



County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Agenda - Final Environmental Sustainability Board

*John Bliss, Chair; Sarah M. Terrill, Susan Barns, Erik Loechell,
and James Robinson, Members*

Thursday, September 21, 2017

5:30 PM

1000 Central Avenue, Suite 110

1. **CALL TO ORDER - ROLL CALL**

2. **PUBLIC COMMENT**

*This section of the agenda is reserved for comments from the public
on items that are not otherwise included in this agenda.*

3. **APPROVAL OF AGENDA**

4. **APPROVAL OF MINUTES**

[9927-17](#) Approval of the August 17, 2017, Environmental Sustainability Board
Minutes

Presenters: John Bliss

Attachments: [A - Draft ESB Minutes August 17, 2017](#)

5. **BOARD BUSINESS**

[9928-17](#) Construction and Demolition Recycling Presentation

Presenters: John Bliss

Attachments: [B - El Paso C&D Recycling Presentation](#)

[9932-17](#) Wildlife Ordinance Vote

Presenters: John Bliss

Attachments: [E - Code Ordinance 02-279 Wildlife](#)

[9930-17](#) Eco Challenge

Presenters: Susan Barns

[9929-17](#) Review the Environmental Sustainability Plan

Presenters: John Bliss

Attachments: [C - Environmental Sustainability Plan 2017](#)

6. REPORTS

A. Chair's Report - John Bliss

B. Liaison's Reports

- 1). Board of Public Utilities - Sue Barns
- 2). Planning and Zoning Commission - James Robinson
- 3). Transportation Board
- 4). Parks and Recreation Board - Erik Loechell
- 5). County Council Liaison - Pete Sheehey

7. STAFF REPORT

[9931-17](#) August 2017 Residential Sustainability Report

Presenters: Angelica Gurule

Attachments: [D - Residential Sustainability Report - August 2017](#)

[9934-17](#) Environmental Services Update

Presenters: Angelica Gurule

Attachments: [F - FY18 ESB Work Plan](#)
 [G - FY18 ESB Work Plan Schedule](#)
 [H - Invitation to Green Team Event](#)

8. PREVIEW OF UPCOMING AGENDA ITEMS

9. ADJOURNMENT

If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact the County Human Resources Division at 662-8040 at least one week prior to the meeting or as soon as possible. Public documents, including the agenda and minutes can be provided in various accessible formats. Please contact the personnel in the Community Services Administration Office at 662-8163 if a summary or other type of accessible format is needed.



County of Los Alamos

Staff Report

September 21, 2017

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: John Bliss

Legislative File: 9927-17

Title

Approval of the August 17, 2017, Environmental Sustainability Board Minutes

Recommended Action Motion

I move that the Environmental Sustainability Board approve the August 17, 2017, minutes as presented.

Or

I move that the Environmental Sustainability Board approve the August 17, 2017 minutes as amended.

Body

The ESB will review and approve the August 17, 2017, Environmental Sustainability Board Minutes.

Attachments

A - Draft ESB Minutes August 17, 2017



County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Minutes

Environmental Sustainability Board

*John Bliss, Chair; Sarah M. Terrill, Susan Barns, Erik Loechell, and James Robinson,
Members*

Thursday, August 17, 2017

5:30 PM

1000 Central Avenue, Suite 110

1. CALL TO ORDER - ROLL CALL

The ESB chair, John Bliss, called the meeting to order at 5:31 p.m.

The following members were in attendance:

**Present: Board Chair Bliss, Member Terrill, Member Barns, Member Loechell,
Member Robinson**

2. PUBLIC COMMENT

Elena Giorgi asked the board to review issues regarding prescription drug disposal. She feels that not many residents are aware of how to properly dispose of their medications. The police station has a bin to collect discarded prescriptions and is currently the only location in Los Alamos County. Elena would like to know if it would be possible to advertise this service and possibly expand collection to include the local pharmacies.

Don Machen brought in a ceramic food composter with a filter built into the lid and compostable bags for the ESB to review.

3. APPROVAL OF AGENDA

A motion was made by Member Robinson, seconded by Member Barns, that the agenda be approved as presented.

The motion passed unanimously.

4. APPROVAL OF MINUTES

A motion was made by Member Robinson, seconded by Member Loechell, that the June 15, 2017 and July 20, 2017 minutes be approved as presented.

The motion passed unanimously.

[9809-17](#)

Approval of the June 15, 2017 and July 20, 2017, Environmental Sustainability Board Minutes

Presenters: John Bliss

Attachments: [A - Draft ESB Minutes June 15, 2017](#)
[B - Draft ESB Minutes July 20, 2017](#)

5. BOARD BUSINESS

[9816-17](#) How Jemez House Thrift Store Contributes to Sustainability in a Mighty Way

Presenters: John Bliss

Mary Zemach from Jemez House Thrift Store spoke regarding their contribution to sustainability in Los Alamos County. Items covered included: outreach in Rio Arriba County, scholarships for youth, support provided to orphanage in Mexico, clothes helping kids, assistance for fire victims in Los Alamos County, recycling initiatives and thrift store donation policy. The philosophy for the Jemez House Thrift Store is "The more you give away the more you get."

[9810-17](#) Discuss and Vote for the Color of the Brush Roll-Cart

Presenters: John Bliss

Attachments: [C - Public Input on Brush Bin Color](#)

Environmental Services Division requested public input on the brush bin color at Science Fest, Los Alamos County Fair, and Facebook. The brown bin received 294 votes and the green followed closely with 247 votes. ESB members voted on their preference and brown was selected unanimously. Brown will be the official color of the brush bin.

Angelica Gurule, Staff Liaison, reported that the next step is to determine how many carts to order initially. The website will have a brush bin registration for residents to request a roll-cart.

[9814-17](#) Discuss Bear Issues Regarding Waste Management and Waste Containers

Presenters: John Bliss

Attachments: [D - Bear Deterrent Tips](#)
 [E - Bear Proof Roll Cart Price](#)
 [F - Bear Resistant Hardware Tutorial](#)

Member Barns presented a list of bear deterrent tips she gathered from Facebook and public events, she suggested that a flyer be developed that can be shared on social media and as a utility bill insert.

