluorescent light bulbs or tubes, appliances, drums, containers greater than ten (10) gallons in size, any containers having more than one (1) inch of residue remaining on the bottom, or fuel tanks.

6. **"C&D waste short-term storage facility" defined. A C&D waste short-term storage facility** is a facility that provides for the storage of one or more trucks, trailers, and/or portable waste containers which are used for the collection of C&D solid waste for transport to a permanent disposal site.

7. **"Disposal site" defined. A disposal site** is 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 MSW landfill.

8. **"Garbage" defined. Garbage** is putrescible animal and vegetable wastes resulting from the handling, storage, sale, preparation, cooking, and serving of food.

9. **"Hazardous waste" defined. Hazardous waste** is a waste with properties that make it dangerous or potentially harmful to human health or the environment. In regulatory terms, a Resource Conservation and Recovery Act (RCRA) hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics—ignitability, corrosivity, reactivity, or toxicity.

10. **"Health Authority" defined. Health Authority** means the officers and agents of the Board and the staff of the SNHD, including Environmental Health Specialists.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (13 of 99)

11. **"Household hazardous waste" defined. Household hazardous wastes (HHW)** are hazardous products used and disposed of by residential as opposed to industrial consumers. This includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.

12. **"Materials recovery facility" defined. A materials recovery facility (MRF)** is a solid waste disposal site 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:
    (a) A site that receives only recyclable materials that have been separated at the source of waste generation;
    (b) A salvage yard for the recovery of used motor vehicle parts;
    (c) A site that receives, processes or stores only concrete, masonry waste, asphalt pavement, brick, uncontaminated soil or stone for the recovery of recyclable materials.

13. **"Nuisance" defined. A nuisance** is 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.

14. **"Permit to Operate a Solid Waste Management Facility" defined. A Permit to Operate a Solid Waste Management (SWM) Facility** is the initial written approval by the SWMA to design, construct, and operate a solid waste disposal site under the provisions of these SWMA Regulations, and is separate from any other licensing and/or permitting requirements of other agencies of jurisdiction that may exist within political subdivisions where the solid waste disposal site is located.

15. **"Public waste storage bin facility" defined. A public waste storage bin facility** is a solid waste disposal site that provides one or more portable waste containers which are used for the collection of solid waste for transport to a permitted 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.

16. **"Putrescible" defined. Putrescible** means capable of being decomposed by microorganisms with sufficient rapidity as to cause nuisances from odors or gases.

17. **"Recyclable material" defined. Recyclable material** is solid waste that is processed and returned to the economic mainstream in the form of raw materials or products, as determined by the Nevada State Environmental Commission (SEC).

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (14 of 99)

The SEC interprets recyclable material to include, without limitation:
(a) Newspaper;
(b) Corrugated cardboard;
(c) Aluminum;
(d) Yard debris (material generated from plants, including trees, bushes, sod, and grass clippings on residential or business property);
(e) Office paper;
(f) Glass;
(g) Tin and steel cans;
(h) Metal;
(i) Motor oil;
(j) Plastic;
(k) Antifreeze;
(l) Wood; and
(m) Food waste

18. **"Recycling center" defined.** A **recycling center** is a facility designed and operated to receive, store, and process recyclable material which has been separated at the source from all but residual solid waste (NRS 444A.014). The recycling center must receive and store and process only source-separated recyclables for which there is an available market to be permitted as a recycling center. The recyclable materials must be separated from the solid waste stream at the source of waste generation. A recycling center may not receive any solid waste, other than residual solid waste, commingled with recyclables at the recycling facility. The term "recycling center" does not include a:
(a) MRF;
(b) Transfer station;
(c) Compost plant;
(d) Hazardous waste recycling facility permitted by the NDEP or the EPA;
(e) Public waste storage bin facility;
(f) Drop off bins; and
(g) Agricultural facility.

19. **"Solid waste" defined. Solid waste** is any garbage, refuse, rubbish, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semisolid, 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 material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923), or hazardous waste as defined in the RCRA, Subpart C.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (15 of 99)

DEFINITIONS

20. **"Solid Waste Management Authority" defined. The Solid Waste Management Authority (SWMA)** means:
    (a) The district board of health (BOH) 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.
    (b) In all other areas of the state, the Division of Environmental Protection of the State Department of Conservation and Natural Resources.
    (c) In states other than Nevada, any SWMA having jurisdiction over the location of the permanent disposal site.

21. **"Solid waste management facility" defined. A solid waste management facility (SWMF)** is any facility at which solid waste is deposited or accepted for processing, sorting, recycling, transfer, or storage.

22. **"Solid waste management system" defined. A solid waste management system** is 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.

23. **"Source separated recyclable materials" defined. Source separated recyclable materials** are solid wastes that include single recyclable or commingled recyclable materials that have been separated from the waste stream, with ten (10) percent or less by weight or volume of non-recyclable solid waste, at the site of generation.

24. **"Temporary Permit" defined. A temporary permit** is the written temporary approval by the SWMA to operate a solid waste disposal site under the provisions of SNHD Regulations, and all other applicable federal, state, and local agencies of jurisdiction laws, regulations, and ordinances.

25. **"Transfer station" defined. A transfer station** is 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 permanent disposal site approved by the SWMA or permitted by any other SWMA having jurisdiction over the location of the permanent disposal site. Some processing may be included therein. The term does not include public waste storage bin facilities or C&D waste short-term storage facilities.

26. **"Waste Management Permit" defined. A Waste Management Permit** is an annual Permit issued by the SWMA for a solid waste disposal site to operate and conduct day-to-day business. Annual fees are assessed in accordance with SNHD Environmental Health (EH) Fee Schedule.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (16 of 99)

EXECUTIVE SUMMARY

The Southern Nevada Health District Board of Health (BOH) is designated as the Solid Waste Management Authority (SWMA) for Clark County under NRS 444.495. Under NRS 444.580 the BOH may adopt standards and regulations for the location, design, construction, operation and maintenance of solid waste disposal sites and Solid Waste Management (SWM) systems and may issue permits thereunder. The Solid Waste and Compliance Section (SWAC) of the Environmental Health Division (EHD) is responsible for the oversight of these regulations (State of Nevada, 2011). Southern Nevada encompasses Clark County, Nevada and all its incorporated and unincorporated municipalities, communities, and rural areas. The SWAC is the designated agency for regulatory oversight of solid waste collection, management, and disposal issues in Southern Nevada.

Under this authority and per NRS 444.510, the SWMA must develop a plan to provide for a Solid Waste Management System which adequately provides for the management and disposal of solid waste within Clark County. This plan is called the Solid Waste Management Plan (SWMP). Southern Nevada's SWMP provides a description of the existing framework for SWM within the applicable laws, regulations and infrastructure within the jurisdiction. The SWMP describes governmental roles and responsibilities, trends in SWM, the assessment of Southern Nevada's MSW management systems, and SWM issues and future considerations.

Southern Nevada has had two previous formal SWMPs: The first one entitled *Clark County Comprehensive Solid Waste Management Plan* was written in 1974 by URS Systems Corporation to describe the Clark County Health District's (the former name of the SNHD) then-existing solid waste conditions, practices, and problems and evaluations and recommendations for the timeframe between 1974 and the year 2000 (URS Systems Corporation, 1974). The second plan, dated March 15, 1995 entitled *Solid Waste Management Plan for Clark County, Nevada,* was intended to be an update to address a 20-year planning period from 1995 to 2015, with a particular emphasis on the period of 1995 to 2000 (Harding Lawson Associates, 1995). This third current, updated plan is intended to move forward from 2013 and to cover specifically the next five-year timeframe.

Southern Nevada continues to grow and modernize its SWM systems. Since the last update to the SWMP, the SNHD has promulgated several solid waste-related regulations. These regulations have categorized certain functions of SWM and created niches for industry to contribute to the management of a variety of waste categories. These SNHD/SWMA Regulations are discussed in this SWMP in detail in CHAPTER 4 (State of Nevada, 2012).

In the timeframe from the development of the first Southern Nevada SWMP in 1974 to now, nearly 40 years later, the SWM industry, including its various recycling processes has become more science-based business practices.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (17 of 99)

EXECUTIVE SUMMARY

The following existing local conditions continue to significantly allow for expansion of waste diversion and recycling efforts and good long-term solid waste disposal efforts:

- Assured long-term disposal capacity,
- Strong tradition of private enterprise in providing SWM operations and facilities,
- Long-term franchise agreements for refuse collection and disposal,
- Existing residential waste quantities at manageable levels,
- Existing commercial waste quantities,
- Existing network of convenience and transfer stations,
- Local scrap metal and paper processing companies and other independent recycling operations,
- Curbside residential recycling service provided throughout franchised service areas in Southern Nevada,
- Large, sparsely populated rural areas,
- Changing residential population and related construction growth or decline,
- Increased interest and need for disposal construction/demolition wastes,
- Large tourist population throughout the year,
- Increased service industry/commercial growth throughout Southern Nevada,
- Major resort/hotel/casino/convention industry.

Historically, SWM legislation in Nevada was driven by federal legislation in the 1960's as a basis (United States of America, 1965). The Federal Solid Waste Disposal Act was one of the first attempts to regulate solid waste, including putrescible and non-putrescible waste, disposal methods nationwide (United States of America, 1970). The State of Nevada Legislature, in 1971, added to its existing NRS Chapter 444-Sanitation, the section entitled "Collection and Disposal of Solid Waste." (State of Nevada, 1971) In 1976, the Federal Solid Waste Disposal Act was changed to the "Resource Conservation and Recovery Act" after it was modified to accommodate the management and disposal of hazardous waste (United States of America, 1976). At the federal level, solid waste is regulated by the United States Environmental Protection Agency (EPA). RCRA was amended again in 1986 by adding Subtitle D requiring state and local authorities to inspect solid waste and hazardous waste disposal methods and facilities. RCRA regulations are the basis for several programs, including underground storage tank, hazardous waste, and solid waste programs nationwide and statewide. Sections of NRS Chapter 444 were legislatively added and modified in 1991 and 1993 to accommodate applicable modifications (State of Nevada, 1991). The EPA hands down enforcement authority to the states who have the appropriate agencies. In the State of Nevada, this enforcement authority rests with the State Department of Conservation and Natural Resources, Nevada Division of Environmental Protection (NDEP), except in areas such as tribal lands, which are governed by tribal governments. NDEP has the option to further delegate enforcement authority to municipalities or health districts (State of Nevada, 1971). However, these agencies continue working with the NDEP to ensure enforcement is being properly managed.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (18 of 99)

EXECUTIVE SUMMARY

The SWAC has expanded considerably in the past few years. Given the rapid growth in Clark County and the resulting increase in solid waste issues, the SWAC will have to expand further to keep up with the demand for services. Currently, SWAC is responsible for managing a number of programs.

These include:

a) Application plan reviews and permitting of all SWM facilities and disposal sites in Clark County. These include landfills (class I, class II, and class III disposal sites), MRFs, transfer stations, recycling centers, public waste storage bin facilities, C&D waste short-term storage bin facilities, waste tire haulers, waste asbestos transportation companies, waste tire management facilities (WTMFs), and composting facilities;
b) Compliance inspections of all permitted SWM facilities;
c) Investigations of approximately 1,700 illegal dumping and public nuisance complaints (Southern Nevada Health District, 2011);
d) Processing Notices of Violation and conducting the Solid Waste Hearing Officer process;
e) Conducting 3,000 conditionally exempt small quantity generator (CESQG) waste management audits annually, with 3,684 audits in 2011; and
f) Small quantity generator (SQG) target sector inspections, and other programs that are not found on the fee schedule (Southern Nevada Health District, 2010).

Southern Nevada's SWMP provides a description of the existing framework for solid waste management within the applicable laws, regulations, and infrastructure within the State. The Plan describes governmental roles and responsibilities, statewide trends in SWM, the assessment of Nevada's municipal SWM systems, and SWM issues and future considerations. The following is a breakdown of the seven chapters that make up the SWMP:

INTRODUCTION AND OVERVIEW: CHAPTER 1 of this SWMP discusses the importance of proper solid waste management. In addition this chapter provides an overview of the major components involved in the system to effectively manage solid waste in a community.

SOLID WASTE GENERATION: CHAPTER 2 of this SWMP discusses current and future waste generation, impacts of current waste flows in Southern Nevada, the importation and exportation of waste from other areas into Southern Nevada, as well as electronic waste (e-waste), recycling waste, waste diversion (legal and illegal diversion of recyclables), solid waste characterization, and wastes requiring special handling.

Some wastes require unique handling due to certain physical, chemical or biological characteristics of the waste. These are called "Special Wastes." An example of an emerging Special Waste is mercury. Informational brochures are available that address the proper disposal of household waste mercury. Action was taken by SNHD and the EPA following two incidents in 2004 involving the spills of elemental mercury at local schools and in a local neighborhood, which resulted in significant illness in at least one young person in the Las Vegas area (Las Vegas Review-Journal, 2004) (Rawlyk & Koch, 2004). Household generated

materials that have the characteristics of hazardous waste, such as mercury, while they can be exceptionally dangerous, are exempt from hazardous waste regulation.

Other special wastes of concern are medical and pharmaceutical wastes. Waste from medical and veterinary facilities are generally handled by medical waste services throughout the county, but services for home-generated medical and pharmaceutical wastes are limited.

Electronic waste (e-waste) is a special waste that is currently receiving national attention. The volume of e-waste is rapidly growing and various components of this waste stream (e.g., TV screens, computer monitors, cell phones) have been identified in some states as hazardous wastes. As both industry and government seek to alleviate the problem on a national level, public education is needed in Southern Nevada concerning proper recycling and disposal options.

DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS: CHAPTER 3 provides significant evaluation of: types and definitions of solid waste: residential, commercial, and industrial solid wastes; solid waste collection/franchises within the various incorporated and unincorporated cities and areas within Clark County; definitions and numbers of the variety of solid waste disposal and management facilities; various waste diversion technologies including recycling centers, materials recovery facilities, aggregate crushing C&D waste, composting facilities; franchise recycling programs such as residential and curbside recycling, transfer stations, and recycling in public buildings; non-franchise diversion programs, waste diversion technologies, single-stream recycling pilot programs; chemical digestion and biodiesel production; liquid waste management, and illegal waste dumping and enforcement.

Illegal or open dumping is a historic and persistent problem in both rural and urban areas of Southern Nevada. Illegal dumping problems are fundamentally local in nature and combating the issue through a combination of SWM planning, public education, and coordinated enforcement will help reduce the problem. Local community groups have made great strides in controlling illegal dumping by coordinating community cleanup projects, involving the local government, and producing public information campaigns. The SWMA, through its Hearing Officer Process, has made some headway in the area of illegal dumping; however, there are individuals and companies who continue to illegally dump through ignorance of the law or deliberate acts.

LAWS AND REGULATIONS: CHAPTER 4 provides a detailed discussion of relevant federal, state, local, and SWMA regulations affecting SWM in Southern Nevada (State of Nevada, 2008).

FINANCIAL SUSTAINABILITY: CHAPTER 5 discusses current funding sources for SWM programs in Southern Nevada. This includes current funding sources such as permits, fees, the waste tire fund, grants, and tipping fees. Recommendations for managing funding in the

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (20 of 99)

current financial atmosphere and with the limitations governmental and private entities must function under at this unprecedented time in economic history will be discussed.

THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN: CHAPTER 6 discusses the Clark County Emergency Debris Management Plan and its role in managing the disposal of wastes resulting from an area-wide emergency or catastrophe, including an annual State of Nevada evaluation of the Debris Management Plan.

PROGRAM EVALUATION: CHAPTER 7 reviews the findings and recommendations in this 2013 SWMP and discusses future considerations and the next steps in the community for the next five years with regard to the management of solid waste in Southern Nevada.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (21 of 99)

ACKNOWLEDGEMENT

The SNHD would like to thank the staff of Clark County, NV; the cities of Boulder City, Henderson, Mesquite, Laughlin, Las Vegas, and North Las Vegas; Republic Services of Southern Nevada (RSSN); the NDEP; and the other organizations that assisted in creating this plan. The help we received was instrumental in allowing for the development of this plan and in laying the groundwork for future endeavors.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (22 of 99)

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH

The SNHD is governed by a fourteen (14)-member policy-making board composed of:

- Two (2) elected officials from the Clark County Board of Commissioners.
- Two (2) elected officials of the largest city in Clark County, the City of Las Vegas.
- One (1) elected representative from each of the four remaining jurisdictions in the county (Boulder City, Henderson, Mesquite, and North Las Vegas)
- Six (6) at-large members selected by the Board and meeting the following specifications:
  1. Two (2) representatives who are physicians licensed to practice medicine in this state, one (1) of whom is selected on the basis of education, training, experience or demonstrated abilities in the provision of health care services to members of minority groups and other medically underserved populations.
  2. One (1) representative who is a registered nurse licensed to practice in Nevada.
  3. One (1) representative with a background or expertise in EH or EH services.
  4. One (1) representative of a nongaming business or from a business or industry that is subject to regulation by the SNHD.
  5. One (1) representative of the association of gaming establishments whose membership in the county collectively paid the most gross revenue fees to the state pursuant to NRS 463.370 in the preceding year, who must be selected from a list of nominees submitted by the association. If no such association exists, the representative selected pursuant to this subparagraph must represent the gaming industry (State of Nevada, 2011). Information about the gaming member, which was added during the 2011 Legislative session, is available at www.leg.state.nv.us (State of Nevada, 2011).

The BOH represents a unique consolidation of agencies, groups, and professionals into one regulating body. This Board addresses the public health concerns of Boulder City, Henderson, Las Vegas, Mesquite, North Las Vegas and Clark County, as well as minority groups, medically underserved populations, and local business and industry.

Members of the BOH serve terms of two years. Vacancies must be filled in the same manner as the original selection for the remainder of the unexpired term.

Members serve without additional compensation for their services, but are entitled to reimbursement for necessary expenses for attending meetings or otherwise engaging in the business of the board.

The BOH, through policy development and direction to SNHD staff, identifies public health needs and, as mandated by Clark County Ordinance 163 (codified as Clark County Code Title

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (23 of 99)

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH

3-Commissions, Boards, and Districts, *Chapter 3.08-Board of Health*) establishes priorities on behalf of local taxpayers, residents, tourists/visitors, and the commercial service industry.

Clark County Code Chapter 3.08.060 states:

"The district board of health shall:
(a) Oversee all sanitary conditions of the county for which the board is created;
(b) Establish and conduct a comprehensive program of health which shall include the promotion of EH, exclusive of air quality matters, maternal and child health, control of communicable diseases and the further programming of the prolonging of life and the promotion of the well-being of the people of Clark County."

The SNHD is one of the largest local public health districts in the nation. It serves a population of 1.7 million residents, representing 69 percent of the state's population and an average of 471,201 tourists daily, with a staff of approximately 500 employees working in four divisions. Public health services are available to everyone, regardless of income.

The SNHD's mission is:

"To protect and promote the health, the environment and the well being of Southern Nevada residents and visitors."

Because the SNHD is the acting health authority in Southern Nevada, it was given the responsibility as the SWMA under Nevada statutes (NRS 444.595), the primary regulatory body over SWM, in Clark County and all incorporated municipalities (Southern Nevada Health District, 2013).

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (24 of 99)

CHAPTER 1
INTRODUCTION AND OVERVIEW

1.1 Purpose and Scope

The management of solid waste is a vital purpose of the infrastructure of any municipality. Reuse and recycling programs help conserve resources and promote job growth. Cost-effective and efficient waste collection systems prevent illegal dumping and preserve public health. Properly designed, well-operated SWM sites ensure the safe, efficient, and sanitary disposal of solid waste.

Planning and implementing a system to effectively manage solid waste is a responsibility of the affected cities and Clark County, in cooperation with the BOH, the SWMA for all areas in Clark County. NRS 444.510 requires the development of a plan for the management of solid waste and its periodic revision at least every five years.

This Plan, the SWMP, reviews the status of collection and disposal systems within Clark County, including Laughlin, which remains an unincorporated township within Clark County and the five cities therein: (1) Las Vegas, (2) North Las Vegas, (3) Henderson, (4) Boulder City, and (5) Mesquite. The SWMP considers the adequacy of regulatory standards governing disposal sites and attempts to identify viable economic incentives and other methods that will encourage the most efficient use of resources, reduction of waste generation, and optimum recovery of resources from the solid waste stream.

1.2 Introduction to Solid Waste Management

Solid waste is any item that is intended for discard, i.e., to be thrown away (see below for exemptions). The standard regulatory definition of solid waste is provided in 40 CFR 258.2.

> 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).

SWM carries a "cradle-to-grave" responsibility. That is, the generator of solid waste is responsible to see that it is properly handled and disposed. This responsibility extends from the time of generation, through the collection and disposal process, and all the way through until final disposal or recycling.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (25 of 99)

SWM incorporates:
(1) waste disposal, including collection, transportation, and landfilling and
(2) recycling, reduction, and reuse.

1.2.1 Disposal

Waste disposal can be segmented into three phases:
(1) on-site storage by the generator, (2) collection and transportation, and (3) disposal.

On-site storage is the responsibility of the generator of the waste. Generally speaking, putrescible solid waste, which is waste, such as food waste, that is readily decomposed and capable of causing odors or gases, must be collected within 24 hours of generation. No specific time-limit has been set for the removal of non-putrescible solid waste.

In smaller communities, solid waste is collected by contracted/franchised waste haulers and transported directly to a disposal site, such as a landfill. In larger communities, solid waste is collected by a contracted or franchised waste hauler and taken to local collection center, called a transfer station, where the waste is consolidated into large tractor-trailers for transport to the landfill. Additionally, businesses and/or individuals may transport their own waste directly to a transfer station or landfill.

Solid waste disposal can be completed by landfilling or incineration. All solid waste generated in Clark County is disposed of utilizing landfilling. Landfill sites are categorized as class I, II, or III sites. Class I sites are typical landfills—they bury municipal and industrial solid waste in engineered "cells" or landfill units. These cells are designed to protect the environment from possible contamination by the buried waste, for example they are bottom-lined by materials virtually impermeable to liquids and gases, usually clay and/or high-density polypropylene. Class II sites are similar to class I landfills, but may only accept very small amounts of waste. Class III sites bury only industrial solid waste.

1.2.2 Recycling, Reduction, and Reuse

Recycling is the redirection of solid waste back into the manufacturing process to create new products. Recyclables are collected from homes and businesses by contracted/franchised haulers and private recycling companies and transported to recycling centers where they are sorted, compacted and baled for shipment, and sold, usually out of state, to processors. Individuals can turn in their own recyclable materials at recycling centers for money. Recycling can be profitable, based on the balance between collection and transportation costs versus commodity prices paid by processors. Some products can be recycled, but the cost of doing so may be deemed prohibitively high.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (26 of 99)

In addition, certain recyclable materials like glass bottles and aluminum cans are generated for recycling and are controlled through a "deposit" or "rebate" system in states like California. States adjacent to California, like Nevada, have no such deposit requirement and glass and aluminum are recycled purely as commodities. This system has created an unanticipated problem. Individuals or organized groups illegally collect recyclables from neighborhoods or areas that are otherwise contracted for routine curbside pickup under a legally-obtained franchise agreement. These recyclables do not end up in the proper system for recycling. They end up being illegally transported over the state border into states with deposits. The deposits are paid out to the illegal collectors. The deposits were never originally collected by the redeeming state and were not paid by the person returning the cans and bottles. This profits the recyclables thieves at the cost of the state redeeming the items.

Waste reduction consists of lowering waste generation on the front-end of the solid waste chain. Through efforts during manufacturing and packaging, such as using less packaging materials, thereby eliminating unnecessary printing and shipping costs, resources can be shifted to electronic record keeping, extending useful life, etc.

Reuse is the redirection of items that would otherwise end up as waste back for use as originally intended in an as-is or refurbished condition. Items that are no longer desired may be sold or donated. Thrift stores, charitable organizations, used vehicle or equipment sales, and salvage operations are most typically associated with this type of waste management.

All three methods: recycling, reduction, and reuse are critically important to encourage saving of natural resources. This includes reducing the need for mining or other methods for securing raw materials at the beginning of the "cradle-to-grave" waste generation life cycle and reducing the need for use of land, water, or other natural resources at the final end of waste disposal.

1.3 Government Roles and Responsibilities

State government's primary role is regulatory with respect to SWM, by implementing the regulations adopted by the SEC, implemented centrally by the NDEP. The statutes and regulations governing SWM in Nevada are NRS 444.440-444.645 and NAC 444.570-444.7499 (State of Nevada, 2008; 2011). **(Appendix C, Parts 1 and 2)** Recycling statutes and codes fall under NRS 444A.010-444A.110 and NAC 444A.005-444A.655 (State of Nevada, 2008; 2011). **(Appendix C, Part 3)** Solid waste planning, agency coordination, and public education are part of the state's responsibilities. The NDEP is required to develop a statewide SWMP and update it every five years in cooperation with the SEC (NRS 444.570) (Nevada Division of Environmental Protection, 2007). This requirement is passed down to the responsible agencies at a local level and gives the state the opportunity to assess SWM systems statewide and to review the efficacy of existing laws and regulations.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (27 of 99)

CHAPTER 1 **INTRODUCTION AND OVERVIEW**

The State of Nevada received approval from the EPA in 1994 to enforce federal municipal landfill regulations. In order to receive approval, the State of Nevada had to demonstrate that its regulations were at least as stringent as federal landfill regulations and that it had adequate resources and authority to enforce them. The EPA retains authority to take enforcement action 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 where there are violations of the federal landfill criteria and the state has failed to take action to remedy the situation.

Nevada State statutes designate the BOH as SWMA (NRS 444.595), the primary regulatory body over SWM, in Clark County and all incorporated municipalities. The SEC retains the ultimate authority to implement municipal landfill regulations, if necessary, acting in state-level role similar to the BOH (NRS 444.558). The BOH is responsible for: issuing permits to operate solid waste disposal sites (NRS 444.553), conducting inspections of solid waste disposal sites for compliance with SWMA regulations (NRS 444.556), and investigating illegal dumping (NRS 444.592). The BOH, as well as municipal governments, may adopt standards and regulations (NRS 444.580) governing solid waste disposal site location, design, and operation. Such regulations or codes must be at least as strict as, and must not conflict with, state regulations. Nevada State regulations are found in NAC 444.570-7499 and are described briefly in Chapter 4, as are SWMA Regulations adopted by the BOH and municipal codes adopted by the various municipalities.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (28 of 99)

CHAPTER 2
SOLID WASTE GENERATION

Elected officials, municipality managers, and program analysts make important long-term decisions about the design and operation of solid waste collection systems. Data on the quantities of solid waste disposed and recycled are necessary in order to conduct waste management planning, ensure future disposal capacity, and provide a means to measure the success of waste reduction and recycling efforts. Landfills, MRFs, recycling centers, and transfer stations are required to report the amount of waste disposed of at their facilities. This data is compiled and used in conjunction with population and visitorship data to determine waste generation and recycling rates on a per year basis, as well as broken down to a per day basis.

2.1 Current and Future Waste Generation

Historically, Nevada and Clark County have calculated waste generation rates on a per capita per day basis without considering the large visitor population. Even though this is an acceptable method that is used successfully by waste planners across the country, Clark County is unique among counties, both state- and country-wide as well, in our high number of tourists. In fact, the 2007 State of Nevada SWMP states under that plan's **Section 2.5.1**:

> It has been suggested that Nevada's tourism economy has an effect on the municipal waste generation rate. The Las Vegas Convention and Visitor's Authority reports that over 35 million people visit the area per year. These visitors are transient generators of MSW and are not counted in with the resident population. As such, per capita waste generation tends to be high in the high-tourism areas than in non-tourism economies (Nevada Division of Environmental Protection, 2007).

As such, not including visitor-based population in the calculation of our waste generation rate may lead to incorrect estimations in the true rate.

Accordingly, this plan reports two waste generation rates. Using county-wide population statistics available from the Clark County Department of Comprehensive Planning and visitorship data, including the number of visitors and the average number of nights visitors stay in hotels (referred to as room-nights occupied) available from the Las Vegas Convention and Visitors Authority, this plan will report these two rates:

(1) a traditional resident-based rate (pounds of waste generated per resident per day) and

(2) A novel form based on resident population and visitorship (pounds of waste generated per "person-day occupied"). Although the relative difference is small, SNHD believes per person-day occupied is a more accurate way of reporting waste generation within Clark County (Southern Nevada Regional Planning Coalition, 2012).

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (29 of 99)

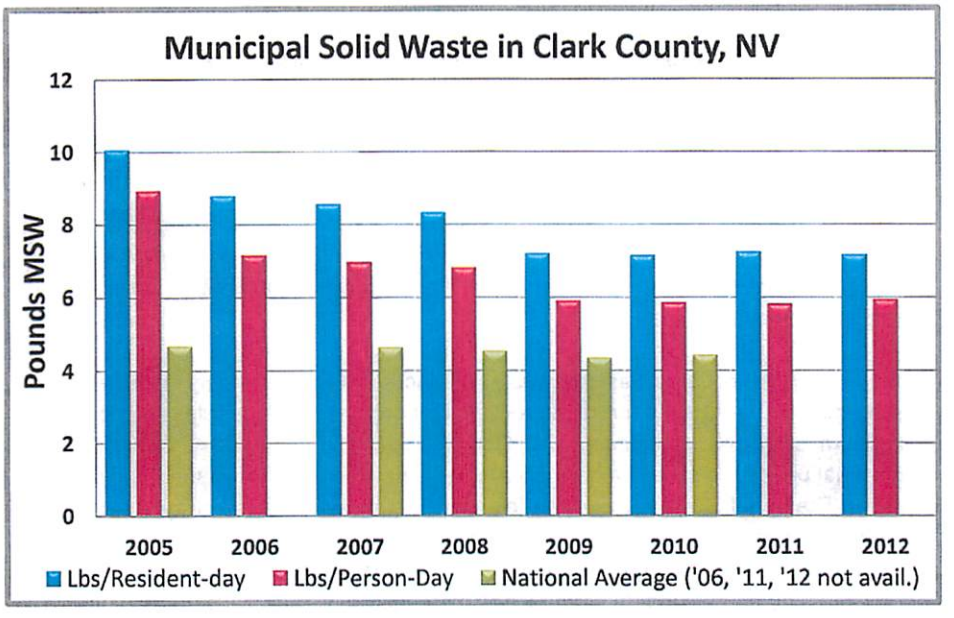


Chart 2-1: Waste Generation in Clark County. Complete data and calculations found in Appendix E.

	2005	2006	2007	2008	2009	2010	2011	2012
Per resident	10.06	8.79	8.56	8.34	7.20	7.15	7.24	7.16
Per resident and visitor combined	8.93	7.15	6.96	6.81	5.91	5.86	5.82	5.94
National Average	4.67	n/a	4.64	4.53	4.35	4.43	n/a	n/a

Table 2-1. Pounds of MSW generated per person per day in Southern Nevada

2.2 Current Waste Flow Impacts

2.2.1 Importation of Solid Waste into Southern Nevada

While Nevada has counties that support importation of solid waste, according to the Solid Waste Importation 2006 Map in the 2007 State of Nevada SWMP, Clark County does not import significant amounts of solid waste from outside Nevada. In the Clark County Solid Waste Profile from the state plan from 1993 to 2005, the chart shows zero "Imported waste disposed (tons)." (Nevada Division of Environmental Protection, 2007)

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (30 of 99)

2.2.2 e-Waste (Electronic Waste)

The electronic waste stream, which includes televisions, home computers, cell phones, smoke detectors, and other electronic equipment, is generating in exponentially escalating quantities as more and more of these items receive widespread personal and business use throughout the country and ostensibly the world.

Many of these wastes, while not only retaining valuable components may also contain hazardous components that fail RCRA toxicity characteristic tests. For instance, cathode ray tubes (CRT) within older televisions and computer monitors contain significant amounts of lead.

The amount of electronic waste (e-waste) produced in Clark County is unknown. E-waste may be refurbished for reuse, recycled for component parts (plastic, copper, cadmium, etc.), or in some cases disposed of in landfills. The age and wear on individual units for disposal varies. Ideally, e-waste would be refurbished and sold for reuse. The benefit from reuse is two-fold: first, increasing the availability of lower cost electronics; second, decreasing the environmental impact associated with the manufacture of new equipment (mining/recovery of raw material, manufacturing processes) by decreasing demand for raw materials. When reuse is not reasonable (due to age of the equipment or security demands), e-waste should be recycled in a process to recover component materials. A recovery process may involve chemical extraction of heavy metals, the waste products of which are hazardous. There are three companies in Clark County which perform a type of recovery process, although there are some in neighboring states. This leads to the warehousing of large amounts of e-waste awaiting transport out of state. Three companies in Clark County perform refurbishment and several others collect e-waste and send it to recyclers out-of-state.

2.2.3 Exported Waste

Despite the capacity for the disposal of solid waste that is available at Southern Nevada disposal sites, some amount of waste is exported from the Clark County, NV area for the purpose of landfilling. At this time, most wastes that leave Southern Nevada are in the form of recyclables being taken to their final processing at plants and manufacturers outside the area. These items are not being disposed in landfills or by incineration, they are being recycled, reused, or refurbished. Several of these exported wastes are discussed in **Section 2.5**, "Wastes Requiring Special Handling."

2.2.4 Recycled Waste

Clark County has had some form of recycling program for decades. Within the last decade, Nevada formalized its recycling program and recycling goals.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (31 of 99)

CHAPTER 2 **SOLID WASTE GENERATION**

Southern Nevada has a curbside collection and disposal program for municipal waste throughout all of Clark County. Currently, the curbside collection and disposal program, existing municipal waste collection and disposal services provided by RSSN include a twice monthly curbside recycling program for paper products, aluminum and steel cans, plastics, and glass bottles. However, in recent action, the Clark County Commission approved the implementation of single-stream recycling in all of unincorporated Clark County by 2017. The collected materials are transferred to RSSN's recycling center, where the material is separated for subsequent sale and shipment. Existing curbside customers within the Las Vegas municipal area are also allowed unlimited dumping of household wastes at no extra charge at any of RSSN's disposal or transfer facilities.

In addition to standard recycling services provided by RSSN, a number of independent recycling businesses contract with several of the larger businesses and casinos to provide for enhanced recycling for food materials, cardboard, aluminum, and other metals, glass, etc. In the majority of instances, the incentive for such enhanced recovery programs has been both the economic benefit of the recovered materials and the reduced solid waste collection and disposal fees realized by reduced volumes of waste materials collected. A number of independent recyclers also offer cash for recovered goods programs to individuals who take advantage of recycling efforts.

Construction debris consisting of excavated soils, concrete blocks, and asphalt are often processed and recycled into new fill material or road construction material for ongoing construction projects. This process is called aggregate crushing of C&D waste. This effort has significantly reduced the amount of potential waste entering the Apex and other municipal landfills and has reduced the volume of illegal desert dumping which otherwise might have occurred.

A voluntary recycling program for businesses who are customers has also been established by RSSN. The purpose of this program is to encourage businesses to reduce solid waste and to separate at the source recyclable material from other solid waste. The program uses 0.5 cubic yard canisters (generally one per business) for collection of papers, aluminum cans, and plastics which are picked up on a twice monthly basis by RSSN. The business recycling program has met good success.

At present, RSSN has also attempted to implement a recycling program on a voluntary basis for multi-family residences. Collected materials are also transferred to RSSN 's recycling center and handled in a similar fashion as the materials collected from commercial facilities. To-date the multi-family residential program has met with only limited success, but recent legislation, Senate Bill (SB) No. 417 approved June 4, 2011, which required the NDEP to create regulations including placement of recycling containers at multi-family housing units may increase recycling rates at these locations (State of Nevada, 2011). To fulfill this requirement, multi-family residences were added to the language in NRS 444A.040 (1)(a).

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (32 of 99)

CHAPTER 2 **SOLID WASTE GENERATION**

Nevada's updated recycling program began with passage of Assembly Bill (AB) 320 in 1991 (State of Nevada, 1991). AB 320 was codified in NRS Chapter 444A – Programs for Recycling (State of Nevada, 2011). (See **Appendix C, Part 3**) The **Table 2-2** (below) outlines the different levels of recycling services required of counties and municipalities based on population thresholds.

County/Municipality Population Threshold*	Program Components
100,000 or more **Shall:**	
• Provide curbside recycling from residential premises and public buildings	
• Provide for the placement of recycling containers at multi-family developments where those services are provided	
• Establish recycling centers as needed	
• Provide for collection and disposal of HHWs	
• Encourage business to reduce solid waste and recycle where possible	
45,000 – 100,000 **Shall:**	
• Establish recycling centers as needed	
• Provide for collection and disposal of HHWs	
May:	
• Provide curbside recycling from residential premises and public buildings	
Less than 45,000 **May:**	
• Provide curbside recycling from residential premises and public buildings	
• Establish recycling centers as needed	
• Provide for collection and disposal of HHWs.	

Table 2-2 Recycling Program Requirements

AB 320 also established a recycling goal of 25 percent, a preferential procurement policy for goods made with recycled-content materials, and directed the NDEP to provide education and technical assistance concerning waste reduction and recycling. With the directives created by these statutes, the SEC adopted regulations, NAC Chapter 444A-Programs for Recycling (See **Appendix C, Part 3**), to fulfill the statutory mandate (State of Nevada, 2006).

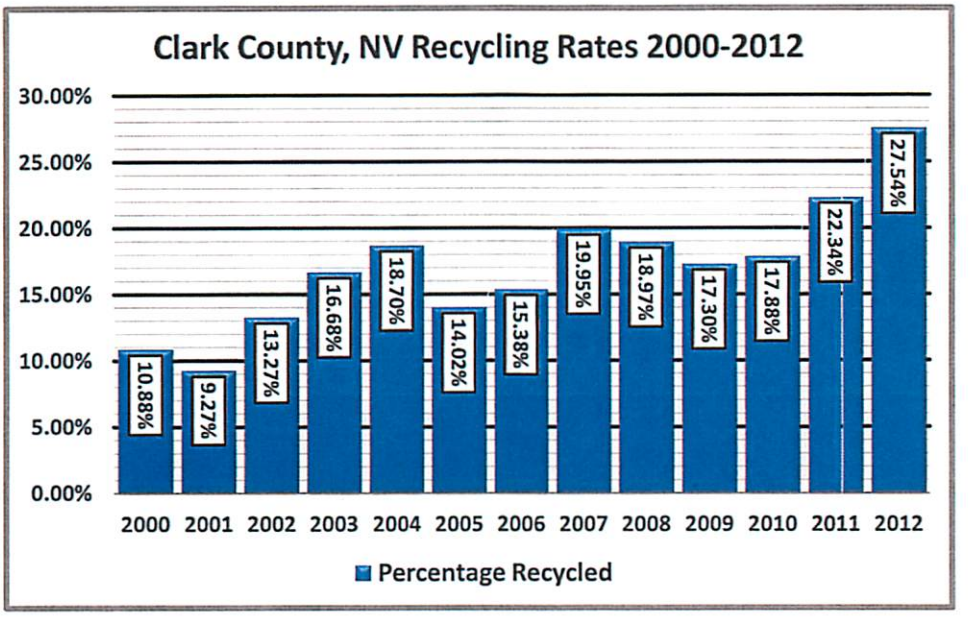
The legislative goal has been to have a recycling percentage of 25 percent or greater. Clark County has exceeded this goal for the first time since 2000. We believe this increase in the recycling rate is due to the implementation of single-stream recycling in a number of jurisdictions and the increased number of permitted recycling centers in Clark County. It should be noted, however, that the recycling rate would be even higher

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (33 of 99)

if it were not for the ongoing recycling theft problem in Clark County. Recyclable materials continue to be stolen in Clark County and taken to California to defraud the California Refund Value (CRV) and other programs.

2.3 Diversion

The diversion of waste to other beneficial uses can preserve the environment and our natural resources, extend the life of landfills, and harvest value from what would otherwise require costlier disposal. Each year the SNHD surveys the business community and calculates a county recycling rate. Since 2003, the county recycling rate (expressed as a percentage) has increased to the high teens, and recently passed into the high 20's (see table below). Approximately 95 percent of all recycling originates from commercial waste, while residential recycling comprises the remaining 5 percent.



ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (34 of 99)

	2005	2006	2007	2008	2009	2010	2011	2012
Recycling Rate	14.02%	15.38%	19.95%	18.97%	17.30%	17.88%	22.34%	27.54%
National Average	31.6%	≠	33.2%	33.3%	33.8%	34.1%	≠	≠
Nevada Average	21%	17.2%	21.6%	21.7%	20.3%	20.6%	25.3%	≠
Lbs/Resident/Day	1.88	1.35	1.71	1.58	1.25	1.28	1.62	1.97
Lbs/PERSON/Day*	≠	1.10	1.39	1.29	1.02	1.05	1.30	1.64
National Average	1.48	≠	1.54	1.51	1.47	1.51	≠	≠

Table 2-3. Percent of MSW generated in Clark County that was recycled. SNHD Recycling Reports, years 2005 – 2012.

****Lbs./PERSON/Day includes visitors to Southern Nevada ≠No data currently available***

(Nevada Division of Environmental Protection, 2005; 2006; 2007; 2008)
(Nevada Division of Environmental Protection, 2009; 2010; 2011)
(Nevada Division of Environmental Protection, 2011)

2.3.1 Single-Stream Residential Recycling Program

Historically, residential curbside recycling collection programs in Clark County provided three small milk-crate style bins for residents to place their separated recyclables. Collection was provided once, every other week. This type of collection program was once common in the United States, although most communities had shifted to single-stream style programs. Single-stream collection refers to programs in which residents may place all of a list of recyclables into one bin for collection. Separation of the recyclables, then, is conducted at a centralized facility generally using manual and mechanical means. Following a broadly implemented pilot program in the Las Vegas Valley, single-stream curbside is being implemented at all curbside collection residences (mostly single-family homes with some townhouses, condos, and manufactured homes) in the cities of North Las Vegas, Henderson, and Boulder City. Under the new program in North Las Vegas, Henderson, and Boulder City, recyclable collection is done once a week, on the same day regular trash collection is also completed. Based on the success of the program in the cities of North Las Vegas, Henderson, and Boulder City, the other municipalities in the Las Vegas metropolitan area and in unincorporated Clark County are likely to follow.

2.4 Characterization

The previous SNHD/SWMA 1995 SWMP and the 2007 Nevada State SWMP all discuss the benefits of conducting a waste characterization study. SWM planning, especially with regard to recycling, is more difficult without knowledge of the content of the waste stream. Knowing what wastes the community produces and the quantities in which they are generated will help to determine how the waste stream might be more efficiently managed. For example, if it is determined that 20 percent of land filled waste is a

particular type of recyclable material, a program to provide for that material's recycling at residences or businesses could be considered. To date, a waste characterization study has not been completed.

2.5 Wastes Requiring Special Handling

2.5.1 Asbestos

The amount of asbestos waste generated in Clark County during 2012 is estimated to be 490 cubic feet. It is noted by the Clark County Department of Air Quality Management that almost half of this asbestos waste volume originated from just two projects. In Clark County, only the Apex landfill may accept asbestos, which has not been generated on site. However, asbestos waste generated in Clark County is exported to other counties in Nevada and other states. Long-term exposure to airborne friable asbestos presents a serious risk of injury. Accordingly, strict requirements governing the transport and disposal of waste asbestos were adopted in 1989 (See **Appendix C, Part 2**). A person who desires to transport asbestos waste must first obtain a permit from the SWMA and the transporter must notify the facility to which the asbestos will be taken of their intent to dispose of asbestos waste. Notification must occur at least 24 hours prior to disposal. Landfilled asbestos must be disposed in a portion/cell of the landfill specifically designated for asbestos disposal and must be covered with six inches of cover material within 24 hours of disposal. A completed asbestos disposal area must receive an additional 30 inches of cover. Transportation permits are issued with the payment of a modest fee to cover expenses related to administration and enforcement of the regulations.