Angelica Gurule, Staff Liaison, reported that the bear hardware installations are ongoing; however, there have been several reports that the bears are tearing off the locks. To date, 105 bear hardware installations have been completed and another 48 are on the waiting list. The bear tuff cart grant has been awarded and the estimated cost to the customer will be \$77 per cart.

Michelle Rosette, Los Alamos County resident, offered edit suggestions to the bear deterrent tips as well as the draft wildlife ordinance.

[9820-17](#) Discuss and Revise Draft Wildlife Ordinance

Presenters: John Bliss

Attachments: [H - Draft Wildlife Ordinance](#)
[Penalties for violations of wildlife ordinance in CO](#)
[LA Plata CO proposed bear resistant trash container ordinance](#)

Cheryl Bell, Wildlife Chair for Pajarito Chapter Sierra Club urged the ESB to require residents to place carts at the curb on the day of collection, instead of the night before.

Member Robinson handed out data on bear resistant trash container ordinance and penalties for violations from Colorado. Board Chair Bliss, asked Member Robinson to make the suggested changes to the draft wildlife ordinance and bring back to the ESB for review and approval after legal has approved the language.

9815-17 ESB Member Recruitment Update

Presenters: Angelica Gurule

Angelica Gurule, Staff Liaison, reported there were three applicants for the two vacant positions on the board. Appointment of new members will be made August 29, 2017 at the County Council meeting.

6. REPORTS

A. Chair's Report - John Bliss

Board Chair Bliss reported that the County Fair was successful and there was a lot of interest from the public on the brush bins.

B. Liaison's Reports

1). Board of Public Utilities - Sue Barns

Member Barns reported that items discussed at the Board of Public Utilities meeting included: Otowi well #2 will be drilled in September, the Ski Club voted last week to sell to a private company which includes completing the installation of water line to the ski hill, the White Rock power outage in July was caused by fault on the LANL transmission line and PNM is going to exit its agreement with San Juan generation which will cause the plant to close in 2020.

2). Planning and Zoning Commission - James Robinson

Member Robinson reported that items discussed during the Planning and Zoning Commission included a request for a home based business.

3). Transportation Board

Don Machen reported that items discussed during the Transportation Board meeting included: ACT ski hill run will be considered although it's not in the current budget, the bicycle plan has been submitted to National Bike Association to designate Los Alamos as "bike friendly," 502 construction including the roundabout is estimated to begin in 2018, and the traffic control measures on North Road and Urban.

4). Parks and Recreation Board - Erik Loechell

Member Loechell reported that items discussed during the Parks and Recreation Board meeting included: approval of upgrades to ice rink and golf course and they are looking at upgrading or possibly reducing the number of tennis courts around Los Alamos.

5). County Council Liaison - Pete Sheehey

No report provided

C. Los Alamos Public Schools Subcommittee - Angelica Gurule

Angelica Gurule, Staff Liaison, reported that she has received a draft of the RAID contract agreement for the Zero Waste lunch campaign and waste oil heater.

7. STAFF REPORT**9819-17**

Discuss Schedule to Conduct Residential Recycle Audit

Presenters: Angelica Gurule

Angelica Gurule, Staff Liaison, reported that it is time to schedule the recycle audit and would like to have it done before winter. The audit will be conducted on one collection area over a two week period.

9817-17

July 2017 Residential Sustainability Report

Presenters: Angelica Gurule

Attachments: [Residential Sustainability Report - July 2017](#)

Angelica Gurule, Staff Liaison, reported that the residential diversion rate is up from 20% in June to 24% in July. Construction is currently being done at the Transfer Station's west push wall, as a result cardboard and mixed recycling are being comingled due to space issues.

8. PREVIEW OF UPCOMING AGENDA ITEMS

1. ESB FY18 Work Plan
2. Eco Challenge in October
3. Save As You Throw
4. C & D recycling
5. Host workshop on sustainable gifts
6. Recycle Fashion show
7. Wildlife Ordinance

9. ADJOURNMENT

A motion was made by Member Robinson, seconded by Member Barns, that the meeting be adjourned.

The meeting adjourned at 7:41 p.m.

John Bliss, ESB Chair

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September 21, 2017

Los Alamos, NM 87544
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Agenda No.:

Index (Council Goals):

Presenters: John Bliss

Legislative File: 9928-17

Title

Construction and Demolition Recycling Presentation

.Recommended Action Motion

N/A

Body

The ESB will hear a presentation from Sean Gillespie of Green Paso regarding the opportunity to recycle construction and demolition material.

Attachments

B - El Paso C&D Recycling Presentation



El Paso C&D Recycling
Serving West Texas and Southern New Mexico







Products Recycled

Gypsum, Wood, Cardboard, Metal,
Plastic, Concrete, Roof Shingles,
Particle Board



Shingles



Gypsum



Cardboard



Mulch

Recycling Plant Process

- Find End Markets First (Who will buy if you separate)
- Find Good Equipment and Location (Repairs will ruin you)
- Evaluate Competition (Landfills make money by burying waste)
- Learn The Regulations (Know the rules inside and out)
- Learn What Customers Want (They may want product shredded not bailed)
- Process Materials Correctly (Avoid contamination of finished product)
- Hauling and Disposal (Waste is cost in recycling so have as little as possible)

HIGH-VOLUME MIXED C&D SORTING FACILITIES 2010



Construction Waste Recycling

- 10% of waste stream, but 30% of volume
- In 2012 the amount of C&D recycled saved 4300 acres of landfill space at a depth of 50'
- In 2012 the amount of greenhouse gas emissions avoided by recycling C&D = 4.7 million cars off the road for a year, and energy savings in a year = 85 million barrels of oil
- There are over 20,000 jobs in the US supported by C&D recycling and its secondary uses
- There is over \$4.5 billion in C&D recycling facility investment in the US
- Direct annual output revenue from C&D Recycling is estimated at \$7.4 billion annually, and when considering economic and induced economic output the industry contributed over \$17 billion to the economy
- Concrete, Asphalt, Wood, Gypsum, Asphalt shingles, Metals, Ceiling tiles, Carpet, Plastics, & Cardboard
- Easy markets and Creating a market
- Drywall and Hydrogen Sulfide, secondary life
- Shingles and their uses and NMDOT