2.5.2 Dead Animals

Dead animals may, for a fee, be disposed of at the four (4) class I landfills servicing Clark County: Apex, Boulder City, Laughlin, and Mesquite. Animals must be placed in a separate trench and covered immediately. **(NAC 444.694)**

2.5.3 Junk Vehicles, Vehicle Batteries, and Used Oil

Approximately 42,000 automobiles were issued salvage titles in Clark County in 2008. While some of the autos are repaired and resold as a working vehicle, approximately 85 percent (approximately 53,500 tons) are salvaged for parts and/or scrap (Nevada Department of Motor Vehicles, 2009). Management of junk vehicles presents significant risks of damage to worker health and the environment. Lead-acid batteries, mercury switches, and waste fluids including gasoline, lubricants, and anti-freeze, are normally expected wastes which must be handled properly to prevent harm to salvage yard employees and the environment. Approximately 20 facilities in Clark County accept and

process junk vehicles by salvaging, though all are located within metropolitan Las Vegas. There are no salvage yards in Boulder City, Laughlin, or Mesquite.

Several companies in Clark County accept lead-acid batteries for recycling, lead being the most valuable part of the battery. The depositor is paid by the unit for smaller quantities, or by the pound for larger quantities. Prices paid by the recycling company vary with the commodity price of lead. Historically, recyclers have paid from 3 to 30 dollars per average 35-pound lead-acid automobile battery. Used batteries are shipped out of state by the recyclers for processing. Many companies who sell and install new car batteries accept the old, exhausted batteries as part of the transaction for customer convenience. The individual customer receives a small rebate toward the price of the new battery and the company accepts the battery and resells it to the recyclers.

Used oil is collected at auto repair/maintenance facilities throughout Clark County. Depending on the commodity price for recycled oil, facilities could receive, or be required to make, payment for used oil pickup service. Used oil is shipped to out-of-state facilities for processing. The SWMA conducts annual audits of facilities that generate used oil including, oil-change shops, auto repair shops, in-house maintenance facilities, etc. to verify that used oil is disposed of properly.

2.5.4 Household Hazardous Waste

Hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health or the environment. In regulatory terms, a RCRA hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics—ignitability, corrosivity, reactivity, or toxicity.

HHW are hazardous products used and disposed of by residential as opposed to industrial consumers. This includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.

If these wastes are generated by individual households, then they are exempt from hazardous waste regulations. However, that does not mean they should be discarded in a careless or random matter. The small amounts of hazardous waste generated by a household can be taken to the contracted municipal waste collection and disposal companies' waste collection sites for proper handling.

Certain items, such as liquid paint or used motor oil, cannot be placed in bins for curbside MSW collection; however, certain other HHW may be disposed for regular solid waste collection.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (37 of 99)

2.5.5 Compact Fluorescent Light (CFL) Bulbs

There are unique complexities associated with the presence of CFLs in the environment.

CFLs are simply miniature versions of full-sized fluorescent light bulbs. They screw into standard lamp sockets and are available in a variety of styles or shapes. Some have two, four, or six tubes. Older models and specialty models have separate tubes and ballasts. Most common today are the circular or spiral-shaped tubes.

A CFL is a very energy efficient lamp and have become popular. A concern is that a CFL bulb generally contains an average of 5 mg of mercury (about one-fifth of that found in the average watch battery, and less than 1/100th of the mercury found in an amalgam dental filling). The net benefit of using the more energy efficient lamp is positive, and this is especially true if the mercury in the fluorescent lamp is kept out of the waste stream when the lamp expires.

The mercury in compact fluorescent bulbs poses no threat while in the bulb, but if a CFL breaks, the mercury can be released into the environment. Proper handling and a prudent recycling effort will help reduce the effects of mercury in the environment. CFLs are made of glass and can break if dropped or roughly handled.

The technology exists to separate the glass, phosphor powder, mercury and other materials in CFLs for recycling, but there is not yet a convenient system for bulb collection. However, there are a few recycling programs. In the absence of the local recycling programs residents and businesses should check with their local municipality or take their spent fluorescent lamps to a HHW collection center.

Although household CFL bulbs may legally be disposed of with regular trash, they are categorized as HHW. As long as the waste is sent to a modern municipal landfill, the hazard to the environment is limited. Another solution to disposing in the regular trash is to save spent CFLs for a community HHW collection event, which would then send the bulbs to facilities capable of treating, recovering, recycling, or properly disposing of them (Nevada Division of Environmental Protection, 2013). (See **Appendix F, Part 1** for an EPA handout on CFL recycling)

2.5.6 Pharmaceuticals and Personal Care Products (PPCP)

Disposal of excess PPCP has gained national attention of late due to recent studies which have found common drugs and chemicals at detectable levels in surface water. Evidence suggests that low levels of PPCPs have been in water supplies since they were first used (Ruhoy & Daughton, 2008). Our improved ability to detect PPCPs, rather than an actual increase in concentration is the likely reason we have become

more knowledgeable about the issue. Furthermore, researchers believe that the majority of PPCPs in our water systems are not directly flushed down the drain intact, but are from drugs or substances that have been taken by individuals and naturally passed through the body into the sanitary sewer system (Ruhoy & Daughton, 2007). In order to control the amounts that are being directly added to the environment unnecessarily, the Food and Drug Administration (FDA) and the Office of National Drug Control Policy made guidelines for the disposal of unused pharmaceuticals (U.S. Food and Drug Administration, 2011). These guidelines recommend mixing unused pharmaceuticals with something such as cat litter or used coffee grounds to adsorb/absorb the substances and make them less retrievable and palatable to children and pets and then disposing of them directly in the trash. See **Appendix F, Part 2** for guidelines for disposing of residential pharmaceuticals.

2.5.7 Medical Waste

Nevada has adopted the US Department of Transportation (DOT) definition for regulated medical waste found in 49 CFR Part 173, App. G (Nevada Division of Environmental Protection, 2003). (See **Appendix C**) Other pertinent regulations are at NAC 444.646 and 444.662. If medical waste has been treated by incineration, autoclaving or an alternative method approved by the SWMA, it can be managed as ordinary solid waste with no special requirements. Special requirements apply to the storage, collection, labeling, transporting, and disposal of regulated medical waste. Nevada regulations allow the direct disposal by landfilling of untreated medical waste. An NDEP fact sheet explaining medical waste collection and disposal in Nevada is available in **Appendix F, Part 3** (Nevada Division of Environmental Protection, 2011). The SNHD SWMA has recently drafted *Regulations Governing Medical/Biohazardous Waste Management*. These regulations are currently on hold as of December 2012 awaiting the rescheduling of a Public Hearing date to be brought before the BOH for review and possible approval.

2.5.8 Septic Waste, Sewage Sludge, and other Liquid Waste

Liquid waste, including septic tank waste, grease trap and car wash interceptor pumping, process waste water, etc., can be properly disposed at several liquid waste processing facilities. Processing generally consists of settling tanks that separate out water, oil, and solids. Land disposal prior to processing is strictly prohibited without prior approval from the SWMA. **(NAC 444.646, 444.654)**

Sewage sludge can be disposed of at all four (4) landfills servicing Clark County: Apex, Boulder City, Laughlin, and Mesquite (testing/origination requirements may vary). Of chief concern with the disposal of sewage sludge is the presence of heavy metals, free liquid, and/or fecal coliforms. Although sewage sludge may be used for the production

of soil amendments (restrictions apply), all sewage sludge generated in Clark County is being disposed in one of the four aforementioned landfills. **(NAC 444.646, 444.656)**

Liquid waste haulers are required to obtain permits.

2.5.9 Contaminated Soil

Soils can become contaminated by a variety of means, including spills or releases of petroleum hydrocarbons; non-petroleum based grease, oils, or fats; dry cleaning chemicals such as tetrachloroethylene (PCE); industrial wastes; or uncontrolled sewage releases.

In Southern Nevada, there are known areas in Henderson where industrial wastes generated from the production of ammonium perchlorate-based rocket fuels and other industrial processes have infiltrated the soil and are now present in the waters of the state.

Where there are identified sources of contaminated soil, these soils can be removed, treated, and either placed back into the site of origin or disposed in an appropriate class III site. For instance, the soils removed from 15 former collection ponds at the BMI Industrial Complex, a Henderson, Nevada site, which had operated for more than 30 years, beginning in 1942, were taken to a special landfill called a "Corrective Action Management Unit." At the time of the article, 250,000 cubic yards of soils had been removed (Twitchwell, 2009).

The identification, testing, and remediation of contaminated soils are critical processes in Southern Nevada to preserve the groundwater and to prevent exposure of individuals to soil-based environmental hazards.

2.5.10 Used Restaurant Oil

Several companies in Clark County will pick up used restaurant oil. Three of these companies with SNHD recycling center permits process the oil to separate out yellow grease, an input in the production of diesel fuel. There are other facilities in neighboring states which also accept and process restaurant oil.

There have been several private individuals that have collected used restaurant grease and processed it at home into diesel fuel. The process is hazardous and home-based production is a violation of solid waste regulations, municipal codes, and fire codes.

In addition, there have been cases where the licensed grease pumper arrives to complete their contracted grease trap cleanout service, for which the restaurant pays fees, only to find that the grease has been "pirated" by unauthorized individuals. Such

cases, when discovered, are investigated by SWAC staff. If possible the offending illegal grease collector is issued a Notice of Violation (NOV). Illegal collection may result in environmental spills, transportation accidents, illegal processing and waste disposal, and even negative effects on human health and community safety.

2.5.11 Waste Tires

In Clark County, waste tires have historically been disposed of in landfills. Relatively low landfilling costs and effective waste tire handling regulations (adopted in 1994 by the SEC) prevented large-scale illegal desert dumping of waste tires. In 2009, the Nevada Legislature passed a law prohibiting waste tires from disposal in landfills in counties with a permitted WTMF. On April 22, 2010 the SNHD SWMA adopted *Regulations Governing the Management of Waste Tires* (Southern Nevada Health District, 2010). These regulations require permitting of waste tire recyclers, permitting of waste tire haulers (WTHs), and that waste tire generators dispose of their tires at facilities other than MSW landfills in Clark County.

Several companies provide waste tire collection services in Clark County. Destinations for these waste tires include crumb rubber processing centers, kilns, tire resellers, overseas processors, and landfills outside Clark County and other states.

2.5.12 White Goods

"White goods" generally refer to large household appliances such as stoves, refrigerators, freezers, water heaters, clothes washers and dryers. These items have been traditionally handled and processing for recycling as scrap metal by established recyclers in Southern Nevada. Components of appliances such as copper tubes and wiring are also recyclable. However, federal regulations clearly require the removal of chlorofluorocarbons (CFCs) prior to shredding, flattening, or baling white goods.

RSSN has established drop off sites at their MRF and transfer station to perform this service. Independent contractors/salvagers may also perform this service if licensed and permitted to do so. It is desirable to recycle the materials generated by the removal from service of white goods; however, those materials which are not recyclable can be disposed of as MSW once the CFCs are no longer present (Harding Lawson Associates, 1995).

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (41 of 99)

CHAPTER 3
DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.1 Background

Implementation of more stringent state and federal landfill regulations in the 1990's drove the regionalization of SWM systems. More than twenty (20) small, rural, open dumps were closed in favor of three (3) regional municipal landfills and an associated network of transfer stations and public waste storage bin facilities.

Of significant note are two large closed landfills: Sunrise Mountain and Henderson. Sunrise Mountain landfill is under EPA scrutiny following a large rainstorm that eroded the topsoil cover and washed solid waste into a natural stormwater channel leading to Lake Mead. In a series of agreements between Clark County and RSSN, RSSN has agreed to contribute 36 million dollars in closure costs (Consent Decree and Settlement Agreement, 2008). RSSN is also assisting with the post-closure care at the Henderson landfill and has agreed to pay up to 7.8 million dollars of the closure costs.

3.2 Sources and Definitions of Solid Waste

"Solid waste" means all putrescible and nonputrescible refuse in solid, semisolid, or liquid form, including, but not limited to, garbage; rubbish; junk vehicles; ashes or incinerator residue, street refuse; dead animals; demolition waste; construction waste; and solid, semisolid, or liquid commercial and industrial waste. Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, 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 material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880) or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

The SNHD SWMA defines solid waste in an abbreviated manner in some of their regulations:

> **"Solid waste" defined. Solid waste** is all putrescible and nonputrescible refuse in solid, semisolid, or liquid form, including, but not limited to, garbage; rubbish; junk vehicles; ashes or incinerator residue, street refuse; dead animals; demolition waste; construction waste; and solid, semisolid, or liquid commercial and industrial waste.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (42 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.2.1 Residential Waste

"Household waste" defined. "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. These residential wastes are things like putrescible food wastes, packaging, discarded household items no longer useful to the resident and similar items. Households also generate small amounts of hazardous wastes, which are not regulated under hazardous waste laws. These can include paint, pesticides, household chemicals, solvents, fertilizers, etc. These small amounts of hazardous waste can be taken to the contracted municipal waste collection and disposal companies' waste collection sites for proper handling. Most residential waste is collected on a schedule by the contracted franchise. Residential wastes are picked up by RSSN twice a week in some parts of the Las Vegas Metropolitan area (unincorporated Clark County, including Laughlin township, and parts of the City of Las Vegas). In some parts of the City of Las Vegas, North Las Vegas, and Henderson waste is collected by RSSN once per week. Residential wastes in Boulder City and Mesquite are collected weekly, by Waste Logistics Nevada, Inc (WLN) and Virgin Valley Disposal (VVD) respectively. Mesquite provides no curbside recycling services.

3.2.2 Commercial Solid Waste

Commercial wastes are wastes generated such as commercial refuse from office buildings and other similar buildings. Commercial wastes are collected by the contracted municipal waste collection franchisee and disposal agencies for the area where they are generated. In the Las Vegas Metropolitan area, commercial waste is collected by RSSN on the schedule contracted with them by the business. Depending on the type of business, wastes can range from putrescible food wastes to some recyclables such as sheet cardboard.

Collection frequency is determined by the volume of waste generated by the business, as well as the nature of the waste. For instance, it is very important that businesses that generate large quantities of putrescible wastes like restaurants receive pickup every 24 hours to prevent a public health nuisance. Businesses such as clothing stores that produce primarily packaging type materials and fabrics do not necessarily need daily pickup.

3.2.3 Industrial Solid Waste

"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.

The term does not include waste generated by the mining, oil and gas industries.

3.3 Solid Waste Collection/Franchises

3.3.1 Boulder City

Boulder City Municipal Code and an agreement between Boulder City and WLN doing business as Boulder City Disposal, gives WLN the right to provide solid waste collection services within Boulder City. All solid waste (with two notable exceptions) is transported by WLN to a MSW landfill (MSWLF) owned by Boulder City, and operated by WLN (City of Boulder City, Nevada, 2012). **(Appendix A, Part 1)**

Collection of Residential Waste
Two levels of service are provided based on the type of residence. First, single-family homes, and homes in certain manufactured home and townhome communities, receive once a week (Wednesday) trash collection. Residents may either provide their own trash containers or rent 96 gallon wheeled carts which they are required to place at curbside on their assigned days for pickup by collection trucks. Second, all other residences, including apartments and condominiums, are generally provided once-weekly trash collection service. The contracting party, usually the property owner/manager, rents a 1-, 2-, 3-, or 6-cubic yard bin(s) based on the needs of the community residents. In addition to residential collection service, all residents may drop-off their household-generated trash at the Boulder City landfill at no cost.

Residents of the township of Nelson (unincorporated Clark County) also receive trash collection service from WLN. Currently, several front-load bins are emptied weekly.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (44 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

Collection of Commercial/Industrial Waste

Commercial/Industrial waste collection service is available two, three, or six days per week, Monday thru Saturday, on whichever day(s) the customer prefers. Containers available for rent include: 1-, 2-, 3-, and 6-yard front-load bins, 40-yard roll-off boxes, and compactors.

Boulder City Municipal Code (**BCMC 8-3-6**) prohibits the transportation of solid waste by any entity other than the city's approved contractor, currently WLN. However, certain types of businesses, such as landscape maintenance or C&D companies, are exempted from this prohibition and may transport their non-office waste directly to the landfill and, for a fee, deposit their waste for disposal (**BCMC 8-3-7**) (City of Boulder City, Nevada, 1979). **(Appendix B, Part 1)**.

Boulder City Waste Diversion/Recycling

Residential Recycling

Effective July 2012, residential recyclable material pickup service is provided at single-family homes and manufactured homes and townhomes every Wednesday. One 32- or 64-gallon wheeled container is provided by Boulder City Disposal and must be placed at the curb by the resident by a collection vehicle on the scheduled day. The same single-stream recyclable collection service is provided at apartment and condominium complexes, multi-family complexes and townhouse and manufactured home communities. All residents may drop-off their recyclables at Boulder City-owned recycling center at the landfill.

Recyclable material collection service is not provided in the township of Nelson.

Self-service bins for recyclable materials are available at locations throughout several Lake Mead Recreational Areas near Boulder City. Individuals may deposit their glass, metal, paper, and plastic at no cost.

Commercial/Industrial Recycling

Commercial/Industrial recyclable collection service is provided at government buildings, schools, parks, and other commercial businesses desiring recycling with the frequency and day of pickup at the choice of the customer. Commercial/Industrial customers may also take recyclables, including paper and metal, directly to the Boulder City-owned recycling center at the landfill.

Boulder City-Other Solid Waste

Collection and Disposal of C&D Waste

Collection service is as specified above for commercial/industrial customers. Additionally, C&D companies may take their waste directly to the landfill and, for a fee, deposit it for disposal.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (45 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

HHW
No collection service is provided. Residents may drop-off household-generated hazardous waste, including used motor oil, pool chemicals, televisions, pesticides, etc, at a special drop-off point at the landfill at no cost. The amount deposited, however, must be consistent with what a household would normally generate. WLN contracts with a third party to remove and dispose of some of this waste. Waste that can be bulked and solidified, such as paints, solvents, and other HHW liquids, is solidified and disposed within the landfill.

Collection of Medical Waste
Commercial/Industrial medical waste collection service is available by special arrangement with Environmental Technologies, Inc., a subsidiary of RSSN, separate from other trash collection conducted by WLN. RSSN treats medical waste by high pressure autoclave prior to disposal in the Apex Regional landfill. Residential medical waste may be placed with other household trash for collection as described above.

Boulder City Collection Capacity

Daily Collection and Disposal of MSW
Collection capacity is dependent on several factors, including the number collection trucks, and can be increased as increased generation dictates. WLN estimates they have significant excess collection capacity and could double their current volume with existing equipment.

WLN estimates their excess daily disposal capacity at the Boulder City Landfill with existing equipment is approximately 80 tons, more than double the average daily amount.

Collection and Disposal of C&D Waste
Assuming growth restrictions do not change (see Forecasted Conditions, below), existing infrastructure should be more than sufficient to handle C&D waste collection and disposal demands for the foreseeable future within Boulder City.

Collection of Recyclables
See Daily Collection and Disposal of MSW above.

Facility Lifespan
Projections based on current disposal volumes and limited growth (see Forecasted Conditions, below) suggest the landfill will reach capacity in 2046 (Ninyo and Moore, 2011). A revised landfill capacity report is required every five years. This report provides details regarding actual landfill use and remaining capacity. It can be used by decision makers and planners to assess current and future solid waste disposal and recycling priorities. Several options are available for future solid waste disposal

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (46 of 99)

including: further horizontal expansion of the landfill, closure of the landfill and conversion of the site (or another site) into a transfer station providing transfer of solid waste to another landfill for disposal or solid waste incineration.

Boulder City-Forecasted Conditions

From 1990 to 2010, the population of Boulder City increased approximately 22 percent, or 2 percent per year on average. Strict requirements for new construction and sales of public land included in Boulder City code make it likely that future population increases will be in line with the historic trend.

3.3.2 Clark County-Unincorporated, Rural Solid Waste Service Area

Clark County Code and a franchise agreement between Clark County and RSSN give RSSN the exclusive right (with a few notable exceptions) to provide solid waste collection services within specific rural communities, referred to in the franchise agreement as the Rural Solid Waste Service Area (hereafter referred to as "Rural Area") (Clark County, Nevada, 2006). **(Appendix B, Part 2)** These service areas include:
1) Searchlight,
2) Goodsprings, Sandy Valley, Jean, and Stateline,
3) Mt. Charleston,
4) Indian Springs,
5) Moapa, Glendale, Logandale, and Overton.
All solid waste is transported by RSSN from the point of collection to one of two transfer stations, consolidated with other loads of waste into a trailer, and/or taken for land disposal to the Apex Regional class I landfill. NOTE: A third transfer station was recently place in temporary closure status due to decreases in waste volume (Clark County, Nevada, 2005). **(Appendix A, Part 2)**

Collection of Residential Waste

All Rural Area communities receive residential collection service once per week. Multi-family housing communities may contract for additional collection days. Additionally, once monthly RSSN holds periodic household waste collection events in Good Springs, Moapa, Mt. Charleston, and Sandy Valley which are available to the public at no cost. public waste storage bin facilities/convenience centers operated by RSSN are located at Moapa, Mt. Charleston, Searchlight, and Sandy Valley.