Griehl's
Cafe
CAN FOOD

CAR WASH

Express

EXPRESS WASH
10 min
\$1.00
CLASSIC WASH
20 min
\$1.50

EXPRESS WASH
10 min
\$1.00
CLASSIC WASH
20 min
\$1.50











An El Paso Water Utilities employee spreads recycled gypsum at the Saipan Basin stormwater retention pond. The gypsum conditions the clay under the pond to improve water percolation and drainage so that there is less of the standing water mosquitoes need for breeding.

Regulators have no idea what C&D is!

Violation is putting mulch on the ground?

Reality



Planks on ground



Mulch on ground



Static Piles



Bagged
“covered” mulch

Track No: 543826 Compliance Due Date: 09/04/2014
30 TAC Chapter 328.4(b)(3)(B)

Alleged Violation:

Investigation: 1173358

Comment Date: 08/04/2014

Failure to cover materials to protect them from degradation, contamination or loss of value as a recyclable material. At the time of the investigation the wood planks, plastic bags, plastic bottles and wood mulch were uncovered and on the ground.

Recommended Corrective Action: The El Paso C&D shall stack wood planks stored outside. Plastic bags and plastic bottles shall be either disposed of or cover to protect the materials from further degradation. Wood mulch shall be placed in a windrow or static pile or any other protective measure approved by the El Paso Region Office and completed by the El Paso C&D. The facility shall provide documentation of the actions taken to provide protection to material.



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Staff Report

September 21, 2017

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: John Bliss

Legislative File: 9932-17

Title

Wildlife Ordinance Vote

.Recommended Action

I move that the Environmental Sustainability Board approve Code Ordinance 02-279 as presented.

Or

I move that the Environmental Sustainability Board approve Code Ordinance 02-279 as amended.

Body

The ESB will discuss and vote on the wildlife ordinance which addresses recent bear issues in Los Alamos County. Game and Fish representative Bob Osborn and Sean Murphy will also be present to answer questions the board may have regarding the roll-cart project and/or bear biology.

Attachments

E - Code Ordinance 02-279_Wildlife

INCORPORATED COUNTY OF LOS ALAMOS CODE ORDINANCE 02-279

AN ORDINANCE AMENDING CHAPTER 32, SECTION 32-7,

REGARDING SOLID WASTE MANAGEMENT

AND THE PLACEMENT AND MAINTENANCE OF CONTAINERS

BE IT ORDAINED BY THE GOVERNING BODY OF THE INCORPORATED COUNTY OF LOS ALAMOS:

Section 1. Section 32-7 of the Code of the Incorporated County of Los Alamos is amended to read as follows:

Sec. 32-7. Placement and maintenance of ~~containers~~ **roll-carts**.

(a) It shall be the responsibility of every person owning or controlling any building, house or grounds or any other place of habitation or business to have and maintain in reasonably good repair one or more solid waste, ~~and/or recycling,~~ **and/or brush roll-carts** of the kind and character prescribed or furnished by the county.

(b) **Roll-carts** provided by the county are the property of the county and shall not be removed from the property to which the ~~container~~ **roll-cart** was assigned by the county.

(c) Solid waste roll-carts shall be stowed in a secure location. The solid waste roll-cart shall be stored in an enclosed structure sufficient to prevent the entry of wildlife common to the area such as bears, raccoons, foxes, coyotes and/or crows.

~~(e)~~**(d)** Roll-carts are to be removed from streets and sidewalks and neatly stowed by the end of the day of collection and set out for collection no earlier than ~~5:00 a.m.~~ **4:30 a.m.** the day ~~prior to~~ **of** scheduled collection.

(e) Penalties: Upon conviction for a first violation of this ordinance within in a five year period as measured from dates of offense, the fine imposed by the Municipal Court shall not exceed \$50.00. Upon conviction of a second or subsequent violation of this ordinance in a five year period as measured from the dates of offense, the fine imposed by the Municipal Court shall not exceed \$200.00.

~~(d)~~**(f)** Screening and storage of commercial solid waste collection.

(1) Designation of areas. The solid waste division shall designate where commercial solid waste collection containers are to be located on all sites that have trash collection in commercial (dumpster or roll-off) containers.

(2) Appearance of collection points. Solid waste containers shall be properly maintained and shielded from view from public on three sides by a solid six-foot high wall or fence. All sign shield shall be approved by the community development department and shall be in compliance with the requirements of the County Development Code.

Section 2. Effective Date. This Code Ordinance shall become effective upon adoption with the amended rates being applied at the next billing following the effective date.

Section 3. Severability. Should any section, paragraph, clause or provision of this Code Ordinance, for any reason, be held to be invalid or unenforceable, the invalidity or unenforceability of such section, paragraph, clause or provision shall not affect any of the remaining provisions of this ordinance.

Section 4. Repealer. All ordinance or resolutions, or parts thereof, inconsistent herewith are hereby repealed only to the extent of such inconsistency. This repealer shall not be construed to revive any ordinance or resolution, or part thereof, heretofore repealed.

ADOPTED this ____ day of September, 2017.

**COUNCIL OF THE INCORPORATED
COUNTY OF LOS ALAMOS**

**David Izraelevitz
Council Chair**

ATTEST: (SEAL)

**Naomi D. Maestas
Los Alamos County Clerk**



County of Los Alamos

Staff Report

September 21, 2017

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Susan Barns

Legislative File: 9930-17

Title

Eco Challenge

.Recommended Action Motion

N/A

Body

The ESB will hear a presentation from Sue Barns regarding the Eco Challenge. She will discuss what it is and how it works. The challenge runs from October 11 - 25, 2017. See link for more information: <https://ecochallenge.org/how-it-works/>

Attachments

N/A



County of Los Alamos

Staff Report

September 21, 2017

Los Alamos, NM 87544
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Agenda No.:

Index (Council Goals):

Presenters: John Bliss

Legislative File: 9929-17

Title

Review the Environmental Sustainability Plan

.Recommended Action

N/A

Board, Commission or Committee Recommendation

N/A

Body

Review the Environmental Sustainability Plan

Attachments

C - Environmental Sustainability Plan



LOS ALAMOS

Los Alamos County Environmental Sustainability Plan

Updated August 2017

Introduction

Appreciation and respect of the natural environment of northern New Mexico has long been a cultural value shared by the residents of Los Alamos County. In 2005, the Los Alamos County Council recognized the public's desire to preserve this environmental amenity through the adoption of "maintain environmental quality" as one of its six core goals.

The County created the Environmental Sustainability Initiative (ESI) in March 2008. This initiative narrowed the County's focus from the broad concept of sustainability to eight focus areas:

- 1) Environmental sustainability policy
- 2) Waste and recycling
- 3) Hydrocarbon independence
- 4) Water
- 5) Land use
- 6) Economic development
- 7) Education and outreach
- 8) Measurement and reporting

Within these eight focus areas, short and long term programs and activities were proposed to enable Los Alamos County to become a more sustainable community. Since then, the County has made significant progress on a variety of short and long term activities identified in the ESI. Policies were passed to ensure sustainability is at the forefront of decisions made now and into the future, and significant infrastructure improvements have occurred, including the formation of the Environmental Sustainability Board. The County has taken actions to educate all of its employees on the importance of sustainability in internal operations with the formation of the County Green Team and County Fleet Team. These teams help ensure that the County government is leading the way in transitioning Los Alamos into a more sustainable community.

In addition, the County Council reinforced the importance of the environment in the 2011 Los Alamos County Strategic Leadership Plan by updating one of the goals to read: "enhance environmental quality and sustainability." Later, at the County Council Workshop on November 16, 2013, County Council asked the Environmental Sustainability Board to consider the definition of environmental sustainability to include the "balance of costs and benefits" in response to the desire to include an evaluation component to the goal. The Environmental Sustainability Board accepted the recommendation. Currently, the 2017 Los Alamos County Strategic Leadership Plan defines the County Council's goal for environmental stewardship as "Enhance environmental quality and sustainability balancing costs and benefits including County services and utilities."

"Enhance environmental quality and sustainability by balancing costs and benefits including County services and utilities."

2017 Los Alamos County Strategic Leadership Plan Goal

With environmental sustainability included in the County Council's Leadership Plan, what remains is the roadmap. In many ways, the County took progressive steps toward the goal, and a cohesive, expanded vision and strategy as laid out in this document, is proposed as the next step.

Definitions

Before laying a framework to work toward the County's environmental stewardship goals, key terms need to be defined as they pertain to the needs of the Los Alamos community. This Environmental Sustainability Plan proposes the following definitions:

Environmental Stewardship refers to management of the environment, with the intent to provide protection or care.

Environmental Sustainability is the ability to continue a defined behavior indefinitely. It is a broad concept that incorporates a variety of criteria including economics and the environment that will enable the community to thrive well into the future. Environmental sustainability is a state that allows for indefinite support of the community, its built and natural environment, its quality of life, and future ecosystem health. In order to achieve environmental sustainability, it requires a balance between the rates of resource depletion and generation, while minimizing the rate of pollution.

Environmental Quality refers to the current state of the natural environment.

Purpose

The Los Alamos County Environmental Sustainability Plan establishes a roadmap for accomplishing the Council's goal to "enhance environmental quality and sustainability by balancing costs and benefits including County services and utilities." This plan outlines a set of quantifiable goals, referred to as sustainability indicators, chosen after balancing the costs and benefits. In addition, the plan outlines a strategy for tracking progress for each of the sustainability indicators and thus measuring Los Alamos' progress toward reaching the Council's goal. The Environmental Sustainability Plan will be updated every two years in order to track progress, evaluate strategies, and when needed modify or develop new strategies based on data and experience, which is important for attaining the sustainability goals outlined in this document.

Scope

All indicators and goals in this plan apply to the community of Los Alamos County; however, Los Alamos National Laboratory (LANL) energy and water usage is not included in the data reported. The decision to exclude LANL energy and water usage from this plan was based on several reasons:

1. Being a Department of Energy Facility, LANL must follow federal mandates that would supersede any local goal developed in this plan.
2. LANL has their own environmental sustainability plan called "Long-Term Strategy for Environmental Stewardship and Sustainability."

On the other hand, LANL waste generation and diversion numbers are included, since LANL is a major commercial customer for Los Alamos County. Almost all waste generated at LANL, excluding radioactive and other special waste, is disposed at the Los Alamos County Eco Station. The County is also responsible for the collection of solid waste and recycling from a few LANL facilities located throughout the community. Given the amount of integration in terms of waste and recycling services, LANL is included in Los Alamos County commercial customer data.

Relation to Energy and Water Conservation Plan by Department of Public Utilities

The Los Alamos County Environmental Sustainability Plan is a separate plan from the Los Alamos County Department of Public Utilities Energy and Water Conservation Plan (DPU Plan). The information presented in the DPU Plan is specific to the utility systems operated by the Department of Public Utilities: water, natural gas and electricity. The DPU Plan is a requirement of operating the utility system and it identifies goals for water, natural gas and electricity usage. The goals and baselines used in the DPU Plan are also used in the County's Environmental Sustainability Plan to demonstrate how the County is reducing energy and water usage. The Environmental Sustainability Plan looks beyond the areas of energy and water usage by establishing goals in other areas crucial to creating a more environmentally sustainable community. For a visual representation of how these plans relate see Figure 1.