Collection of Commercial/Industrial Waste

Commercial/Industrial waste collection service is available within the Rural Area one or two days per week. Containers available for rent include: 96-gallon totes, 1-, 2-, and 3-yard front-load bins, and 40-yard roll-off boxes.

Clark County code prohibits third-party collection of MSW (excluding C&D waste and recyclable material) by any entity other than the County or its franchised contractor,

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (47 of 99)

currently RSSN. However, certain duly-licensed businesses or non-profits, such as commercial recyclers or MRFs, are exempted from this prohibition and may collect and transport certain categories of solid waste to their facility for processing.

Clark County Rural-Waste Diversion/Recycling

Residential Recycling
Residential recyclable material pickup service is provided every other week to single-family homes. Collection service at multi-family housing communities is only available by special arrangement with RSSN.

Commercial/Industrial Recycling
Source-separated and comingled recyclable collection service is available by special arrangement with RSSN or any duly-licensed commercial recycler (including operators of recycling centers and MRFs).

Clark County Rural-Other Solid Waste

Collection and Disposal of C&D Waste
C&D collection service is available by special arrangement with RSSN or any duly-licensed commercial C&D cleanup company or hauler (including operators of recycling centers and MRFs). Additionally, C&D companies may take their C&D waste directly to an appropriate type of permitted SWMF or disposal site including transfer stations, MRFs, C&D waste short-term storage facilities, or landfills.

HHW
Residents may drop off household-generated hazardous waste, including used motor oil, pool chemicals, televisions, pesticides, etc, at the RS recycling center, a MRF, (in the Las Vegas metropolitan area) at no cost. The amount dropped off, however, must be consistent with what a household would normally generate. RSSN, through a subsidiary, Environmental Technologies, Inc. removes and disposes of this waste. This service is not available to residents living in most multi-family communities. However, with the exception of paint and other fluids such as used motor oil, which are not permitted for curbside pickup, HHW may be placed in with regular trash for pickup.

Periodically, the Henderson transfer station can accept HHW that is dropped off by customers.

Collection of Medical Waste
Commercial/Industrial medical waste collection service is available by special arrangement with Environmental Technologies, Inc., a subsidiary of RSSN. Residential medical waste may be placed with other household trash for collection as described above. RSSN treats medical waste by high pressure autoclave prior to disposal in the Apex Regional landfill.

Clark County Rural Collection Capacity

Collection capacity is dependent on several factors, including the number of collection trucks and collection points, and can be increased as increased generation dictates. However, changes to a new collection program, for example, from two-person collection trucks to one-person trucks with an automated loader arm, may make for a longer transition time since equipment might require retrofitting or must be ordered new. RSSN estimates they have sufficient collection capacity based on current service level agreements (Republic Services, Inc., 2011). Solid waste from some rural communities is taken to a transfer station for consolidation prior to disposal at the landfill. In others, solid waste is taken directly to a landfill. Transfer capacity remains high. Two transfer stations are run by RSSN with a third in temporary closure status due to decreases in waste volume. The Apex landfill is the ultimate disposal site for nearly all solid waste generated in the Rural Area. Projections based on current disposal volumes suggest the landfill will not reach capacity for more than 100 years (Republic Services, Inc., 2011). RSSN conducts a landfill capacity report every year. This report provides details regarding actual landfill use and remaining capacity. It can be used by decision makers and planners to assess current and future solid waste disposal and recycling priorities.

Clark County Rural-Forecasted Conditions

Solid waste generation is dependent on population and business activity, including construction. Downward trends in local per-person waste generation rates suggest future waste volumes could remain stable or experience modest growth or decline with changes in population (Southern Nevada Health District, 2012).

3.3.3 Las Vegas Urban Area, Urban Solid Waste Service Area (Including North Las Vegas and Henderson)

County and City code and separate franchise agreements between RSSN and each of the four urban municipalities (Clark County, City of Henderson, City of Las Vegas, and City of North Las Vegas), hereinafter referred to as the "Las Vegas Urban Area" (LVUA), give RSSN the exclusive right (with a few notable exceptions) to provide solid waste collection services within their respective urban jurisdictions. All solid waste is transported by RSSN from the point of collection to one of two transfer stations, consolidated with other loads of waste into a trailer, and taken for land disposal to the Apex Regional class I landfill (Clark County, Nevada, 2005), (City of Henderson, 2006), (City of Las Vegas, 2004), and (City of North Las Vegas, 1996). **(Appendix A, Part 2a, Part 2b, Part 3, Part 5, and Part 6)**

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (49 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

Collection of Residential Waste

Single-family homes, and certain manufactured home and townhome communities, are under one of two service plans. First, a long-provided standard plan offers twice a week trash collection (Monday-Thursday, Tuesday-Friday, or Wednesday-Saturday). Residents provide their own trash containers which they are required to place at curbside for pickup by rear-loading trucks on their assigned days. This service plan has been offered for at least 20 years. A second plan became available in 2007 when pilot single-stream programs were initiated in each municipality in the LVUA. Following the general success of the pilot program the cities of Henderson and North Las Vegas chose to implement the new service plan citywide. In a recent action, the Clark County Commission approved the implementation of the single-stream plan in all of unincorporated Clark County by 2017. This second plan provides once a week trash and once a week recycling collection. Two 96-gallon bins, one for regular trash and one for recycling, are provided by RSSN and must be placed at the curb by the resident. Service plans are selected by municipality officials and agreed to by RSSN. Residents may not select between plans.

A third service level is provided for all other residences, including apartments and condominiums. These communities are provided trash collection service at a frequency requested by the contracting party. The contracting party, usually the property owner/manager, rents a 1-, 2-, 3-, 6-, and 8-cubic yard bin or multiple bins based on the needs of the residents.

In addition to residential collection service, all residents may drop off their household-generated trash at either of two RSSN transfer stations or the Apex landfill. There is no cost for households who are directly billed, such as single-family homes. There is a fee for households that are not directly billed, such as apartments or condominiums in which a landlord or management company is directly billed for service, rather than the occupant.

Collection of Commercial/Industrial Waste and Recyclables

Commercial/Industrial waste collection service is available within the LVUA two, three, or six days per week, Monday thru Sunday, on whichever day(s) the business prefers. Containers available for rent include: 1-, 2-, 3-, 6-, and 8-yard front-load bins, 40-yard roll-off boxes, and compactors.

Although slightly different for each municipality, County and City Codes (Clark County Code – 9.04.070, Henderson Municipal Code – 5.17.060, Las Vegas Municipal Code – 9.08.090, North Las Vegas Municipal Code – 8.20.080), prohibit the collection of solid waste, including recyclable materials, by any entity other than the municipality or their franchised contractor, currently RSSN. However, certain duly-licensed businesses or non-profits, such as commercial recyclers or MRFs, are exempted from this prohibition and may collect and transport certain types of solid waste to their facility for processing.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (50 of 99)

In the city of North Las Vegas, a non-exclusive franchise must be awarded by the city to persons who collect recyclable materials from others.

LVUA-Waste Diversion/Recycling

Residential Recycling

Single-family homes, manufactured homes and townhomes in certain communities are under one of two service plans. The first plan offers curbside pickup service every other week using three milk-crate style bins provided by RSSN: one for glass, one for paper, and a third for bottles and cans that are metal or plastic. Residents must place the containers at curbside for pickup on their assigned day. The second plan began in 2007 when pilot programs were initiated in each municipality in the LVUA. Following the general success of the pilot program, the cities of Henderson and North Las Vegas chose to implement the new service plan citywide. This second plan provides once a week curbside recycling collection. One 96-gallon bin is provided by RSSN and must be placed at the curb by the resident. Service plans are selected by municipality officials and agreed to by RSSN. Residents may not select between plans.

Third, recyclable collection service is provided at apartment and condominium complexes, and non-participating townhouse and manufactured home communities, as contracted by the property owner or manager. Although available, in most communities this service level is not provided, largely due to limitations in bin placement and difficulties in keeping recyclable bins free of non-recyclable solid waste.

Throughout the LVUA there are recycling centers that will accept source-separated residential recyclables, including paper products, plastic, glass, and/or metals. Some will provide pick up service, but most allow for drop-off only. There are also self-service drop-off bins available for residential recyclables, including cardboard, paper, plastic, and sometimes metal, located throughout the city in many retail establishments.

Commercial/Industrial Recycling

Source-separated and comingled recyclable collection service is available from RSSN and several recycling companies. Recyclable collection service includes scheduled or on-call pickup of source-separated or comingled paper, plastic, metal, wood, and/or other recyclable material. Alternatively, entities may also transport their recyclable materials directly to a recycling facility.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (51 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

LVUA -Other Solid Waste

Collection and Disposal of C&D Waste

Collection service from RSSN is as specified above for commercial/industrial organizations. Duly-licensed commercial recyclers (including operators of recycling centers and MRFs) also provide collection service. Additionally, C&D companies may take their C&D waste directly to an appropriate type of disposal site including: transfer stations, MRFs, C&D waste short-term storage facilities, or landfills.

HHW

Residents who receive individual trash collection service (e.g., single-family homes and some manufactured home or condominium communities) may deposit household-generated hazardous waste, including used motor oil, pool chemicals, televisions, pesticides, etc, at the RSSN recycling center at no cost. The amount deposited, however, must be consistent with what a household would normally generate. RSSN through a subsidiary, Environmental Technologies, Inc. removes and disposes of this waste. This service is not available to residents living in most multi-family communities.

Collection of Medical Waste

Commercial/Industrial medical waste collection service is available by special arrangement with Environmental Technologies, Inc., a subsidiary of RSSN. Residential medical waste may be placed with other household trash for collection as described above. RSSN treats medical waste by high pressure autoclave prior to disposal in the Apex Regional landfill.

Industrial Waste

There are three industrial landfills in the Las Vegas Valley; two are permitted on industrial sites for disposal of solid waste generated at those sites; the third is open to the public and accepts inert rock and aggregate.

LVUA-Collection Capacity

Daily Collection, Transfer, and Disposal of MSW

Collection capacity is dependent on several factors, including the number of collection trucks, and can be increased as increased generation dictates.

Transfer capacity is dependent on several factors including transfer facility size, the number of dumping bays, and the number of transfer trailers, etc. At current waste generation levels the Cheyenne Transfer Station is operating at approximately 25 percent of permitted capacity (Republic Services, Inc., 2012); the Henderson Transfer Station is operating at approximately 10-15 percent of permitted capacity (Republic Services, Inc., 2012). Additionally, a third transfer station has been temporarily closed and could be reopened if necessary.

With existing equipment, the Apex Landfill can receive up to 39,960 tons per day (Southern Nevada Health District, 2012). For years, 2010 and 2011, the average daily waste volume received at the landfill was approximately 8,000 tons.

C&D Daily Collection, Transfer, and Disposal

Collection capacity is dependent on several factors, including the number of collection trucks and collection containers, such as front-load dumpsters and roll-off boxes. As a result of the recent growth and decline in construction activity, many dumpsters and roll-off boxes remain available, providing significant excess capacity.

Collection of Recyclables

Several companies provide collection service for source-separated recyclables.

Facility Lifespan

The three RSSN transfer stations and the RSSN MRF undergo periodic upkeep and retooling by RSSN. This upkeep is not actively monitored by SNHD, however regular inspections are conducted and allow for detection of delayed maintenance, if it were to occur. Provided upkeep and maintenance continue as expected, the life span of these facilities will likely extend well beyond a 5-10 year timeframe.

The Apex landfill, one of the largest in the nation, is the ultimate disposal site for nearly all solid waste generated in the LVUA (Tavares, 2009). Projections based on current disposal volumes suggest the landfill will not reach capacity for more 100 years (Republic Services, Inc., 2011). RSSN conducts a landfill capacity report every year. This report provides details regarding actual landfill use and remaining capacity. It can be used by decision makers and planners to assess current and future solid waste disposal and recycling priorities.

The Wells Cargo landfill is available within the LVUA for disposal of inert construction aggregate waste. A 2009 capacity study projected the landfill had at least 22 years of remaining operating life (Broadbent & Associates, Inc., 2009).

LVUA -Forecasted Conditions

Solid waste generation is dependent on population and business activity, including construction. County-wide data suggests a decline in per person waste generation (Southern Nevada Health District, 2012). If this trend continues or plateaus, infrastructure in place will be sufficient into the near future.

3.3.4 Laughlin, Urban Solid Waste Service Area

Clark County Code and the franchise agreement between the County of Clark (County) and RSSN give RSSN the exclusive right (with a few notable exceptions) to provide solid waste collection services within Township of Laughlin. All solid waste is transported by

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (53 of 99)

RSSN from the point of collection to the Laughlin class I landfill (Clark County, Nevada, 2009). **(Appendix A, Part 2c)**

Collection of Residential Waste

Two levels of trash collection service are provided. First, single-family homes, and manufactured homes and townhomes in certain communities, are provided twice a week (either Monday – Thursday, Tuesday – Friday, or Wednesday – Saturday) waste collection. Residents provide their own waste containers which they are required to place at curbside for pickup by rear-loading trucks on their assigned days. Second, all other residences, including apartments and condominiums, are provided trash collection service at a frequency as requested by the contracting party. The contracting party, usually the property owner/manager, rents 1-, 2-, 3-, or 6-cubic yard bin or bins based on the needs of the residents using the bins. In addition to residential collection service, all residents may drop-off their household-generated trash the Laughlin landfill; there is no cost for households who are directly billed; there is a fee for households that are not directly billed, for example, apartments or condominiums in which a landlord or management company is directly billed for service, rather than the occupant.

Collection of Commercial/Industrial Waste and Recyclables

Commercial/Industrial trash collection service is available to all entities within Laughlin two, three, or six days per week, Monday thru Sunday, on whichever day(s) the business prefers. Containers available for rent include 96-gallon plastic cans, 1-, 2-, 3-, 4-, 6-, and 8-cubic yard front-load bins, 40-yard roll-off boxes, and compactors.

Clark County Code 9.04.070 prohibits the collection of solid waste by any entity other than the municipality or their franchised contractor, which is currently RSSN. However, certain duly-licensed businesses or non-profits, such as commercial recyclers or MRFs, are exempted from this prohibition and may collect and transport certain types of solid waste to their facility for processing.

Laughlin-Waste Diversion/Recycling

Residential Recycling

Residential recyclable material pickup service is provided at single-family homes, manufactured homes, and townhomes in certain communities every other week. Upon request to RSSN, residents are provided three milk-crate style plastic containers, in which they can place glass bottles, paper products, certain plastics, and metals. Residents must place the containers at curbside for pickup on their assigned day. Recyclable collection service at apartment and condominium complexes, and non-participating townhouse and manufactured home communities is only available by special arrangement.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (54 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

Commercial/Industrial Recycling

Source-separated and comingled recyclable collection service is available from RSSN and several recycling companies. Recyclable collection service includes scheduled or on-call pickup of source-separated paper, plastic, metal, wood, and/or other recyclable material. Alternatively, organizations may transport their recyclable materials directly to a recycling facility.

Laughlin-Other Solid Waste

Collection and Disposal of C&D Waste

Collection service from RSSN is as specified above for commercial/industrial organizations. Duly-licensed commercial recyclers (including operators of recycling centers and MRFs) also provide collection service of source-separated recyclables. Additionally, C&D companies may take their C&D waste directly to the Laughlin Landfill.

HHW

Residents who receive individual trash collection service (e.g., single-family homes and some manufactured home or condominium communities) may drop-off household-generated hazardous waste, including used motor oil, pool chemicals, televisions, pesticides, etc, at no cost in a special area set aside at the Laughlin landfill. The amount deposited, however, must be consistent with what a household would normally generate. RSSN, through a subsidiary, Environmental Technologies, Inc. removes and disposes of this waste. This service is not available to residents living in most multi-family communities.

Collection of Medical Waste

Commercial/Industrial medical waste collection service is provided by Republic Environmental Technologies, Inc., a subsidiary of RSSN. Although not required to do so by regulation, RSSN treats medical waste by high pressure autoclave prior to disposal in the Apex Regional landfill.

Laughlin- Collection Capacity

Daily Collection and Disposal of MSW

Collection capacity is dependent on several factors, including the number of collection trucks, and can be increased as increased generation dictates.

The existing equipment at the Laughlin Landfill could process up to 1,750 tons per day of waste (Republic Services, Inc., 2012). For years, 2010 and 2011, the average daily amount of waste received at the landfill was 107 tons.

Collection and Disposal of C&D Waste

Collection capacity is dependent on several factors, including the number of collection trucks and collection containers, such as front-load dumpsters and roll-off boxes. As a

result of the recent growth and decline in construction activity, many dumpsters and roll-off boxes remain available, providing significant excess capacity.

The existing equipment at the Laughlin Landfill could process up to 1,750 tons of waste per day. For years 2010 and 2011, the average daily amount of waste received at the landfill was 107 tons (Republic Services, Inc., 2009-2011).

Recyclable Daily Collection
See Daily Collection and Disposal of MSW above.

Facility Lifespan
The Laughlin landfill is the ultimate disposal site for nearly all solid waste generated in Laughlin. Projections based on current disposal volumes suggest the landfill will not reach capacity for 21 years. RSSN conducts a landfill capacity report every year. This report provides details regarding actual landfill use and remaining capacity. It can be used by decision-makers and planners to assess current and future solid waste disposal and recycling priorities.

Laughlin-Forecasted Conditions

Solid waste generation is dependent on population and business activity, including construction. Countywide data suggests a decline in per person waste generation (Southern Nevada Health District, 2012). Data specific to Laughlin shows a corresponding downward trend. If this continues or plateaus, infrastructure in place will be sufficient into the near future.

3.3.5 City of Mesquite

Mesquite City Code and a franchise agreement between the City of Mesquite (City) and VVD, gives VVD the exclusive right to provide all solid waste collection services within the City. All solid waste is transported by VVD to a MSWLF owned by the City and operated by VVD or transported away for recycling. (City of Mesquite, 1995; 2002). **(Appendix A, Part 4)**

Collection of Residential Waste
Two levels of service are provided based on the type of residence. First, single-family homes, manufactured homes, and townhomes in certain communities, are provided once a week (Monday thru Thursday) trash collection. Residents rent, at least one and up to four, 90-gallon wheeled trash containers which they are required to place at curbside for pickup by side-loading trucks on assigned days. Second, all other residences, including apartments and condominiums, are provided once weekly trash collection service. The contracting party, usually the property owner/manager, rents 3-, 4-, 6-, or 8-cubic yard bin or bins based on the needs of the residences using the bins. In addition to residential collection service, all residents may drop-off their household-generated trash

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (56 of 99)

at the City of Mesquite-owned landfill located minutes from city limits in Lincoln County, NV.

Collection of Commercial/Industrial Waste

Commercial/Industrial trash collection service is available to all customers within the City once per day for whichever day(s), Monday thru Saturday, the business prefers. Businesses may deposit special waste at the landfill for a fee.

Mesquite-Waste Diversion/Recycling

Residential Recycling

Residential recycling pickup service is provided at single-family homes, manufactured homes, and townhomes in certain communities, twice monthly (first and third Wednesdays). Residents rent two 45-gallon recyclable containers, one for newspaper, the other for metals. They place the containers at curbside for pickup by side-loading trucks on the aforementioned days. No recyclable collection service is provided at apartment and condominium complexes, and non-participating townhouse and manufactured home communities. All residents may drop-off their recyclables at the landfill or in self-service bins which can be found in local shopping center parking lots.

Commercial/Industrial Recycling

Commercial/Industrial recyclable collection service is available on Monday, Wednesday, and Friday, with the frequency and day of pickup at the choice of the business. Organizations may also take recyclables, including paper and metal, directly to the landfill.

Mesquite-Other Solid Waste

Collection and Disposal C&D Waste

Collection service is provided Monday thru Saturday, on a regular schedule or an as-needed basis, as determined by individual customer preference.

HHW

No collection service is provided. Residents may drop-off household-generated hazardous waste, including used motor oil, pool chemicals, televisions, pesticides, etc, at the city-owned landfill at no cost. The amount deposited, however, must be consistent with what a household would normally generate. The City contracts with a third-party to remove and dispose of this waste, on an annual basis.

Collection of Medical Waste

Commercial/Industrial medical waste is collected once weekly by VVD, separate from other trash collection. Residential medical waste may be placed with other household trash for collection as described above.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (57 of 99)

Mesquite Collection Capacity

Daily Collection and Disposal of MSW
Collection capacity is dependent on several factors, including the number of collection trucks, and can be expanded as increased generation dictates. With existing equipment VVD has the capacity to collect and dispose of 250 tons per day, more than 150 tons higher than the average daily disposal amount at the Mesquite landfill for 2010-2011 (City of Mesquite, 2008-2011; 2009).

Collection and Disposal of C&D Waste
See Daily Collection and Disposal of MSW above.

Recyclable Daily Collection
See Daily Collection and Disposal of MSW above.

Facility Lifespan
The Mesquite Landfill is projected to have a functional lifespan until 2022 at the soonest (City of Mesquite, 2012). Additionally, the City has obtained land near the landfill which would allow for significant expansion of current landfill capacity (City of Mesquite, 2009).

Mesquite-Forecasted Conditions

Over the past five years the population rose and declined slightly and is back at 2007 levels (Southern Nevada Regional Planning Coalition, 2012). During that time, per-person disposal rates have remained steady, other than a spike in 2008, just below seven pounds per person (Southern Nevada Health District, 2012) (City of Mesquite, 2008-2011).

3.4 Solid Waste Facilities

3.4.1 Class I Sites (MSW Landfills)

A class I site is defined as a disposal site which is comprised of at least one MSWLF unit including all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste; and is not a class II or class III site.