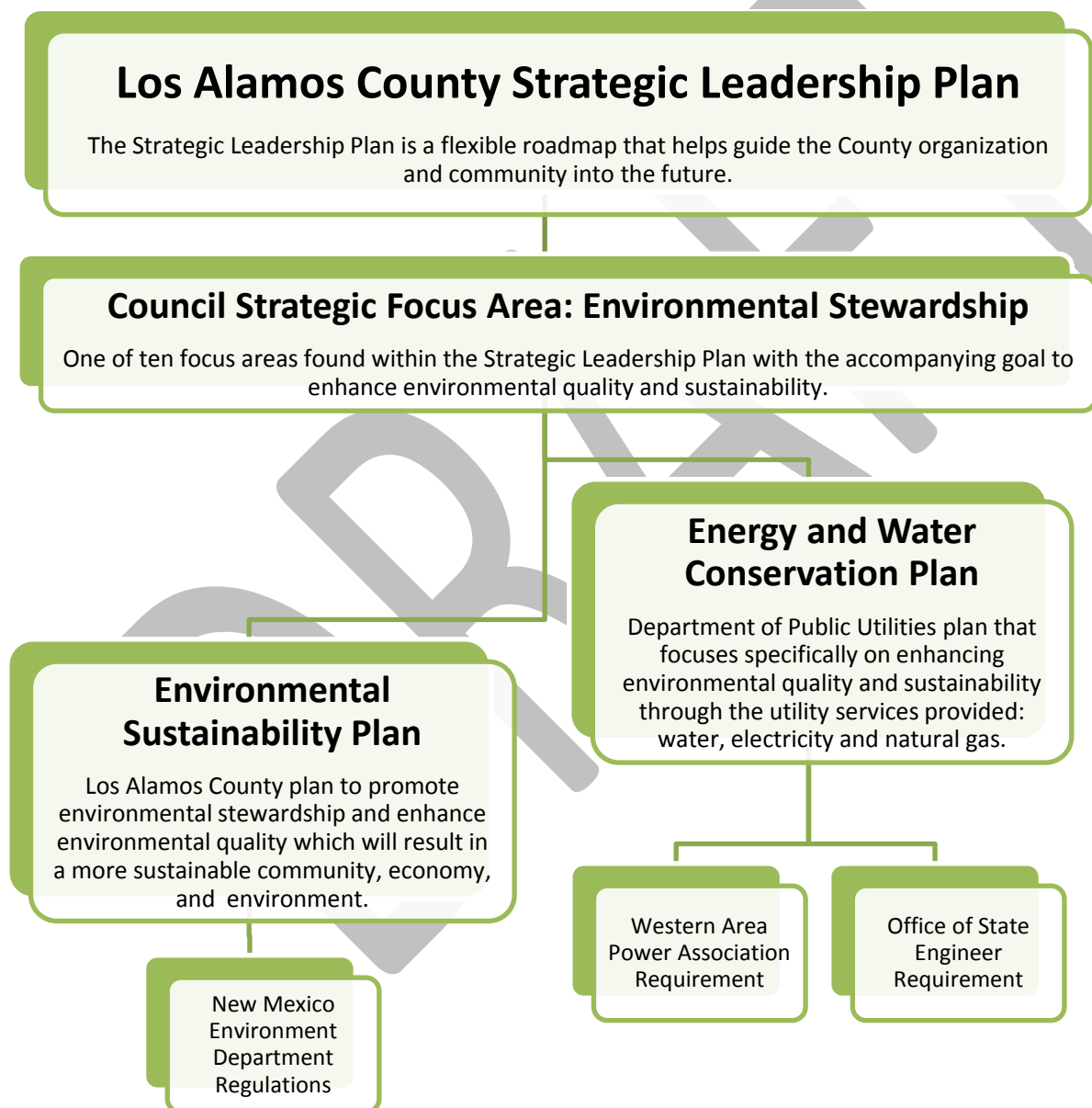


Figure 1: Flow chart showing the relationship of the Environmental Sustainability Plan to Council's Strategic Leadership Plan and the Energy and Water Conservation Plan.

Sustainability Indicators

The Los Alamos County Sustainability plan includes two distinct categories of sustainability indicators: Community Indicators and Local Government Indicators. These indicators will serve as the County's measuring stick, enabling the County to quantify progress in reaching its sustainability goals. The sustainability indicators incorporated into the Los Alamos County Environmental Sustainability plan are identified in **Table 1** below.

Sustainability Indicators

Community Indicators

1. Community Greenhouse Gas Emissions
2. Public Transit Ridership
3. Municipal Solid Waste (MSW) Recycling Rate
4. Construction & Demolition (C&D) Waste Diversion
5. Quality of Residential Recycling Services

Local Government Indicators

1. LEED Certified County Facilities
2. County Operations Greenhouse Gas Emissions
3. Energy Usage of County Facilities
4. Water Usage in County

Table 1: Sustainability indicators for Los Alamos County Community and Local Government.

Although the sustainability indicators do not cover all aspects of sustainability, they do represent the major focus areas adopted by Los Alamos County Council in the Environmental Sustainability Initiative. This plan represents these focus areas with the least number of indicators possible to enable easier and more effective understanding of County goals, and increase the ease of public education. The following is an analysis of each sustainability indicator via three sections:

- (1) The **goal section** presents the goal that the County is striving to obtain. Goals were selected based upon research on actions being taken by federal, state, and local entities across the country, and input from knowledgeable individuals within the County.
- (2) The **performance section** provides quantitative and qualitative information on how the community is performing in each indicator. Community wide indicators have a baseline year of 2006, based on data availability. The local government indicators have a baseline year of 2010. The local government indicators have a different baseline as a result of the major changes that have occurred since 2006 in the County.
- (3) The **strategy section** provides a brief description of proposed actions that will enable the community to reach the established goal for each indicator.

Sustainability Indicator	Goal	Metric	Performance (2012)	Performance (2016)
Community Indicators				
1. Community greenhouse gas emissions	Decrease greenhouse gas emissions based on 2006 – 2012 average.	Metric tons of CO ₂ e from energy and waste	159,431 metric tons CO ₂ e (baseline; average of 2006-2012 emissions)	125,807 metric tons of CO ₂ e from energy and waste
2. Public transit ridership	Increase annual transit total passenger trips per hour of operation to 25 by 2020.	Total passenger trips per hour of operation	20.59 total passenger trips per hour	13.32 total passenger trips per hour
3. MSW recycling rate	Meet or surpass EPA MSW recycling rate of 40% by 2020.	% of total waste recycled	22% of waste recycled	24% of waste recycled
4. C&D waste diversion	Achieve 75% diversion of construction and demolition (C&D) materials and debris (waste) by 2020.	% of total C&D waste diverted	64% of C&D waste diverted	83% of C&D waste diverted
5. Quality of residential recycling services	Receive an excellent or good rating from at least 75% of respondents in 2020 survey.	% of residents rating program as good or excellent in Los Alamos County Customer Survey	73% of respondents ranked as excellent or good	89% of respondents ranked as excellent or good
Sustainability Indicator	Goal	Metric	Performance (2012)	Performance (2016)
Local Government Indicators				
1. LEED certified County facilities	100% of total County facilities over 5,000 sq. feet shall meet or exceed LEED Silver certification.	% of total County facilities over 5,000 sq. feet that are LEED Silver (or higher) certified	40% of total County facilities over 5,000 sq. feet meet at least LEED Silver certification	60% of total County facilities over 5,000 sq. feet meet at least LEED Silver certification
2. County operations greenhouse gas emissions	Reduce greenhouse gas emissions from County operations by 22% or by 2,771 metric tons below the 2012 levels by 2020.	Metric tons of CO ₂ e from energy and vehicle fuel usage	12,597 metric tons of CO ₂	11,458 metric tons of CO ₂ . This is a 9% reduction in greenhouse gas emissions
3. Energy usage of County facilities	Reduce the energy usage of County facilities by 15% per square foot or 8787 million BTU's below 2012 levels by 2020.	Million BTU's of energy, includes electricity and natural gas usage	58,583 million BTU's	52,387 million BTU's. This is a 10% reduction in energy usage by County facilities
4. Water usage in County	Reduce potable water usage in Los Alamos County by 20% or 18,252 thousands of gallons below 2012 levels by 2020.	Thousands of gallons of water used by County	91,261 thousands of gallons of water	83,122 thousands of gallons of water. This is a 9% reduction in water usage by the County

Table 2: List of sustainability indicators with corresponding goals, metrics and performance

Community Indicators

Community Indicator 1: Community Greenhouse Gas Emissions

Goal: Decrease greenhouse gas (GHG) emissions based on 2006 – 2012 average.

Performance: This measure includes greenhouse gas emissions from electricity usage, natural gas usage and solid waste generation. **Figure 2** shows total energy usage, including electricity and natural gas, for Los Alamos County by customer class from 2007 to 2016. The emissions that resulted from energy usage for the same time period can be found in **Figure 3**. Greenhouse gas emissions from natural gas usage were determined by utilizing World Resource Institute (2008), GHG Protocol tool for stationary combustion, Version 4.0.

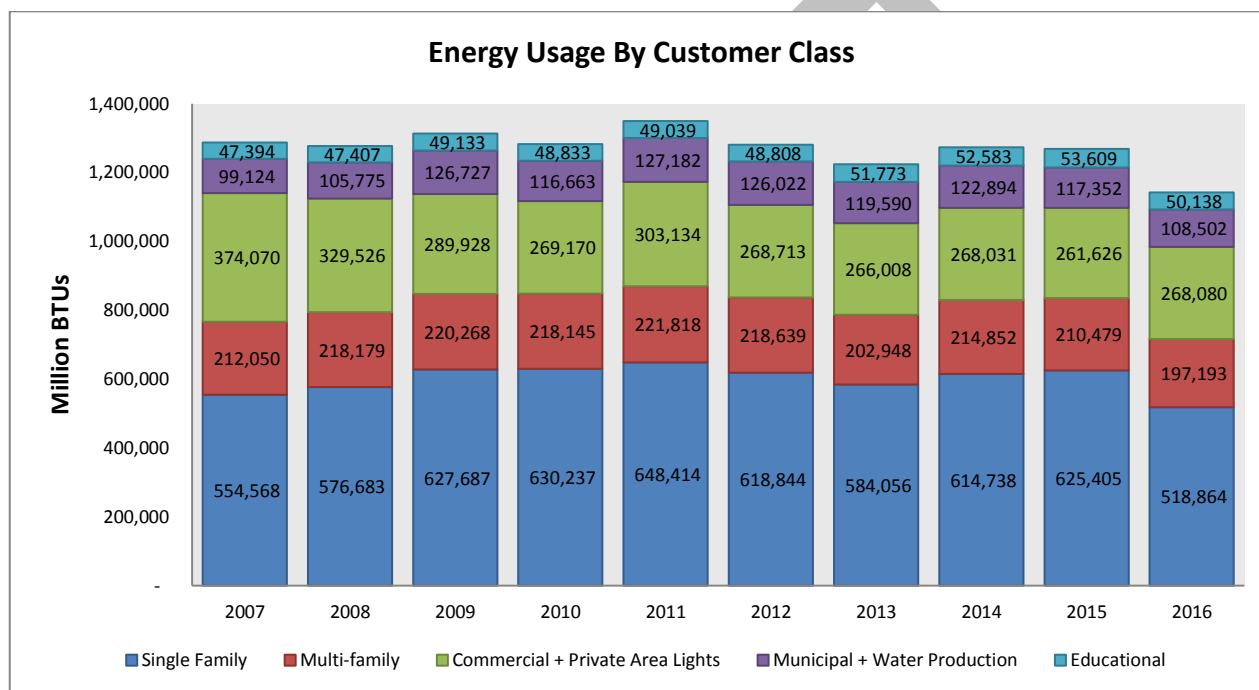


Figure 2: Los Alamos County energy usage which includes natural gas and electricity usage from 2007 – 2016.