In accordance with NAC, a class I site must be operated and maintained in a clean and odorless manner. It must not be within one-fourth (¼) a mile of the nearest public dwelling and not within 1000 feet of a public highway. It must be easily accessible in all weather conditions to all vehicles. Numerous other location and operating restrictions are listed in the NAC regulations (State of Nevada, 2008). **(Appendix C, Part 2)** The solid waste accepted is to be covered at the end of each day with six (6) inches of compacted soil. Appropriate signs must be posted indicating fees, hours, acceptable

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (58 of 99)

solid waste, and the owner and operator of the site. Erosion must be prevented and water is to be adequately supplied for dust control.

The SWMA has currently permitted three (3) class I sites:

(1) Apex Landfill
(2) Boulder City Landfill
(3) Laughlin Landfill

The SNHD SWAC inspects these facilities a minimum of four times per year. Additional activities associated with class I site inspections include special purpose facility visits, complaint investigations, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the landfills and providing technical training.

Closed Landfill Oversight

The EPA's RCRA Subtitle D, 40 CFR Parts 257 and 258 requirements were published in October 9, 1991 and became effective for owners and operators of new and existing MSWLFs. These regulations established revised minimum federal criteria that included location restrictions, facility design and operating criteria, groundwater and landfill gas monitoring requirements, corrective action requirements, financial assurance requirements, and closure and post-closure care requirements.

Subtitle D affects new, existing, and lateral expansions of MSWLFs that receive household waste on or after October 9, 1993. It does not apply to MSWLFs that ceased receipt of waste on or before October 9, 1991. There were some exemptions which extended the date to April 9, 1994. MSWLF units that stopped receiving waste by October 9, 1993, must comply with specified closure requirements only. States who participated in the implementation of the new regulations were required to adopt and implement approved permit programs. NDEP adopted these regulations into NACs. The SNHD adopted these NACs in 1993.

Based on NACs for closure criteria, different standards applied depending on the landfill's rate of waste disposal and the dates that disposal activities ceased:

(1) MSWLFs that stopped receiving waste prior to October 9, 1991, are not subject to the new federal regulations, although the old State of Nevada regulations do apply.
(2) MSWLFs that disposed of less than 100 tons per day and stopped receiving waste after October 9, 1991, but before April 9, 1994, must only comply with the federal standard for final cover of the landfill.
(3) Class II MSWLFs, i.e., small, rural landfills as defined in NAC 444.571, that stopped receiving waste before October 9, 1997 must only comply with the federal standard for final cover of the landfill.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (59 of 99)

(4) MSWLFs that do not satisfy the conditions of number (2) or number (3), above, and that received waste after October 9, 1993 must comply with all of the federal landfill requirements, including closure and post-closure care requirements.

There are approximately 25 small, rural landfills in Clark County that have been closed in favor of regional municipal landfills and the associated network of transfer stations and public waste storage bins. The SNHD oversees closed facilities within the Clark County. Located at http://ndep.nv.gov/bwm/Docs/Closed_DisposalSites_byCounty_3-13.pdf is a table identifying all closed landfills statewide requiring oversight. (Nevada Division of Environmental Protection, 2013)

The SNHD has been evaluating rural MSWLFs in Clark County, Nevada. Many rural communities in Clark County have or have had municipal landfills predating the 1993 RCRA regulations. While the general locations of these landfills are known, much is not known about their current physical condition and long-term viability for maintaining isolation of waste materials and mobile contaminants from the surrounding environment. Four closed landfills in rural communities warrant particular focus: the townships of Goodsprings, Moapa Valley, and Searchlight; and the city of Mesquite. Each of these communities has a MSWLF that is either closed pre-1993 or still in operation within or very near the community borders. SNHD in conjunction with Desert Research Institute, is assessing closed rural dump sites for post-closure monitoring and maintenance. SNHD is also overseeing the Henderson and Mesquite closed landfills.

3.4.2 Class III Sites (Industrial Solid Waste Landfills)

A class III site is defined as a disposal site which accepts only industrial solid waste. Industrial solid waste is solid waste derived from industrial or manufacturing processes, including but not limited to electrical power generation wastes, fertilizer and agricultural product manufacturing, construction debris and demolition, leather manufacturing, inorganic and organic chemical production, water treatment, paper, plastic and rubber manufacturing, nonferrous and ferrous metal production, and food production. Industrial solid waste does not include waste generated by mining, oil, and gas industries.

NAC describes the standards of class III sites. A class III site must be clean and odorless. It must not be within three-fourths (¾) of a mile of a public area and not within 1,000 feet of the nearest public highway. Roads must be easily accessible in normal weather. The solid waste must be covered at least weekly with six (6) inches of compacted material, unless it is deemed not to be a health or environmental hazard if the interval between coverings is longer. The sign requirements for class I and II sites are the same as are required for class III sites. Hazardous wastes and sewage are not allowed. All animal and slaughterhouse wastes must be placed in a separate area and covered immediately.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (60 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

The SWMA has currently permitted six (6) class III sites:

(1) Southern Cal Edison
(2) Nellis Air Force Base
(3) Nevada Power Reid Gardner
(4) Southern Nevada Water Authority
(5) Timet
(6) Wells Cargo

The SNHD SWAC inspects these facilities a minimum of two times per year. Additional activities associated with class III sites include compliance investigations, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the landfills and providing technical training. Many of these facilities are located in the outlying areas of Clark County and as such require extensive travel time.

3.4.3 Transfer Stations

A transfer station is defined as 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 SWMA has currently permitted five (5) transfer station facilities:

(1) RSSN Cheyenne
(2) RSSN Sloan (currently in closure)
(3) RSSN Henderson
(4) City of Las Vegas East Transfer Station
(5) City of Las Vegas West Transfer Station

The SNHD SWAC inspects these facilities a minimum of four times per year. Additional activities associated with transfer stations include compliance inspections, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the transfer station and providing technical training.

3.4.4 C&D Waste Short-Term Storage Facilities

A C&D waste short-term storage facility is defined as a solid waste disposal facility that provides for the storage of one or more trucks, trailers, and/or portable waste containers which are used for the collection of C&D solid waste for transport to a permanent disposal site.

The SWMA has currently permitted two (2) C&D waste short-term storage facilities, Clark County Public Works and Nevada Department of Transportation.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (61 of 99)

The SNHD SWAC inspects these types of facilities a minimum of two times per year. Additional activities associated with C&D waste short-term storage facilities include compliance investigations regarding illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the C&D waste short-term storage facility and providing technical training.

3.4.5 Public Waste Storage Bin Facilities

Public waste storage bin facilities/convenience centers are defined as facilities 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.

The SWMA has currently permitted four (4) public waste storage bin facilities:

(1) Moapa Convenience Center
(2) Mt. Charleston
(3) Searchlight
(4) Sandy Valley

The SNHD SWAC inspects these facilities a minimum of two times per year. Additional activities associated with public waste storage bin facilities include compliance investigations regarding illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the public waste storage bin facilities and providing technical training.

3.4.6 Waste Tire Management Facilities

A waste tire management facility is defined as a site where waste tires are deposited for processing, short-term storage, recycling or use as a fuel.

The SWMA has currently permitted two (2) WTMFs, both with Lunas Construction Cleanup.

The SNHD SWAC inspects these facilities a minimum of two times per year. Additional activities associated with WTMFs include compliance investigations regarding illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the WTMF and providing technical training.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (62 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.4.7 Waste Tire Hauling and Solid Waste Hauling Businesses

A person (including companies) who transports waste tires to a location in Clark County or who transports waste tires generated in Clark County to a location outside Clark County may have WTH permits. Certain exemptions apply to this permit requirement, including for persons transporting only their own waste tires.

The SWMA has currently permitted eleven (11) WTHs. At this time there are no separately permitted solid waste haulers.

These businesses will be inspected at least once per year for compliance with their permit and regulations governing their SWM activity or more if complaints are submitted.

3.4.8 Recycling Centers

A recycling center is defined as a facility designed and operated to receive, store, or process recyclables material which has been separated at the source from all but residual solid waste.

The SWMA has currently permitted fifty-nine (59) recycling center facilities. The SNHD website lists several permitted recycling centers.

The SNHD SWAC inspects these facilities a minimum of two times per year. Additional activities associated with recycling centers include compliance investigations regarding illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the recycling center and providing technical training.

3.4.9 Aggregate Crushing C&D Waste

Aggregate crushing of C&D waste is a type of recycling center that the SWMA has recently started to permit. These types of facilities are being permitted as recycling centers based on the fact that they are bringing in C&D waste from various construction sites, separating out materials like rebar and other recyclable materials, and then taking remaining concrete and crushing it to make type 2 material for use in paving projects.

Since C&D waste is a type of solid waste, any company handling this type of waste must have a SWM Permit from the SNHD SWMA. The SWMA started studying the issue and developing a workable solution for aggregate crushing of C&D waste based on a number of complaints received regarding what was perceived as illegal dump sites. To date a number of legitimate aggregate companies have obtained recycling center permits for aggregate crushing.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (63 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.4.10 Materials Recovery Facilities

A materials recovery facility is defined as a solid waste disposal site 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 a site that receives only recyclable materials that have been separated at the source of waste generation, a salvage yard for the recovery of used motor vehicle parts, and a site that receives, processes or stores only concrete, masonry waste, asphalt pavement, brick, uncontaminated soil or stone for the recovery of recyclable materials.

The SWMA has currently permitted eight (8) MRFs:

(1) Andrade's Recycling
(2) Evergreen Corp
(3) A-Recycling Solutions
(4) Lunas Construction Clean Up - Cartier
(5) Discount Dumpsters
(6) Par-3 Landscape & Maintenance
(7) RSSN Gowan Facility
(8) Wolfe Drop Box

The SNHD SWAC inspects these facilities a minimum of four times per year. Additional activities associated with MRFs include compliance inspections, conducting joint plan review of submittals to update or modify the operation of the facility, provide technical assistance to the operator of the MRFs and providing technical training.

3.4.11 Composting Facilities

Composting is defined as a controlled process of biological degradation of solid waste to an inoffensive humus-like product. The SWMA has currently permitted one (1) composting plant, A-1 Organics.

The SNHD SWAC inspects this facility and any future facilities a minimum of two times per year. Additional activities associated with composting facilities include performing compliance investigations addressing alleged illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, providing technical assistance to the operator of the composting facility, and providing technical training.

3.4.12 Waste Asbestos Transportation Businesses

The SNHD SWAC issues written approval (permits) prior to anyone transporting asbestos waste for disposal. NAC 444.972 applies to asbestos waste regardless of its friable or nonfriable status. The transporter is required to retain a copy of each permit issued for record keeping. The record must be kept on file by the transporter for three

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (64 of 99)

years following disposal and a copy must be provided to the SWMA no later than 30 days after disposal. The transporter must notify a landfill at least 24 hours prior to delivery of asbestos waste.

The SWAC typically issues about seventy-two (72) asbestos transportation permits annually.

SNHD will conduct inspections of transporters of friable asbestos waste. Waste transportation activities may be inspected at least once per year for compliance with their permit and regulations governing their SWM activity or more if complaints are submitted. The inspections shall include the friable asbestos waste being stored in a sealed bag system, at least 6 millimeters in thickness and labeled appropriately and the contents are wetted with water and/or surfactant mixture. Also, SNHD ensures that the vehicle must be fully enclosed or covered.

SNHD staff currently conduct inspections of landfill operations. The landfill operator shall inspect each load of asbestos to verify that each container and its label conforms to NAC 444.971. If a container does not conform and could release fibers during disposal, the landfill operator shall contact the SNHD. The SNHD may authorize the disposal of a nonconforming container. If a container does not conform to regulatory requirements, the landfill operator can soak the asbestos prior to unloading, rinse out the vehicle that contained the non-conforming container, and immediately cover asbestos in a non-conforming container. The landfill operator will designate a separate area for asbestos, maintain records of the quantity and location of disposed asbestos, place containers in the landfill in a manner that limits breakage, cover asbestos with six (6) inches of material that is not asbestos within 24 hours, cover asbestos with at least 30 inches of material that is not asbestos after the disposal area is no longer to be used, grade and stabilize the material that is covering asbestos, control access to an area where asbestos is disposed, and place signs that at each point of access.

The current SNHD EH Fee Schedule authorizes a fee of $500 for initial waste asbestos transportation permit and $150 for each subsequent waste asbestos transportation permit. Historically, there has been no distinction given to friable versus non-friable asbestos. Revisions to the EH Fee Schedule and to the asbestos program will result in a reduced rate for non-friable asbestos waste transportation permits provided that proper analytical documentation is provided to support this classification. National Emission Standards for Hazardous Air Pollutants (NESHAP) under the Clean Air Act defines *Regulated asbestos-containing material* (RACM) as (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart. The abatement of vinyl asbestos tile, exterior asbestos roofing material, exterior asbestos siding, drywall

joints are unlikely to become friable under normal operations. These would be examples of non-friable asbestos that would still require transport permits with supporting analytical data but at a reduced fee rate.

3.4.13 Temporary Permits to Operate SWM Facilities

The SNHD has promulgated regulations to allow certain types of SWM facilities to operate and generate revenue to keep a company viable for up to six months while working through the permanent permitting process. If operated correctly, the company would stay within the environmental laws that apply to their type of facility to protect public health, safety, and the environment. At this time, the SWMA has 22 temporary permits issued for SWM facilities.

3.4.14 New Business License Investigations

A new business contacting Clark County generates a referral to the SWMA for investigation of possible permitting requirements. SNHD SWAC visits all new businesses, meets with the owner/operator, and generates a response to Clark County. SWAC usually investigates about ten (10) potential facilities annually.

These types of facilities are inspected once per year unless compliance enforcement requires otherwise. Additional activities associated with facilities inspections include compliance investigations addressing alleged illegal operations and public nuisances, conducting joint plan review of submittals to update or modify the operation of the facility, providing technical assistance to the operator of the new businesses, and providing technical training.

All of the inspections discussed above are performed using a standardized inspection forms which reference applicable regulations. Once inspections are complete, an inspection report is generated and mailed to the permittee. A 30-day period of time is given to correct the inspection violations and proof of compliance must be submitted to the SWMA.

Failure to perform the required compliance actions and complete the necessary reporting generates a reinspection with fees. In addition, failure to comply with the original directions and failure to complete all required corrective action/reporting, may result in the issuance of an Order and Notice of Violation (NOV) (see SWAC complaint process for procedures). Further, permitted facilities may be required to report to Solid Waste Plan Review if modifying their operations.

Unpermitted facilities are brought into compliance through the SWAC complaint process via an Order/NOV. These facilities will either cease and desist operations or obtain a permit from Solid Waste Plan Review.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (66 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.5 Guiding Principles for Integrated SWM

Most residents of and visitors to Clark County recognize that waste reduction is important. This concept has been well-ingrained into our current culture. Our current waste management systems must be designed and implemented in a manner that creates less landfilling and incineration and returns as many materials as possible to a usable state. By diverting wastes, several positive effects are achieved.

Principles or goals for guiding the development and implementation of integrated SWM programs and policies in Southern Nevada have been established as shown below. Each is described within this Section.

- Protect public health, welfare and safety
- Reduce pollution and enhance environmental quality
- Conform with applicable regulations
- Public/private sector cooperation
- System management vs. local control
- Monitor operation of disposal and collection
- Protection of disposal capacity
- Materials conservation and waste reduction
- Maintain access and convenience of recycling
- Diverse communication for waste reduction/recycling
- Maximum use of recycling resources
- Facilitate proper management of special waste

The above guiding principles were identified by a Technical Advisory Committee for consideration by the implementing agencies. This was done by taking into account existing waste practices, the solid waste regulatory framework, and current and potential future issues facing solid waste managers, businesses and the general public within Clark County.

Protect Public Health, Welfare and Safety

SWM activities and operations should be carried out by all involved parties with strict attention paid to eliminating risks to service providers, citizens and businesses, and with the highest priority given to measures that enhance public health.

Reduce Pollution and Enhance Environmental Quality

SWM should be conducted according to the best technical methods and standards available so aesthetics and integrity of ecosystems are not negatively impacted and overall environmental quality is improved.

Conform with Applicable Regulations

Solid waste programs and policies should be undertaken in compliance with relevant regulatory and statutory provisions derived from governmental codes at all levels.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (67 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

Frequent review of relevant legislation for updates is crucial, especially after each legislative session of the State of Nevada legislature. Such legislative changes should be incorporated into SNHD/SWMA Regulations.

Facilitate Public/Private Sector Cooperation
SWM is best accomplished in an environment that combines the expertise and experience of both private and public sector representatives to encourage private sector initiative within an overall set of publicly determined guidelines.

Promote System Management vs. Local Control
Integrated SWM recognizes that programs and policies must be based on local conditions and values in addition to providing general, coherent direction and uniform standards for the entire County.

Monitor Operation of Disposal and Collection
The utility, aesthetics, and cleanliness of refuse containers and collection equipment should be regularly monitored and necessary improvements made to ensure that waste collection/disposal operations are performed in accordance with environmental, health, and sanitation codes in a manner that minimizes litter.

Promote Protection of Disposal Capacity
Disposal facilities in the County are viewed as valuable assets and resources that should be managed as long-term community investments available for the maximum amount of time feasible.

Promote Materials Conservation and Waste Reduction
Waste reduction and recycling are viewed as having positive environmental and economic benefits on both the national and local levels and are also methods of extending the useful life of existing disposal sites.

Maintain Access and Convenience of Recycling
It is recognized that recycling is fostered when opportunities for participation are incorporated as part of the regular daily routines of citizens and businesses, and that this standard should be pursued when logistically and economically feasible.

Promote Diverse Communication for Waste Reduction and Recycling
It is recognized that education and information about waste diversion opportunities will be more effective to the extent that common themes and messages can be oriented to the various resident populations, visitor groups, and economic sectors that are found in the County's urban and rural areas.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (68 of 99)

Maximize Use of Recycling Resources
The cost effectiveness of recycling will be increased if intermediate and end-use markets for collected materials are local or regional, thus reducing the costs for transporting recyclables from the point of generation to the point of utilization.

Facilitate Proper Management of Special Wastes
The properties and characteristics of certain designated wastes necessitate the application of material-specific management techniques to accomplish either disposal or diversion in a manner that protects the environment and is also economically responsible and operationally feasible.

3.6 Waste Diversion Technologies

3.6.1 Franchise Recycling Program

Currently, all areas within Southern Nevada have some form of recycling available to them, whether residential or commercial, through the franchise agreements between the municipalities where they are located and the solid waste collection and disposal companies with which each municipality is contracted, as well as private commodity buyers and recyclers. Currently, the companies serving residences are RSSN, VVD, and WLN.

While significant strides have been made, it is possible to consider expanding certain areas of recycling in order to reach the 25 percent recycling goal for which Clark County has been striving for the last few decades.

As technologies develop and become economically feasible, then private sector companies can begin implementing them to the benefit of the community and industry.

3.6.2 Residential Level-Suggested Disposal/Diversion Programs

This section contains some workable ideas to expand recycling efforts at the residential level in Southern Nevada. Many of these ideas were proposed in the previous 1995 Clark County SWMP and continue to be relevant (Harding Lawson Associates, 1995). In some cases, the ideas have been implemented partially and that information will be reported in this section:

Additional Curbside Recyclables
Based on an assessment of current recycling collection procedures, market conditions, and franchise terms, the list of materials targeted for recovery through curbside pickup could be expanded. The implementation of single-stream recycling would facilitate an expansion of the list of materials recovered. This assumes local or regional market conditions can support associated collection costs and corresponding value of the collected recyclable.

Expand Multi-Family Recycling
In accordance with recent legislation, SB No. 417 codified under NRS 444A.040 (1)(a), and with the cooperation and coordination of apartment building managers/owners and franchised waste haulers, special multi-family complex recycling zones are being established (State of Nevada, 2011).

Grasscycling / Xeriscaping Information
Residents could be encouraged to adopt the practice of grasscycling. In addition, educational programs can be continued to inform the community about the advantages of xeriscaping through a focused outreach campaign. Existing focused campaigns headed by the Southern Nevada Water Authority have already met with great success (Southern Nevada Water Authority, 2009). Although these efforts were focused on water resource management by eliminating grass and other water-consuming plants, an unintended side effect is the significant reduction of yard wastes. Xeriscaping has become the norm instead of an exception, especially in areas of new residential and commercial construction.

Backyard Composting Project
To assess the feasibility and impact of a large scale backyard composting program, an assessment of all Southern Nevada municipalities' current zoning codes would need to be made to see if such a program is possible at residential properties. A pilot project could be organized based on the provision or sale of composting bins accompanied by a simple set of instructions on the "do's" and "don'ts" of home composting. This alternative would most logically be implemented in conjunction with grasscycling. As with other "green" movements, home composting would likely be met with more positive results at this time than in the past two decades.

Yard Waste Drop-off
A network of conveniently located drop-off sites for the accumulation of compostable yard debris could be set up and open to the public on a regularly scheduled basis.

Yard Waste Curbside Collection
In addition to or in place of yard waste drop off collection points, the development of a yard waste collection program could be pursued, initially on a pilot basis prior to more widespread implementation and based on a commitment to develop more sites for processing/size reduction of material and composting (currently there is only one permitted composting plant in Southern Nevada). Processing and composting could occur at the same or different locations.

Disposal Sites Drop-off /Buy-back
At those disposal facilities, transfer stations and convenience centers that are heavily used by self-haulers, multi-material recycling drop-off/buy-back centers with uniform signage and layout could be developed near the point of entry. In the current economic

climate, this idea might be well received by individuals who can recover funds for their recyclables versus no cost recovery for placing them curbside.

HHW Depots
To supplement existing HHW drop-off areas at disposal sites operated by the franchisee, other similar public centers for short-term accumulation of HHW could be developed and operated by a qualified franchised contractor. Materials from these community depots could then be taken to a central storage and transfer yard before being shipped to a properly permitted disposal and/or recovery facility.

General Education/Information
To provide general education/information about current waste disposal procedures and some reduction/recycling options, an organized and systematic outreach program could be undertaken involving the cooperative efforts of municipalities, county agencies, franchised waste collectors, recycling forums, civic groups, media outlets, and environmental organizations. There are current programs offered by many of these listed community partners. By working together putting out a common message, resources can be unified and the most current topics and information can be presented to the public.

Disposal/Diversion Data Collection
For purposes of tracking quantities of waste disposed and diverted in the County, and to determine progress toward meeting the state's 25 percent waste reduction goal, a County-wide reporting mechanism could be implemented to gather disposal/diversion data from private sector operators and companies on a monthly or quarterly basis. A centralized data base compiled from the various reports and maintained by the County could be used to assemble an annual summary of SWM activities and achievements.

Variable Rates and Incentives
Motivation for adopting various forms of waste diversion is provided by rates that add markedly higher charges to a base fee for each container or unit of additional refuse set out for collection, thereby encouraging waste minimization and recycling.

3.6.3 Single-Stream Recycling Pilot Program

Clark County Management and Board of Commissioners contracted for the performance of a Cost/Benefit Analysis on Waste and Recycling Services May 4, 2010. The company conducting the study was specifically directed not to draw any conclusions from the data they collected. At this time, it is unknown whether this study has driven the programs being implemented by RSSN in certain communities.

According to RSSN's website: www.republicservicesvegas.com, RSSN currently has the Recycling Pilot Program in the following communities: Rhodes Ranch, Collina at Mountain's Edge, Mesa and Valla, Castlewood at the Lakes, Red Rock, Armarillo,

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (71 of 99)

Autumn Ridge/Springdale, Azure Estates. RSSN has and will continue to expand the single-stream recycling program into other communities, as appropriate.

In the pilot program areas RSSN provides every resident with one 96-gallon trash cart and one 96-gallon recycling cart. Carts are also available in 65-gallon and 35-gallon capacities. RSSN provides once per week collection for both trash and recycling on the same day of the week. Bulky item collection will be provided every other week on the regular collection day.

Individuals and communities interested in the Recycling Pilot Program for their area can contact RSSN.

At this time Henderson has been issued a pamphlet entitled "Enhanced Recycling Program-Clean Community Effort," which shows how to separate household waste (City of Henderson, Nevada, 2012).

3.6.4 Commercial Level-Suggested Disposal/Diversion Programs

This section contains some workable ideas to expand recycling efforts at the commercial level in Southern Nevada. Many of these ideas were proposed in the previous 1995 Clark County SWMP and continue to be relevant. In some cases, the ideas have been implemented partially and that information will be reported in this section:

Commercial Drop-off/Buy-back
The County could be divided into a series of commercial recycling service areas based on geographical distribution of businesses, clusters of similar businesses, access to transportation corridors, and other criteria. Each zone would be served by privately operated drop-off/buy-back recycling centers with materials transported to the centers by generators or second-party vendors.

Pilot Commercial Recycling
One or more contractors would provide recycling collection service on a pilot/demonstration basis to designated businesses in a specified area. The pilot/demonstration zones could be defined according to geographical location (all businesses within given boundaries), configuration of businesses (mini-malls, strip-malls, shopping center), or type of commercial generator (hotels/casinos, restaurants/bars, office buildings/institutional "parks").

Countywide Commercial Recycling
One or more contractor(s) would provide recycling collection service to the commercial sector throughout the County. Commercial sector recycling zones could be formed according to the criteria noted in the two Sections above. Recycling service may be implemented in phases starting with pilot/demonstration projects.

Wood Waste Recovery
Untreated, uncontaminated wood from pallets, shipping containers, construction/demolition sites and other sources can be recovered and processed (size reduction through grinding) into a fuel supplement, yard compost amendment, or other soil enhancement product to demonstrate the feasibility of application on a larger scale.

Disposal Site Drop-off/Buy-back
At those landfills, transfer stations and convenience centers that are heavily used by self-haulers, multi-material recycling drop-off/buy-back centers with uniform signage and layout could be developed near the point of entry.

Recycled-Content Product Procurement
Government agencies and entities in the County could formulate cooperative agreements for the procurement of recycled-content products to assist the growth of local markets for such items. Standards for recycled-content levels and targeted purchases may be derived from federal initiatives; specifically executive order 12873, RCRA Section 6002 and CPA's recently issued, "Comprehensive Procurement Guideline." (Administration of William J. Clinton, 1993)

Government Source Reduction/Recycling in Public Buildings
Government agencies and entities in the County would implement a uniform source reduction and recycling program to serve as a model for businesses and institutions. Program elements may include recovery of cardboard, office waste paper, and glass or metal food and beverage containers, on-site grasscycling and small-scale composting demonstration area; maximum use of paper prior to disposal or recycling; adoption of e-mail communication system; sharing of subscriptions to periodicals, magazines, and publications; routing and posting of memorandums; double sided copying; toner cartridge reuse; and other similar measures.

Food Waste Recycling
Using estimated waste generation rates from other resort communities and convention facility data, it is estimated up to 25 percent of the total waste stream from the hotel/casino industry originates from food wastes. Based on the large quantities of food waste generated by hotels/casinos, and restaurants in the County, the feasibility of expanding existing efforts to recover food waste for use as agricultural food products (such as hog farming, which currently utilizes local food wastes) could be determined. Expanding potential options, such as establishing small-scale vermiculture pilot projects could also be reviewed to expand food waste recycling.

General Education/Information
To provide general education/information about current waste disposal procedures and some reduction/recycling options, an organized and systematic outreach program could be undertaken involving the cooperative efforts of municipalities, county agencies,

franchised waste collectors, recycling forums, civic groups, media outlets, and environmental organizations.

Business Promotion, Education, and Technical Assistance
A referral service could be developed to exchange ideas, information and advice between the public and private sectors concerning waste reduction and recycling strategies.

Recycling Storage Space Requirements
Revising building codes and guidelines could be developed to require that designated developments include space for storage of recyclable materials at intermediate and centralized points on the facility grounds and within the structure.

Conference Waste Reduction Requirements
Due to the large number of heavily attended conferences held in the County, a set of operational procedures for conducting conferences could be adopted that emphasize waste reduction/recycling and the purchase of supplies and products that contain recycled-content materials or are durable, reusable, and recyclable.

Planning/Implementation/Reporting Requirements
New or existing business locations could be required to submit source reduction and recycling plans and regular implementation progress reports that describe existing and proposed waste prevention or diversion programs. Such a program would be established to target businesses with larger waste streams.

Construction/Demolition Recovery Standards
In cooperation with local industry representatives, a set of materials recycling and reuse performance criteria applicable to C&D activities would be enacted to accelerate diversion from this sector. Demonstration projects could be established and the performance criteria could be phased in over time in accordance with the growth of local and regional markets for recovered materials. In addition, the SNHD has placed into effect *SWMA Regulations Governing Construction and Demolition Waste Short-Term Storage Facilities* as of January 25, 2007. Permits have been issued to one facility so far in Southern Nevada.

Disposal/Diversion Data Collection
For purposes of tracking quantities of waste disposed and diverted in the County, and to determine progress toward meeting the state's 25 percent waste reduction goal, a County-wide reporting mechanism would be implemented to gather disposal/diversion data from private sector operators and companies on a monthly or quarterly basis. A centralized data base compiled from the various reports and maintained by the County could be used to assemble an annual summary of SWM activities and achievements. There is currently a report generated by SNHD SWAC based on data provided to them from multiple sources. The report at this time shows several data categories with data

from 2002 to 2011 (Southern Nevada Health District, 2012). Data collection and reporting from 2012 has not yet been completed.

3.6.5 Non-Franchise Diversion Programs

Permitted private businesses may accept recyclable materials, however, in some cases franchise agreements and municipal codes prevent the collection and transport of recyclables by anyone other than the franchisee or individual. Consideration should be given to encouraging more non-franchised, for-profit businesses to operate as part of the "green movement." The EPA is a strong proponent of diversion activities, both for EH and human impacts on the environment reasons. Their influence has spurred on zero impact/waste movements, of which waste diversion plays a large role. Creating systems that are both environmentally friendly and possibly benefit the economy are in the best interest of Clark County's residents and visitors.

3.6.6 Biodiesel Production

Biodiesel production (etherification) produces biodiesel from food by extracting the oils and fats. Many of the businesses that produce grease interceptor waste, which is stored in a grease trap until pumped for removal, hire licensed, permitted companies to perform this pumping and hauling service on their behalf. These companies may take the grease for processing to the facilities they designated on their permit applications.

Grease interceptor waste is non-petroleum based grease, oil, and fats generated with wastewater from fixtures and equipment such as, but not limited to, scullery sinks, pot and pan sinks, dishwashing machines, soup kettles and similar cooking equipment, trash compactors, floor drains in grease generating areas, and trash can washing areas of foodservice establishments. Inedible kitchen grease is fat or used cooking grease and oils obtained from kitchen grease generators.

The State of Nevada had made recommendations in an interim study on the production and use of energy to encourage the state, through legislative means SB 146 (BDR 32-218) during the 2011 legislative session, to require a certain percentage of biodiesel be included in all diesel fuel sold or offered in the State of Nevada. However, SB 146 was not passed (State of Nevada, 2011).

Currently, without legislative directive, southern Nevada has only one (1) biodiesel producer.

3.7 Liquid Waste

In areas where public sewers are not available to carry human and household waste water to municipal wastewater treatment plants, individual sewage disposal systems

(septic tank systems or ISDSs) provide the functions of both sewer collection and treatment plant.

It is the policy of the SNHD/SWMA to eliminate and prevent health and safety hazards by regulating proper planning, design, construction, operation and maintenance of individual residential and commercial sewage disposal systems.

This is achieved through plan review issuance of permits and field surveillance as governed by regulations approved by the BOH pursuant to its statutory authority as set forth in NRS 444.650.

If a commercial property requires 3,000 or more gallons of septic tank capacity, the application review and permit approval must be by the NDEP. The SNHD may review and approve commercial ISDS above 3,000 gallons at NDEP's discretion.

As of 2011, there were 97 septic systems permitted, 48 permitted liquid waste pumping/hauling companies, with 120 permitted liquid waste pumping/hauling trucks.

Spills of sewage or grease from a grease trap are considered environmental emergencies that must be remediated within four hours of discovery.

3.8 Illegal Dumping

Illegal dumping is the improper and/or unauthorized disposal of solid waste. Illegal dumping in Clark County continues to be a significant problem and the investigation of illegal dumping complaints is a major focus of SWAC.

Solid waste includes:

- Raw sewage that overflows onto any areas outside of buildings
- Garbage
- Motor oil and other petroleum products causing soil contamination
- Dirt and rock spoils
- Yard waste (landscape debris)
- Tires and batteries
- Construction and demolition waste

Complaints made by the public provide the most common source of information, but SWAC also receives complaints from SNHD employees, Clark County representatives and employees, employees representing all of the fire and police departments within Southern Nevada, State of Nevada Legislators, and government representatives from the various jurisdictions.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (76 of 99)

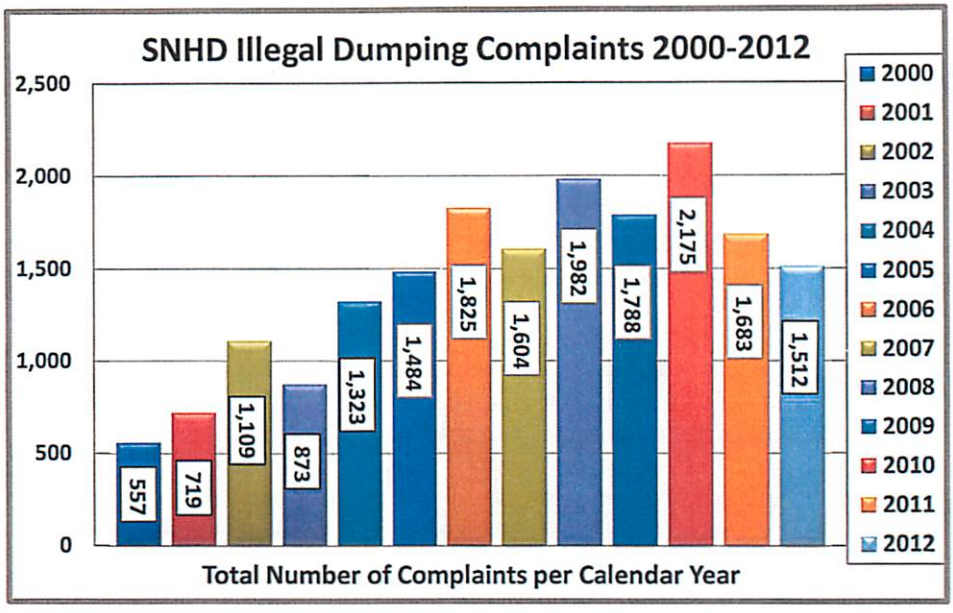


Chart 3-1: SNHD Illegal Dumping Complaints documented from 2000-2012

When a complaint is received, the SWAC staff investigates and, when possible, assembles evidence for submission to the SWMA Hearing Officer who may impose administrative penalties.

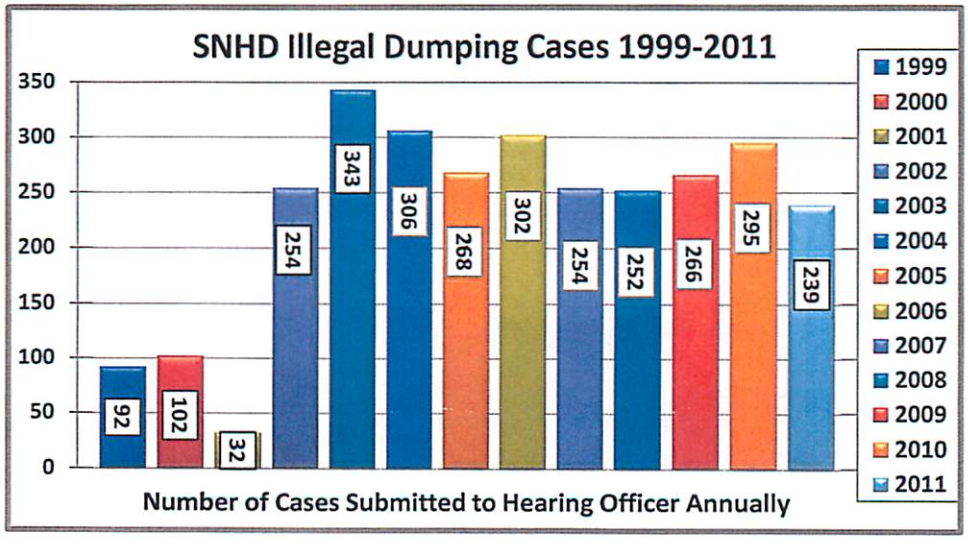


Chart 3-2: SNHD Illegal Dumping Cases brought before the Hearing Officer from 1999-2011

Any person providing information leading to an administrative penalty or a conviction for violation of "unlawful disposal of garbage or sewage" (**NRS 444.630 and 444.635**) or certain associated provisions, may receive a $100 reward upon payment of the penalty in full by the offender.

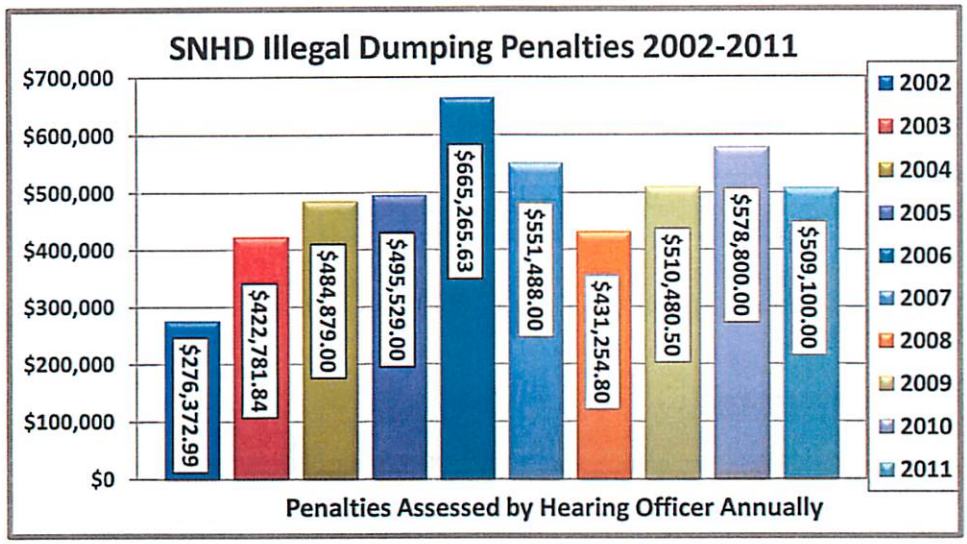


Chart 3-3: SNHD Monetary Penalties Assessed by the Hearing Officer Annually from 2002-2011

The witness must be willing to sign a voluntary statement and will be required to provide testimony at a SWMA hearing or court in order to receive the reward. In addition, witnesses wishing to receive a reward must fill out an IRS W-9 form.

3.8.1 Cost

The illegal dumping of solid waste, commercial and residential, has been occurring for many years in Clark County. Desert dumping, as it is more commonly known, costs business, personal, and government entities within the County in excess of 1.8 million and perhaps as much as 4.2 million dollars each year for remediation and disposal. The cost to have dumped the material legally is estimated to be approximately 25 percent of the cost incurred in remediation and disposal of the waste after the fact. The figures in Table 3-1 are thought to be a low-end estimate of the cost of investigating and remediating illegally dumped waste. A more accurate estimate could be obtained if more resources were allocated for such a study.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (78 of 99)

Entity	Estimated Cost
Private Landowners	$700,000 – $2.6 million[1]
County and City governments	$2 million – $2.5 million[2]
Government-Owned Land (BLM, Fish & Wildlife)	$300,000 - $600,000[3]
Total	$3 million – $5.6 million

Table 3-1. Cost estimates by entity type of investigating and remediating illegally dumped solid waste.

These data are based on:

(1) Extrapolation of anecdotal information from SNHD SWMA EHSs,
(2) Estimation based on SNHD dumping enforcement costs applying 2008 cleanup costs incurred by Clark County Public Works per resident of Clark County and applying that rate to the population of the County and all cities.
(3) Estimates from Southern Nevada Area Partnership, a Southern Nevada Public Land Management Act of 1998 (SNPLMA)-funded interagency litter reduction program.

3.8.2 Enforcement

The SNHD SWAC is the primary solid waste enforcement body, employing approximately twelve EHSs who investigate incidents of illegal dumping, prosecute those responsible through an administrative hearing process, and ensure the waste is appropriately removed and disposed. In most cases of illegal dumping, it is not possible to determine who was behind the dumping. In such cases, the landowner is obligated to remove and properly dispose of the illegally dumped waste. In cases where illegal dumping was witnessed (or conclusive evidence was left behind), EHSs vigorously pursue prosecution of the dumper. Prosecution occurs through a legislatively-established administrative court (Hearing Officer Process) which has the power to fine persons found to have violated State of Nevada law or SNHD SWMA Regulations, from 500 to 5,000 dollars per incident, per day and may also require persons to remediate the site and properly dispose of the illegally dumped waste at their own additional expense. Prior to the establishment of the administrative court, cases of illegal dumping were prosecuted as misdemeanors through local municipal or justice courts. However, they were not high priority for the courts, and therefore satisfactory resolutions were rare.

Code enforcement officers enforce solid waste code for their respective municipalities. They can issue Orders and Notices of Violation to residents and businesses requiring them to clean up solid waste. Such action can lead to fines.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (79 of 99)

CHAPTER 3 DESCRIPTIONS OF SOLID WASTE MANAGEMENT SYSTEMS

3.8.3 Community Prevention and Cleanup Efforts

Public programs throughout Clark County bring community groups and local governments together to keep neighborhoods clean. Often called "Clean up events," these programs use the organizational ability of government and the efforts of the community to clean up windblown and intentionally discarded litter.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (80 of 99)

CHAPTER 4
Solid Waste Laws and Regulations

4.1 Federal Laws and Regulations

Existing federal solid waste regulations apply to solid waste disposal sites and relate to the protection of human health and the environment. The RCRA of 1976, as amended, provides the statutory basis for federal regulation of solid waste. Subtitle D of RCRA applies specifically to MSW landfills. The EPA promulgated regulations on October 9, 1991 to address Subtitle D requirements. These regulations are found in Volume 40 of the Code of Federal Regulations, Part 258 (40 CFR Part 258) and are commonly referred to as Subtitle D (available online at http://ecfr.gpoaccess.gov at the time of printing) (United States of America, 1976). These regulations apply to MSW landfills that accepted solid waste after October 9, 1991.

Within RCRA Subtitle D, the EPA has established criteria in the following six categories for MSW landfill:

(1) Location
(2) Operation
(3) Design
(4) Groundwater monitoring and corrective action
(5) Closure and post-closure care
(6) Financial assurance

4.2 State of Nevada Revised Statutes and Administrative Codes

NRSs are the laws established by the legislative branch of the Nevada government. NACs are requirements adopted by governmental regulatory agencies to implement statutes. Codes have the effect of law because they are enforceable under the authority granted to regulatory agencies by the statutes.

State regulations governing SWM facilities were adopted pursuant to NRS 444.560 and can be found in NAC 444.570 to 444.7499. They are based largely on 40 CFR Part 258. Current regulations apply to all types of SWM facilities with specific sets of regulations for several specific types of facilities including: transfer stations (NAC 444.666 – 66645), public waste storage bin facilities (NAC 444.66647), compost plants (NAC 444.670), incinerators (NAC 444.672), salvage yards (NAC 444.674), landfills (NAC 444.6769 – 747), and MRFs (NAC 444.7474 – 74779) (State of Nevada, 2008). **The content of these State of Nevada statutes and regulations may be found in Appendix C, Parts 1, 2, and 3.**

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (81 of 99)

CHAPTER 4 **LAWS AND REGULATIONS**

4.3 Municipal Codes

The county and each incorporated municipality have adopted codes related to SWM, including storage, collection, transportation, and disposal. The Municipal Codes can be found in **Appendix B, Parts 1 to 6** (City of Boulder City, Nevada, 1979), (Clark County, Nevada, 2006), (City of Las Vegas, 2007), (City of Mesquite, Nevada, 2001), (City of Henderson, Nevada, 2006), (City of North Las Vegas, Nevada, 2011).