Greenhouse gas emissions from solid waste include the emissions from the disposal of municipal solid waste generated by the community and LANL; this does not include the disposal of any non-routine waste from LANL. When waste is deposited in the landfill it breaks down over a 20-plus year timeframe and emits greenhouse gases, specifically methane.

When determining emissions generated from solid waste stored in landfills there are two commonly used methodologies: (1) ongoing emissions estimation and (2) cumulative emissions estimation.

- 1) The ongoing emissions estimations use a first-order decay model to estimate the actual greenhouse gas emissions on an annual basis.
- 2) The cumulative emissions estimation sums the lifetime emissions of waste and assigns it to the year of disposal; therefore, creating one number that summarizes the environmental impact of waste disposal.

This plan utilizes the cumulative emissions estimation methodology. Emissions from solid waste were found using the

methodology presented in Chapter SW.4 Community-Generated Waste Sent to Landfills of the ICLEI Community Protocol. The International Council for Local Environmental Initiatives (ICLEI) is a global network of local governments dedicated to sustainability, resilience, and climate action. Waste from Los Alamos County is currently shipped a distance of 89.4 miles to landfills in Rio Rancho, NM.

Figure 3 summarizes Los Alamos County greenhouse gas emissions from electricity usage, natural gas usage and the disposal of solid waste. The seven year average usage is 159,431 metric tons of carbon dioxide equivalents. The County, in conjunction with LANL, has recently undertaken two major renewable energy projects that enable the County to receive electricity without creating harmful greenhouse gas emissions. The first project was the installation of a low-flow turbine at the Abiquiu hydroelectric facility. This turbine generates an additional 6,468 MWH of electricity from a renewable energy source on an annual basis. The other renewable energy project was the installation of a 1 MW solar array on the closed Los Alamos County landfill through a partnership with the Japanese agency NEDO.

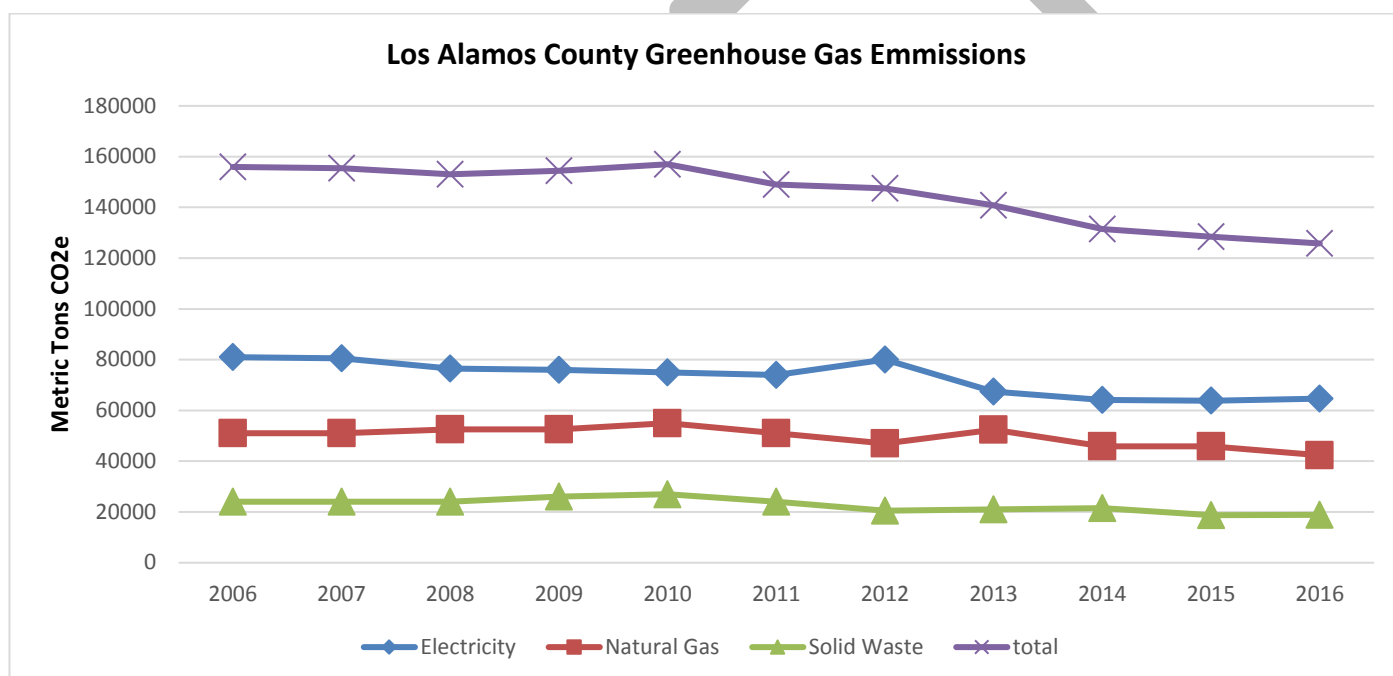


Figure 3: Los Alamos greenhouse gas emissions in metric tons of Carbon Dioxide equivalents for 2006 – 2016.

Strategy: The strategy for decreasing greenhouse gas (GHG) emissions is inherently tied to reducing solid waste along with reducing electricity and natural gas usage. Additionally the county should continue to shift the power supply from hydrocarbon electricity sources toward renewable energy sources.

Community Indicator 2: Public Transit Ridership

Goal: Increase annual transit total trips per hour of operation to 25 by 2020.

Performance: Total trips per hour is an industry standard used to measure the efficiency and impact of public transit systems. It is determined by dividing the annual ridership by the hours the buses are on route. Atomic City Transit began service in October 2007 and had steady ridership through 2013. Ridership increased 120% from approximately

255,000 riders in 2007-2008 (the first full year of operation) to over 562,000 in 2011-2012. Services have also expanded with the addition of AM/PM peak service in 2008, the addition of routes that serve the Eastern Area neighborhoods and Pajarito Cliffs Site in 2010, and seasonal shuttle service to Bandelier National Monument. From the first full year of operation through 2013, the number of passenger trips per hour of operation has been approximately 20. For 2014 and subsequent years the ridership numbers have decreased, but are still above the national average as depicted in **Figure 4**. The performance indicator from July 1, 2015, through June 30, 2016, is 13.32 passenger trips per hour. Although the trend is a decrease in trips per hour since 2013, reaching double-digits in passenger trips per hour is considered to be a successful ridership program in the transit industry. The other important factors that can be correlated to this decrease in ridership are lower fuel prices and thus an increase in use of personal vehicles.