4.4 SNHD Regulations

Pursuant to NRS 444.580, the BOH, as SWMA for Clark County and all incorporated municipalities, has adopted regulations governing the storage, collection, processing, treatment, and disposal of solid waste that are as strict as, or stricter than, NAC. State regulations remain applicable until stricter regulations are adopted by the SWMA. In addition to adopting applicable NAC, regulations have been adopted by the SWMA which govern C&D waste short-term storage facilities, MRFs, public waste storage bin facilities, recycling centers, and transfer stations (Southern Nevada Health District, 2002; 2002; 2004; 2007) (Southern Nevada Health District, 2007; 2007) (Southern Nevada Health District, 2009; 2010; 2011). **The content of the fully implemented SWMA/SNHD regulations can be found in Appendix C, Part 4.**

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (82 of 99)

CHAPTER 5
FINANCIAL SUSTAINABILITY

5.1 Introduction

As with any enterprise, solid waste disposal collection and recycling efforts require funding. The 1995 Clark County SWMP did not provide detailed information regarding how solid waste programs were funded in Southern Nevada. The SNHD now maintains an annual fee schedule approved by the BOH (Southern Nevada Health District, 2010). Each service provided by the SNHD has a clearly delineated associated fee on the current fee schedule, which is posted on the SNHD website. These fees were calculated carefully as fee-for-service, in the interest of collecting the precise amount of funding to operate SWM programs to their optimal levels. The fee schedule goes through an extensive public review period prior to being placed into effect, giving the business community opportunities to offer their opinions and reasons as to why a fee is or is not necessary and sufficient to cover the related service provided.

The SNHD SWMA is also responsible for the investigation and administrative prosecution of illegal dumping cases. These cases are frequently attached to fines, administrative penalties, and clean up costs which are charged against the offending dumper.

Each contractor or franchisee, such as RSSN, VVD, and WLN, charges for their various services. Fee schedules change regularly and can be found within the literature of each franchise agreement and also on billings sent to residential and commercial clients. There is a very clear delineation of what each service costs.

5.2 Current Funding Sources

Funding sources include SWM Plan Review Fees, SWM Annual Operating Permit Fees, Waste Asbestos Transport Permit Fees, SWM Waste Audit Fees, SWMA Hearing Officer Penalties, State Tire Fees, Landfill Tipping Fees, and the Small Quantity Generator Grant from NDEP.

If additional grant funding becomes available, the SNHD always attempts to apply for relevant program dollars. Before applying for grant funding, it is always critical to ensure that the costs of meeting the requirements of the grant do not exceed the funds received, which would render the receipt of the money moot.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (83 of 99)

CHAPTER 5 FINANCIAL SUSTAINABILITY

5.2.1 Permits and Fees

At this time, the SNHD is operating under the fee schedule which became effective July 1, 2010. This fee schedule will be in place until it becomes necessary to create a new fee schedule. This usually happens when adjustments must be made to the fees (increase or decrease based on economic need) or when new fees must be added due to new services offered or old fees removed due to their no longer being relevant to current SNHD business practices. "Waste Management Fees" and other funding sources are discussed below.

SWM Plan Review Fees

A permit to operate must be obtained for any SWMF in Clark County. Solid Waste Plan Review (SWPR) has established a formal process to obtain approval to operate a facility for the management of solid waste in Clark County. In addition, the purchase of an existing SWMF requires a new permit to operate. Prior to approving a change of ownership facilities must be brought into compliance with the current solid waste regulations. In order to cover staff costs in taking a facility through the process of obtaining a permit, a fee schedule has been developed. Based on the type of SWMF and their complexity, the fees vary considerably.

Each permitted facility must undergo a plan review prior to opening. There are fees associated with the plan review process. Many of the permits require approval by the BOH. In order to be presented before the BOH for consideration, they must first be offered for public comment. This process includes posting Public Notices at public facilities and in multiple newspapers. The costs associated with public postings are added to the plan review charges for exactly cost. The plan review costs tend to be the greatest regulatory expenditure when a SWMF chooses to open. The plan review process is very labor intensive for all parties, including the Plan Reviewers themselves, and much of the costs associated are fee-for-service for man-hours expended.

If the facility desires to operate in a manner that requires a variance or waiver for a specific activity within their facility, then there are additional fees due to the significant amount of additional work required to produce the documentation and take it before the BOH.

On an annual basis, these fees generate approximately $115,000 in revenue to SNHD.

SWM Annual Operating Permit Fees

Once a facility is open and functioning, there are set Annual Permit Fees for every type of permitted SWMF. Compliance inspections are conducted with varying frequencies each calendar year at all permitted disposal sites in Clark County. In order to cover staff costs in carrying out compliance inspections on a regular basis, a fee schedule has

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (84 of 99)

been developed. Based on the type of SWMF and the associated operational complexity, the fees vary considerably.

If the facility chooses to make alterations that are of a nature or extent where a permit modification is necessary, then they must apply for a plan review of the modification. These fees are significantly lower.

In addition, the fees are utilized to cover the investigations unpermitted solid waste handling facilities and used in following up on rejected load reports. On an annual basis, these fees generate approximately $61,000 in revenue to SNHD.

Waste Asbestos Transport Permit Fees

As per the State of Nevada regulations for the disposal of asbestos (NAC 444.972), SWAC has been issuing Waste Asbestos Transport permits upon receipt of an application. Analysis of the regulations and reviewing daily activity reports reveals that for each permit issued, approximately two (2) hours of staff time are required to review applications, contact applicants, and carry out administrative functions. The fee currently in place for these permits covers the amount of staff time expended. On an annual basis, these fees generate approximately $40,000 in revenue to SNHD.

SWM Waste Audit Fees

The Waste Management Audit Program currently regulates over 3,800 facilities within Clark County. Clark County Business License department and the various city Business License departments provide new business information to the SWAC regarding businesses that may generate hazardous waste. Upon receipt of this information, an EH Specialist (EHSs) will visit the site and determine if the facility's operations qualify the business for the Waste Management Audit Program. The EHSs also identify businesses within their assigned inspection districts that are open, but are not currently active within the Waste Audit Program. Thus, the method of identifying potential qualifiers for the program is based upon referrals and EHS observation and verification.

All revenue generated from the Waste Management Audit Certificate Fees is returned to the program for operational costs, which include complaint investigations where citizens, regulatory agencies, commissioners, and city representatives report illegal dumping activities occurring at Conditionally Exempt Small Quantity Generator (CESQG) businesses (businesses that generate hazardous waste in quantities below 220 pounds per month). Said costs relate to EHS time, equipment (cameras, GPS units, etc.), administrative and office operational costs (data entry, billing, filing, etc.), and vehicles (SNHD trucks used by EHSs and mileage accrued through personal vehicle use). The fee paid by the owner covers the physical facility inspection and the discussion of any questions the owner may have for the EHS at the time of the inspection or anytime in the future.

The waste management audits are conducted for CESQGs. Although CESQGs generate small amounts of hazardous waste, they may represent a potential impact to the public health of Clark County residents and visitors and the environment. The potential impact is reflected in the regulations found in RCRA. Federal requirements for CESQG include: the need to identify all hazardous waste generated, ensuring no more than 100 kg of hazardous waste is generated in any calendar month, verifying that no more than 1,000 kg of hazardous waste are stored at any time, and contracting services that guarantee delivery of hazardous waste to a facility authorized to treat and/or dispose of CESQG waste. SNHD is interested in helping small businesses recognize and comply with these regulations.

To accomplish the goals of the waste audit program the SWAC inspects CESQGs annually. On an annual basis, these fees generate approximately $681,000 in revenue to SNHD.

SWMA Hearing Officer Penalties

A major focus of SWAC is the investigation of illegal dumping complaints. Illegal dumping is the improper and/or unauthorized disposal of solid waste. Illegal dumping in Clark County continues to be a significant problem and the investigation of illegal dumping complaints is a major focus of the SWAC (See **Section 3.8**). SWAC handles approximately 1,850 complaints annually throughout Southern Nevada.

When a complaint is received, the SWAC staff investigates and, when possible, assembles evidence for submission to the SWMA Hearing Officer who may impose administrative penalties. The Hearing Officer Process reviews an average of 25 cases per month and generates an average of $25,000 per month in revenue for SNHD.

5.2.2 State Tire Fund

Funding for SWM is provided primarily through the $1 fee (Tire Fee) per tire sold at retail collected by the State Department of Taxation.

The State Tire Fund is the result of this small fee collected for each tire sold in Nevada. According to NRS 444A.090, the sale of each tire results in the collection of one dollar per tire sold. This goes into a fund for SWM. The amount of dollars in the fund is split between four agencies within the State of Nevada: NDEP, receives 44.5 percent; Washoe County Health District receives 25 percent; SNHD receives 30 percent; and the Nevada Department of Taxation receives the remaining 0.5 percent. Based on this distribution, SNHD receives approximately $500,000 on an annual basis.

Before the tire fund was activated, agencies were left to enforce unfunded federal mandates for landfills and disposal restrictions. When the tire fund was established to

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (86 of 99)

fund SW programs, it was implemented to fund the program infrastructure. The fund has filled gaps in revenue sources for oversight infrastructure. In addition, the fund was intended to create a pool a money that could be used for public outreach programs, including grants. In Clark County, the use of the tire fund for the latter has been limited.

5.2.3 Grants

Currently has one grant from NDEP entitled the "Small Quantity Generator Grant."

This program has been conducted through an Interlocal Agreement with the NDEP since 1994. SWAC staff members are responsible for annually inspecting approximately 300 potential SQGs in Clark County, Nevada, under the contract to the NDEP. In return for this work, SNHD receives $75,000 annually.

In addition to conducting full Compliance Evaluation Inspections (CEIs), the SWAC is also responsible for entering all compliance and enforcement information into the RCRA (RCRAINFO) database.

As with the waste audit program, SNHD's services provide the owner(s) of an establishment that generates a regulated waste stream with current knowledge on proper disposal methods and assistance with understanding the importance of controlling certain waste streams and protecting the environment.

If grant funding becomes available, the SNHD always attempts to apply for relevant program dollars. Before applying for grant funding, the SWAC verifies that the costs of producing deliverables do not exceed the funding received. The NDEP cannot pass along grant dollars they receive because the dollars are assigned to them.

5.2.4 Tipping fees

In February 2004, a SWM Fee was implemented to increase SNHD's capability to effectively enforce the SWM regulations and statutes in Clark County, Nevada. This SWM Fee is paid by third-party commercial customers of all transfer stations and landfills in Clark County. This "tipping fee" or charge of 2.3 percent is collected by the operators of all transfer stations and landfills in Clark County, Nevada. On an annual basis, these fees generate approximately $300,000 in revenue to SNHD.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (87 of 99)

CHAPTER 5 FINANCIAL SUSTAINABILITY

5.3 Findings and Recommendations

5.3.1 Current Funding Atmosphere

The current economic climate, changes in Southern Nevada's population and the corresponding changes in the need for solid waste services affects the amount of dollars collected by the SWM companies. Subsequently, they are opening less facilities and providing less services. They are not utilizing existing facilities to their maximum capacities, thereby reducing tipping fees, since there are less frequent and smaller loads of waste.

The SWM system in Southern Nevada is fluid and adaptable. The SNHD SWMA also adapts staffing and operations to flex with the needs of the regulated community.

The methods by which the SNHD funds itself leads to a more self-sustainable system. The regulatory climate will change and grow as community needs change.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (88 of 99)

CHAPTER 6 THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN

CHAPTER 6
THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN

6.1 Introduction

The Clark County Emergency Management basic plan provides guidance for the government of Clark County to outline the concept of operations, organizational plan, and responsibilities for managing and coordinating the occurrence or immediate threat of severe damage, injury or loss of life or property resulting from any natural or man-made cause, including but not limited to hazardous substance releases, bioterrorism, emerging epidemics, fire, flood, earthquake, storms, radioactive material, explosion, aircraft accidents, avalanches, civil disturbances, dam failure, fuel shortages, terrorists acts, water shortages, or hostile military or paramilitary action and restore essential services within a disaster area.

This basic plan applies to the government of Clark County and provides guidance to local jurisdictions, the private sector, non-governmental organizations, and the public involved in the management of incidents, emergencies, or disasters within the geographic boundaries of Clark County.

While this basic plan refers to the Clark County government activities, functional annexes and related appendices apply to LVUA, as a whole.

The SNHD has primary responsibility under the basic plan for extreme heat emergencies. In addition, they may be called upon, depending upon the type of emergency, to participate under the Incident Command System (ICS) as a responder. One responding role that the SNHD SWMA may be required to perform is directing the management of collection and disposal of a variety of wastes generated during an emergency event.

The Clark County Emergency Management Plan basic plan can be found online at the Clark County Government website (Clark County, Nevada, 2011).

Annex X of the ***Clark County Emergency Management Plan*** discusses Debris Management related to an emergency (Clark County, Nevada, 2011). This document can be found in **Appendix F, Part 4.**

6.2 The Clark County Emergency Debris Management System

Annex X provides guidance for jurisdictions within the LVUA for coordinating the management of debris following a disaster or emergency situation.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (89 of 99)

CHAPTER 6 THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN

Annex X applies to all local departments and agencies within the LVUA, along with the private sector, volunteer organizations, and citizens. This annex is designed to support and integrate state and federal plans, which aid in debris management operations within the LVUA.

The LVUA includes the geographic boundary of Clark County, including municipalities, special districts (such as SNHD), tribal governments, and private and non-profit organizations.

Debris management operations in the LVUA will depend on the nature, duration, location, magnitude, and severity of the disaster incident generating debris.

Disaster conditions could be a result of a number of natural phenomena, such as an epidemic, flood and flash floods, wildfires, drought, earthquakes, severe thunderstorms, severe winter weather, severe heat, tornados, or high winds. Apart from natural disasters, the LVUA is subject to a myriad of other disaster contingencies, such as derailments, aircraft accidents, transportation accidents involving chemicals and other hazardous materials, plant explosions, chemical oil and other hazardous material spills, leaks or pollution problems that affect air and water quality, dumping of hazardous wastes, dam or bridge collapses, utility service interruptions, energy shortages, civil disturbance or riots, terrorism, warfare, applicable criminal acts, or a combination of any of these.

Human-caused disasters in the LVUA may result in a large number of casualties and heavy damage to buildings and basic infrastructure. Crime scene constraints may hinder normal debris operations, and contaminated debris may require special handling. These factors will necessitate close coordination between local, state, and federal law enforcement, and SNHD SWMA, representing health and environmental interests in the community.

The LVUA contains one authorized landfill site located at Apex, as well as additional smaller facilities. Debris management activities will cause significant environmental and air quality concerns. Debris clearance is important to the restoration of critical infrastructure and utilities needed for response and recovery operations. Because of the isolated nature of the LVUA, complications could arise in the arrival of support or relief efforts. Critical debris management resources are considered priority as a part of the overall fuel management plan. The LVUA utilizes the WebEOC Resource Manager to manage public and private resources. Depending on the nature of the incident, biological or chemical agents may be present in debris.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (90 of 99)

CHAPTER 6 THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN

6.3 Findings and Recommendations

The Clark County Emergency Management Plan has been approved and put in place as of June 2011. This includes **Annex X.**

Annex X spells out specific roles for many agencies and individual job categories within those agencies.

The following are specific roles assigned to SNHD/SWMA:

Chapter 1 Annex X-Debris Management
IV. Organization and Assignment of Responsibilities
A. Organization
10. Public Health (Page 1-4)

B. Assignment of Responsibilities **(Page 1-5)**
11. **Public Health** will:
a. distribute permits and waivers for land fill sites
b. manage environmental permitting
c. monitor potential health hazards

Chapter 3
Appendix 2—Collection and Removal
III. Organization and Assignment of Responsibilities
A. Organization
1. **SNHD (Page 3-3)**

B. Assignment of Responsibilities
1. **SNHD** will:
a. Assist in identification of waste that may require special handling
b. Assist in identification of collection sites.

Chapter 4
Appendix 3—Site Management
III. Organization and Assignment of Responsibilities
A. Organization
1. **SNHD (Page 4-3)**
B. Assignment of Responsibilities
1. SNHD will:
a. Assist in compliance with environmental standards
b. Assist in establishing special waste handling procedures
c. Assist in determining appropriate interim debris management sites
d. Permit the establishment of permanent debris management sites.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (91 of 99)

CHAPTER 6 THE CLARK COUNTY EMERGENCY DEBRIS MANAGEMENT PLAN

Chapter 5
Appendix 4—Permitting and Licensure
III. Organization and Assignment of Responsibilities
B. Organization
2. SNHD **(Page 5-3)**
C. Assignment of Responsibilities
2. SNHD will:
a. Assure public health measures are in place
b. advise entities about concerns with collection, transportation, and storage

The roles outlined above are appropriate for the SWMA as part of coordination within a larger incident response plan.

6.4 Annual Evaluation of the Plan

The LVUA Working Group (LVUAWG) planning subcommittee is responsible for coordinating, maintaining and updating this annex. The LVUAWG planning subcommittee will conduct an annual review and revise as necessary. Updated appendices will be forwarded to those on the distribution list.

Training and exercises should validate the roles and provide practical experience with debris management issues.

An After-Action Report (AAR) and Improvement Plan (IP) will be conducted following exercises and actual events. The effectiveness of this annex and any recommended changes should be part of the AAR and IP process.

Since the SNHD/SWMA is only one part of the Clark County Emergency Management Plan, it will be important for a member of SNHD staff to monitor changes to the Emergency Management Plan and all of its Annexes that affect the SNHD/SWMA at least once per year.

It is also important for the SWMA to provide input back to Clark County regarding whether or not their assigned roles in the Emergency Management Plan continue to be feasible, and if necessary, provide recommended changes back to Clark County. It is also appropriate for the SWMA to monitor responsibilities assigned to solid waste franchises to ensure that they coordinate with their permitted facilities and activities.

Should a new type of SWM permit be developed, the SWMA would be the best agency to advise the LVUAWG and how that particular activity may integrate into the Emergency Response Plan.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (92 of 99)

CHAPTER 7
PROGRAM EVALUATION

7.1 Future Consideration

Recent trends in waste management have led planners, industry professionals, and elected officials to view our trash as a two-fold opportunity for resource utilization. First, by looking at our waste stream as a source of valuable commodities, such as plastic, metal, paper, and organics, and second, by viewing our abundant landfill space as an asset to be used in a responsible and sustainable way. This approach has led to job creation and sector growth, and increased community exports.

The future of waste management in Clark County holds considerable promise. From our massive disposal capacity – 200-plus years of anticipated landfill life at the Apex Landfill, to expanding recycling collection networks, especially in metals, significant revenue sources exist in waste importation and expansion of recycling programs.

Modernization of recycling programs could be jumpstarted further if solid waste planners and decision makers had more community-specific information. One looming question that remains unanswered is the amounts and types of recyclables which are still being landfilled. Fortunately, this sort of data can be made available through a waste stream analysis, which is a type of study that has been conducted in many cities and counties across the US. Knowing what we throw away–most importantly what recyclables we throw away–would allow private and public officials at all levels to tailor recycling programs and incentives to the actual community needs while maximizing recovery of our waste stream assets. Waste stream analyses or a waste characterization study would be best conducted as a collaborative effort between waste haulers/processors, SNHD, the University of Nevada-Las Vegas, and the municipalities and should be a regular part of our waste management planning. To verify progress and allow for recycling strategy adjustments analyses should be revised regularly and funding mechanisms should be built into municipal code or franchise/waste management service agreements.

For the proper management of solid waste in Clark County there is an ongoing (Washoe County Health District, 2011)requirement to assess the funding sources and costs for SWM to determine the need for additional financial support for SWM by SNHD in Clark County.

In terms of regulations, a number of existing regulations are in need of updating and modifications. A primary example would be formally adopting the most current changes to the State of Nevada solid waste regulations by presenting the proposal in a Public Hearing before the BOH for approval. In addition, there continues to be a need to

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (93 of 99)

develop a number of new SWM regulations. These could include regulations for medical waste, solid waste haulers, composting, asbestos waste transportation, waste audit inspections and salvage yards.

7.2 Future Waste Generation and Changes in Capacity

In 2010, Clark County residents generated approximately 7.15 pounds of MSW per person per day. When including visitorship, the number drops to a more likely 5.86 pounds (Southern Nevada Health District, 2012). The EPA's estimate for per person MSW generation for 2010 is 4.43 pounds (US EPA, 2011).

7.2.1 Boulder City

Section 3.3.1 describes current waste collection and disposal capacity as sufficient. Growth restrictions adopted by the Boulder City Council in 1970's has prevented significant population increases. Additionally, the Boulder City landfill operator is limited to accepting only solid waste generated within Boulder City limits, except when special permission is granted by Boulder City. Following the 2011 approval of a lateral expansion of the landfill, Boulder City has a disposal capacity sufficient until 2046 (Broadbent & Associates, Inc., 2009).

7.2.2 Clark County, Rural Solid Waste Service Area

Section 3.3.2 describes current collection and disposal capacity as sufficient. Downward trends in local per-person waste generation rates suggest future waste volumes could remain stable or experience only modest growth or decline as the population changes (Southern Nevada Health District, 2012).

Most rural residents have few options for recycling and for disposal of special wastes, such as used motor oil, appliances, and hazardous waste. To the extent that recycling and collection programs could achieve widespread community support and participation, these options could be expanded.

7.2.3 Las Vegas Valley, Urban Solid Waste Service Area

Section 3.3.3 describes current collection, transfer, and disposal capacity as sufficient. Downward trends in local per-person waste generation rates suggest future waste volumes could remain stable or experience only modest growth or decline as the population changes (Southern Nevada Health District, 2012).

Per-person landfill disposal volumes may also be on the decline as programs for single-stream residential recycling are implemented by more municipalities. Pilot single-

stream residential recycling collection projects conducted across the Las Vegas Valley have shown significant promise for increasing the County-wide recycling rate. Currently, the cities of North Las Vegas and Henderson are implementing such programs city-wide. The experiences of residents in these cities may lead other municipalities to adopt single-stream residential recycling programs as well.

7.2.4 Laughlin, Urban Solid Waste Service Area

Section 3.3.4 describes current collection and disposal capacity as sufficient. Laughlin's disposal rate is more closely linked to visitorship than other Clark County communities in that the ratio of visitors to residents is higher than elsewhere. As such, fluctuations in visitorship will result in corresponding fluctuations in disposal demand.

7.2.5 Mesquite

Section 3.3.5 describes current collection and disposal capacity as sufficient. Recent data on per-person waste generation rates suggest they are stable and as such any changes in population would likely lead to a correspond change in disposal demand.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (95 of 99)

Bibliography/Works Cited

Administration of William J. Clinton. (1993, October 20). *Executive Order 12873--Federal Acquisition, Recycling, and Waste Prevention.* Retrieved from www.epa.gov: http://www.epa.gov/epp/pubs/eo12873.pdf

Broadbent & Associates, Inc. (2009). *Boulder City Capacity Report.*

City of Boulder City, Nevada. (1979, October 17). Boulder City Municipal Code. *Title 8, Chapter 3-Garbage; Refuse.* Boulder City, Nevada.

City of Boulder City, Nevada. (2012, July 24). Boulder City Solid Waste Collection Agreement Amended. Boulder City, Nevada.

City of Henderson. (2006, December 26). Henderson Franchise Agreement. Henderson, NV.

City of Henderson, Nevada. (2006). Henderson Municipal Code. *Title 5-Health and Sanitation, Chapter 5.17-Solid Waste Management.* Henderson, Nevada.

City of Henderson, Nevada. (2012, September 27). *Enhanced Recycling Program Clean Community Effort brochure.* Retrieved from www.cityofhenderson.com: http://www.cityofhenderson.com/community_development/docs/RevisedHendersonBrochure.pdf

City of Las Vegas. (2004, May 31). Las Vegas Franchise Agreement. Las Vegas, NV.

City of Las Vegas. (2007). Las Vegas Municipal Code. *Title 9-Public Health and Safety, Chapter 9.08-Solid Waste Management.* Las Vegas, Nevada.

City of Mesquite. (1995, April 26). City of Mesquite Solid Waste Collection Agreement. Mesquite, Nevada.

City of Mesquite. (2002, August 2). Addendum to Solid Waste Collection Agreement. Mesquite, NV.

City of Mesquite. (2008-2011). *Quarterly Solid Waste Disposal Reports.*

City of Mesquite. (2008-2011). *Solid Waste Disposal Report.*

City of Mesquite. (2009, April 20). Virgin Valley Disposal, Inc. Data for Clark County Solid Waste Managment Plan.

City of Mesquite. (2012). *Landfill Life Expectancy.*

City of Mesquite, Nevada. (2001, July 16). Mesquite Nevada City Code . *Title 4-Health and Safety, Chapter 4.2-Garbage, Refuse, and Weeds.* Mesquite, Nevada.

City of North Las Vegas. (1996, April 3). North Las Vegas Solid Waste Franchise Agreement. North Las Vegas, NV.

City of North Las Vegas, Nevada. (2011, September 21). North Las Vegas Municipal Code. *Title 8-Health and Safety, Chapter 8.20-Solid Waste Management.* North Las Vegas, Nevada.

Clark County, Nevada. (2005, August 2). Clark County Franchise Agreement. Clark County, Nevada.

Clark County, Nevada. (2006). Clark County Code. *Title 9-Public Health and Sanitation, Chapter 4-Solid Waste Management, Chapter 9.04-Solid Waste Management.* Clark County, Nevada.

Clark County, Nevada. (2009, October 6). Agreement for Disposal of Solid Waste and Operation of the Laughlin Landfill. Laughlin, NV.

Clark County, Nevada. (2011, June). Clark County Emergency Management Plan. *Basic Plan.* Las Vegas, Nevada. Retrieved from http://www.clarkcountynv.gov/Depts/admin_services/oem/Documents/Basic%20Plan%20-%20June%202011.pdf

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (96 of 99)

REFERENCES

Clark County, Nevada. (2011, June). Clark County Emergency Management Plan. *Annex X—Debris Management Plan.* Las Vegas, NV.

Consent Decree and Settlement Agreement, Civil Action No. 2:08-cv-1024 (United States District Court-District of Nevada-Southern Division September 26, 2008). Retrieved from http://www.epa.gov/region09/waste/sunrise/pdfs/consent-decree_06-2008.pdf

Harding Lawson Associates. (1995). *Solid Waste Management Plan for Clark County, Nevada.* Las Vegas, Nevada: Clark County Health District.

Las Vegas Review-Journal. (2004, January 12). Poisonous Vapors: EPA Cleaning Up Mercury Spill. *Las Vegas Review-Journal*, p. n.d. Retrieved from http://www.reviewjournal.com/lvrj_home/2004/Jan-12-Mon-2004/news/22976558.html

Mesquite Solid Waste Collection Agreement. (1995, April 26).

Nevada Department of Motor Vehicles, M. S. (2009, April 14). Salvage Title Section. (E. Wynder, Interviewer) Carson City, Nevada.

Nevada Division of Environmental Protection. (2003, December 12). Letter RE: Definition of Regulated Medical Waste. Carson City, Nevada. Retrieved from http://ndep.nv.gov/bwm/Docs/medical_waste_definition-49_cfr.pdf

Nevada Division of Environmental Protection. (2005, December 31). *Nevada 2005 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate05.pdf

Nevada Division of Environmental Protection. (2006, December 31). *Nevada 2006 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate06.pdf

Nevada Division of Environmental Protection. (2007, December 31). *Nevada 2007 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate07.pdf

Nevada Division of Environmental Protection. (2007). *State of Nevada Solid Waste Management Plan.* Carson City, Nevada: Nevada State Environmental Commission.

Nevada Division of Environmental Protection. (2008, December 31). *Nevada 2008 Recyling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate08.pdf

Nevada Division of Environmental Protection. (2009, December 31). *Nevada 2009 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate09.pdf

Nevada Division of Environmental Protection. (2010, December 31). *Nevada 2010 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/nvrate10.pdf

Nevada Division of Environmental Protection. (2011). *2011 Recycling and Waste Reduction Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://nevadarecycles.gov/doc/2011_biennial_report.html#2

Nevada Division of Environmental Protection. (2011, June 8). *FACT SHEET-Treatment Collection and Disposal of Infectious Medical Waste.* Retrieved January 29, 2013, from State of Nevada-NDEP-Bureau of Waste Management: http://ndep.nv.gov/bwm/Docs/MedWaste_FactSheet.pdf

Nevada Division of Environmental Protection. (2011, December 31). *Nevada 2011 Recycling Rate Report.* Retrieved January 29, 2013, from NevadaRecycles.gov: http://www.nevadarecycles.gov/doc/nvrate11.pdf

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (97 of 99)

REFERENCES

Nevada Division of Environmental Protection. (2013, January 30). *Compact Fluorescent Light Bulbs (CFL)*. Retrieved January 30, 2013, from NDEP Bureau of Waste Management-Solid Waste: http://ndep.nv.gov/bwm/clf01.html

Nevada Division of Environmental Protection. (2013). *www.NDEP.nv.gov*. Retrieved March 14, 2013, from Closed Facility Inventory Report: http://ndep.nv.gov/bwm/Docs/Closed_DisposalSites_byCounty_3-13.pdf

Ninyo and Moore. (2011). Projected Waste Acceptance Ranges and Landfill Life Estimate to Elevation 2454. *Boulder City Landfill Expansion Application to SNHD.*

Rawlyk, H., & Koch, E. (2004, April 21). Children treated after playing with mercury. *Las Vegas Sun*, p. n.d. Retrieved January 31, 2013, from http://www.lasvegassun.com/news/2004/apr/21/children-treated-after-playing-with-mercury/

Republic Services, Inc. (2007, May 24). Report of Operating Plan. *Cheyenne Transfer Station Application, Tab 6*, Subsection 8.

Republic Services, Inc. (2009-2011). *Quarterly Solid Waste Reports.*

Republic Services, Inc. (2010, July 13). Report of Operating Plan. *Henderson Transfer Station Application, Tab 6*, 3.

Republic Services, Inc. (2010). Various Phone Conversations.

Republic Services, Inc. (2011). 2010 Annual Capacity Report.

Republic Services, Inc. (2012). *2011 Monthly Disposal Amounts - Cheyenne Transfer Station.*

Republic Services, Inc. (2012). *2011 Monthly Disposal Amounts - Henderson Transfer Station.*

Republic Services, Inc. (2012, April 23). Apex Laughlin LF Productivity.

Ruhoy, I. S., & Daughton, C. G. (2007). Types and Quantities of Leftover Drugs Entering the Environment via Disposal to Sewage-Revealed by Coroner Records. *Sci. Total Environ., 388*, 137-148. Retrieved from http://www.epa.gov/nerlesd1/bios/daughton/SOTE2007.pdf

Ruhoy, I. S., & Daughton, C. G. (2008). Beyond the Medicine Cabinet: An Analysis of Where and Why Medications Accumulate. *Environ. Internat., 34*, 1157-1169. Retrieved from http://www.epa.gov/nerlesd1/bios/daughton/EnvInt2008.pdf

Southern Nevada Health District. (2002, February 28). SWMA Regulations Governing Hearing Officer Process. Las Vegas, Nevada.

Southern Nevada Health District. (2002, January 24). SWMA Regulations Governing Recycling Centers. Las Vegas, Nevada.

Southern Nevada Health District. (2004, June 24). SWMA Regulations Governing Materials Recovery Facilities. Las Vegas, Nevada.

Southern Nevada Health District. (2007). SWMA Regulations Governing Construction and Demolition Waste Short-Term Storage Facilities. Las Vegas, Nevada.

Southern Nevada Health District. (2007, March 28). SWMA Regulations Governing Public Waste Storage Bin Facilities. Las Vegas, Nevada.

Southern Nevada Health District. (2007, March 28). SWMA Regulations Governing Transfer Stations. Las Vegas, Nevada.

Southern Nevada Health District. (2009, February 26). SNHD Regulations Governing Individual Sewage Disposal Systems and Liquid Waste Management. Las Vegas, Nevada.

Southern Nevada Health District. (2010, June 24). Environmental Health Division Permit and Plan Review Fee Schedule. Las Vegas, Nevada.

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (98 of 99)

REFERENCES

Southern Nevada Health District. (2010, April 22). SWMA Regulations Governing the Management of Waste Tires. Las Vegas, Nevada.

Southern Nevada Health District. (2011). *Annual Report to the Community.* Las Vegas, NV.

Southern Nevada Health District. (2011, October 27). SWMA Regulations Governing Temporary Permits to Operate Solid Waste Management Facilities. Las Vegas, Nevada.

Southern Nevada Health District. (2012, April). Recycling and Waste Disposal, 1993-2011.

Southern Nevada Health District. (2012, April). Solid Waste Disposal Rates: Mesquite.

Southern Nevada Health District. (2013). *Board of Health.* Retrieved January 28, 2013, from Southern Nevada Health District: http://www.southernnevadahealthdistrict.org/boh.php

Southern Nevada Regional Planning Coalition. (2012). *Clark County, Nevada: Historic Population.* Clark County, Nevada.

Southern Nevada Water Authority. (2009). *Water Resource Plan 2009.* Retrieved January 31, 2013, from SNWA.com: http://www.snwa.com/assets/pdf/wr_plan.pdf

State of Nevada. (1971, January 19). Senate Bill No. 15. *Enacts Solid Waste Management Law.* Carson City, Nevada, United States of America: State of Nevada.

State of Nevada. (1971, March 10). Senate Bill No. 490. *Provides for the establishment of solid waste management systems.* Carson City, Nevada, United States of America: State of Nevada.

State of Nevada. (1991, July 5). *Assembly Bill No. 320-Makes various changes regarding reducing, recycling and disposing of solid waste.* Retrieved January 29, 2013, from State of Nevada Legislature: http://leg.state.nv.us/Session/66th1991/reports/HistoryLibraryNELIS.cfm?SessionNumber=Nelis_91R&DocumentType=AB&BillNo=320

State of Nevada. (2006, December). *NAC: Chapter 444A-Programs for Recycling.* Retrieved January 28, 2013, from State of Nevada Legislature: http://leg.state.nv.us/NAC/NAC-444A.html

State of Nevada. (2008, April 1). *NAC: Chapter 444-Sanitation.* Retrieved January 28, 2013, from State of Nevada Legislature: http://leg.state.nv.us/NAC/NAC-444.html

State of Nevada. (2011, June 13). *NRS: Chapter 439-Administration of Public Health.* Retrieved January 28, 2013, from State of Nevada Legislature.

State of Nevada. (2011, June 4). *NRS: Chapter 444A-Programs for Recycling.* Retrieved January 28, 2013, from State of Nevada Legislature: http://leg.state.nv.us/NRS/NRS-444A.html

State of Nevada. (2011). *NRS: Chapter 444-Sanitation.* Retrieved January 28, 2013, from State of Nevada Legislature: http://leg.state.nv.us/NRS/NRS-444.html

State of Nevada. (2011, April 8). *Senate Bill No. 146.* Retrieved from State of Nevada Legislature: http://leg.state.nv.us/Session/76th2011/Reports/history.cfm?ID=344

State of Nevada. (2011, June 4). *Senate Bill No. 417-Provides for the placement of recycling containers in certain locations.* Retrieved January 29, 2013, from State of Nevada Legislature: http://leg.state.nv.us/Session/76th2011/Bills/SB/SB417_EN.pdf

State of Nevada. (2011, June 13). *Senate Bill No. 43-Committee on Health and Human Services Chapter 313.* Retrieved January 28, 2013, from State of Nevada

ATTACHMENT F: PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (99 of 99)

REFERENCES

Legislature: http://leg.state.nv.us/Statutes/76th2011/Stats201114.html#Stats201114page1759

State of Nevada. (2012, April). *NAC: Chapter 439-Administration of Public Health.* Retrieved January 28, 2013, from State of Nevada Legislature: http://leg.state.nv.us/NAC/NAC-439.html

Tavares, S. (2009, December 7). *Mountains of garbage: Southern Nevada landfill is nation's largest.* Retrieved January 30, 2013, from Las Vegas Sun: http://www.lasvegassun.com/news/2009/dec/07/mountains-garbage/

Twitchwell, J. (2009, January 9). Contaminated soil moved for Henderson development. *Las Vegas SUN.* Retrieved from http://www.lasvegassun.com/news/2009/jan/09/contaminated-soil-moved-henderson-development/

U.S. Food and Drug Administration. (2011, April). *How to Dispose of Unused Medicines.* Retrieved January 29, 2013, from FDA Consumer Health Information: http://www.fda.gov/downloads/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/UnderstandingOver-the-CounterMedicines/ucm107163.pdf

United States of America. (1965, October 20). *Public Law 89-272 Stat. 992.* Retrieved January 28, 2013, from Solid Waste Disposal Act (1965): http://www.enotes.com/solid-waste-disposal-act-1965-reference/solid-waste-disposal-act-1965

United States of America. (1970, October 26). Public Law 91-512. *Resource Recovery Act of 1970.* Washington, DC, United States of America: U.S. Government Printing Office.

United States of America. (1976, October 21). *42 U.S.C. § 6901/Title 40 C.F.R. parts 239 through 259.* Retrieved January 28, 2013, from Summary of the Resource Conservation and Recovery Act: http://www.epa.gov/lawsregs/laws/rcra.html

URS Systems Corporation. (1974). *Clark County Comprehensive Solid Waste Management Plan.* Clark County, Nevada: District Health Department.

US EPA. (2011). *Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2010.*

Washoe County Health District. (2011, December 6). Solid Waste Management Plan and Plan Element of the Regional Plan for Washoe County. Reno, Nevada.

WasteNews.com. (n.d.).

ATTACHMENT G: WRITTEN COMMENTS FORM NEVADA DIVISION OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE MANAGEMENT

From: Chester Sergent
Sent: Thursday, February 14, 2013 5:32 PM
To: Dennis Campbell; Nancy Hall (hall@snhdmail.org)
Cc: Art Gravenstein
Subject: Clark County SWMP Review

Hello,

I've finished my review of your SWMP and must say thanks for providing such a thorough and well developed plan. I'll be drafting a response letter tomorrow, but I wanted to address 2 minor things that need your attention. The first one is as simple as updating the population thresholds in table 2-2; in the last session (2011) the 40,000 threshold was bumped up to 45,000. That kept Nye County (came in at ~44,000) from certain recycling requirements for another 10 years. The second issue is a bit more complex dealing with recycling at multi-family dwellings.

On pages 25 & 59 I found text addressing MFD recycling that appears to have been written before the latest amendments to the NRS 444A.040. As the text states, NDEP had to develop regulations regarding MFD recycling; well we took the easy way out and added MFD to the existing language. Let me paste it in –

> **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.

Bottom Line – Municipalities are required to make the service available, but MFDs are not really required to have the service. Meaning future franchise agreements must negotiate the service in. How that is handled by each municipalities will be between them and their franchisee. NDEP does not intend to force municipalities to open their agreements before their time, but require the service to be added when agreements are opened.

So a little tweaking on that language and we'll call it a day. This MFD service requirement needs to be added in table 2-2 also and any other locations the MFD subject appears in the plan (I did not perform a search and find for it).

I'll have these comments formalized in my review letter, but wanted to let you know now so we can fix that part. Nancy, can you start emailing the appendices to me. I do have a 10 meg limit on email attachments (that is total of all attachments per email). If you want to zip them that will work, but you will need to change the file extension from .zip to whatever (.hall works) and then I can receive them. I'll just change the extension back and unzip.

Your appendices are rather straight forward hence my lack of urgency for them already. Again I'd like to say great work on the plan.

Sincerely,
Chet

Chester Sergent
Bureau of Waste Management
Nevada Division of Environmental Protection
901 S. Stewart St., Ste 4001
Carson City NV 89701
p: 775.687.9469 f: 775.687.5856
www.ndep.nv.gov

ATTACHMENT H: BUSINESS IMPACT STATEMENT ADDRESSING PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (1 of 2)

BUSINESS IMPACT STATEMENT
Adoption of the Proposed
Solid Waste Management Plan for Clark County, Nevada

Pursuant to Nevada Revised Statutes (NRS) Chapter 237.090 and NRS Chapter 237.080, consideration of business impact statement at hearing conducted to adopt the proposed Solid Waste Management Plan for Clark County, NV. Comments were solicited from affected businesses in the solid waste industry in Clark County. The manner in which the comments were gathered included:

1. The March 19, 2013 "Public Notice" announcement of the May 23, 2013 hearing at the Southern Nevada Health District (SNHD) was posted in the lobbies at the Clark County Government Center, the Las Vegas City Hall, the Henderson City Hall, the North Las Vegas City Hall, the Mesquite City Hall, the City of Boulder City-City Hall, the Laughlin Regional Government Center, and the Southern Nevada Health District Ravenholt Public Health Center and on the Southern Nevada Health District Internet Website; and advertised in the LAS VEGAS REVIEW JOURNAL, LAUGHLIN NEVADA TIMES, and the MESQUITE LOCAL NEWS. The notice was available at four public workshops, and over 100 copies were mailed to Board of Health members, elected officials and permitted solid waste companies with interests in recycling and transport of construction and demolition debris, including several consulting firms. The notice provided dates and times for hearing and workshops, and instructions on how to provide comments to the SNHD Environmental Health Division in person or in writing by postal mail and Email.

2. Four Public Workshops were scheduled; April 24, 2013 at 10:00 am and 6:00 pm SNHD in Las Vegas, May 1, 2013 at the Mesquite City Hall, and May 2, 2013 at the Regional Government Center in Laughlin. No written comments or oral comments were received at any of the public workshops. An audio tape was made of the proceedings, and verbatim testimony transcribed of each. Two members of the regulated community attended the workshop in Mesquite but did not provide either written or verbal comments. No members of the public appeared at either the Las Vegas or Laughlin workshops.

3. Written comments have been received from NDEP, and members of the plan review and permitted facilities sections have discussed the comments and have incorporated those comments into the final draft of the plan.

4. The estimated economic effect of the proposed new draft plan on the regulated businesses is minimal. The Plan is intended to be a guide and an informational resource to support solid waste management laws, regulations and policies. Key users are the Nevada Legislature, the State Environmental Commission, NDEP, the Southern Nevada Health District, and other state & local agencies. The Plan may also be useful to Clark County's waste management service providers, including landfill operators, refuse collectors and recyclers, as well as solid waste generators, including all of Clark County's industries, businesses and residents. Implementation of items in the Plan that

ATTACHMENT H: BUSINESS IMPACT STATEMENT ADDRESSING PROPOSED SOLID WASTE MANAGEMENT PLAN FOR CLARK COUNTY, NEVADA (2 of 2)

are identified for "future consideration" could further enhance a sound program of solid waste management in Clark County.

5. The estimated cost to the Southern Nevada Health District for overseeing the proposed plan is minimal. There are no enforcement activities associated with the plan and operating costs will be maintained through the normal SNHD Environmental Health Division plan review and permit fees.