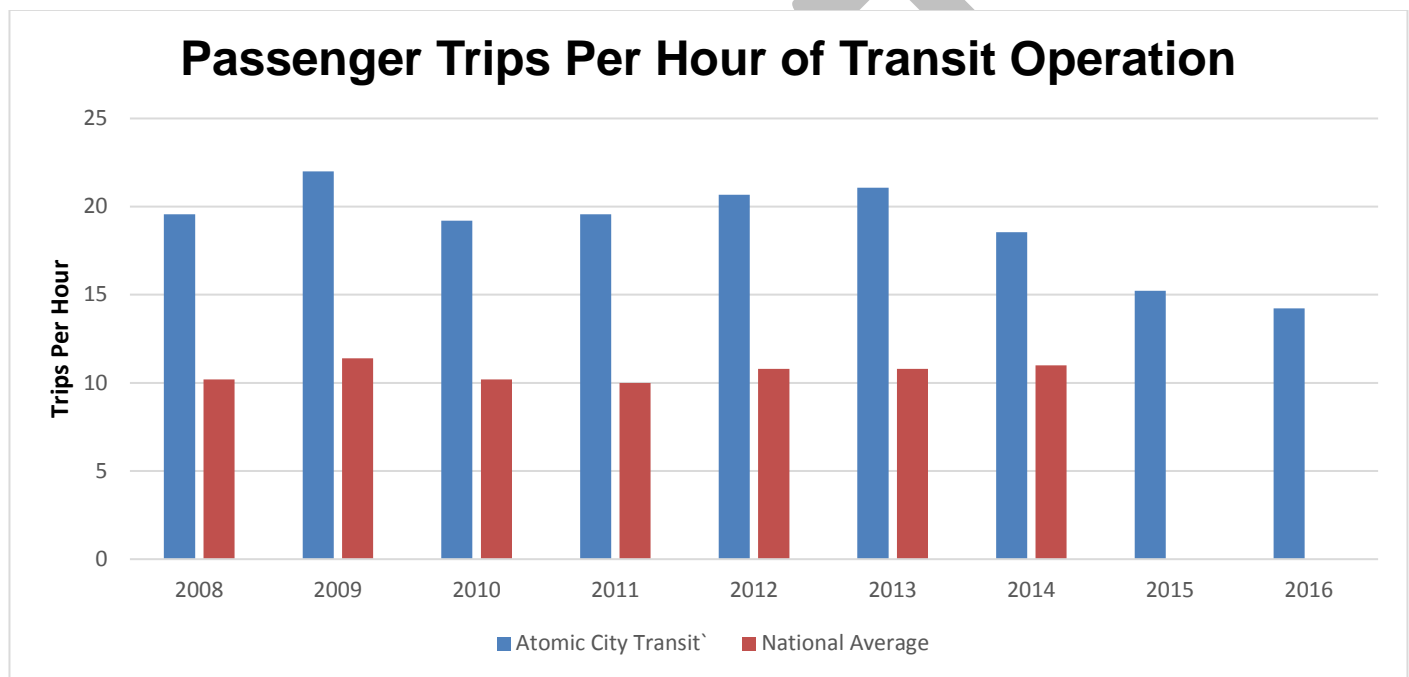


Figure 4: Atomic City Transit trips per hour compared to the national average. Atomic City Transit ridership includes fixed-route and dial-a-ride services. National average comes from the 2016 Transit Fact Book, Small Urban & Rural Transit Center, 2015 and 2016 data not yet available.

Strategy: In 2014 the County added services that have reduced the amount of personal vehicle miles travelled. The County also partnered with the National Park Service to provide ongoing shuttle service to Bandelier National Monument, which is provided annually from Memorial Day weekend through the end of October. The County is also focused on increasing rider amenities. New bus shelters have been installed throughout the community, with more planned in the future. Automated vehicle location and analytic software was implemented beginning in 2014 to assist transit users in connecting with transit services, as well as transit management in measuring performance and making adjustments to the service where needed – all of which is designed to increase the passenger trips per hour sustainability indicator. Technology advancements that had been implemented in late 2015 include ACTracker on the Atomic City Transit website, which provides real time transit data, including the locations of buses on their routes and a Trip Planner that enables individuals to plan their own trips using a variety of modes; digital message displays at major transit stops; MyStop mobile app on both Apple and Android devices; QR Code on bus stop signs, which leads users to the website; and, for those who do not have a smart phone, SMS texting capability at bus stop signs to obtain

next-bus information at individual stops. A comprehensive transit study and five-year plan was completed by an outside contractor and approved by the County Council early in 2015. The plan made recommendations for route and schedule adjustments, as well as vehicle requirements for the service, and was implemented in early 2016.

Community Indicator 3: MSW Recycling Rate

Goal: Meet or surpass EPA MSW Recycling Rate of 40% by 2020.

Performance: Environmental Services handles all waste and recycling functions for the community of Los Alamos and processes the majority of routine municipal solid waste (MSW) and recycling from Los Alamos National Laboratory. In 2012, Los Alamos County recycled 17% of all municipal solid waste received. Since 2012, the County has taken action to increase recycling and waste diversion. In 2014, the County expanded the mixed recycle program to include plastics #1 through #7, instead of only plastics #1 and #2. In 2014, the recycle rate was reported to NMED as 19.1%, and increased to 24.4% in 2016. The expansion of the mixed recycle program is expected to have a significant impact as now there are more opportunities to recycle plastic products. The County's recycle rate is still below the national average recycle rate of 34.6%.

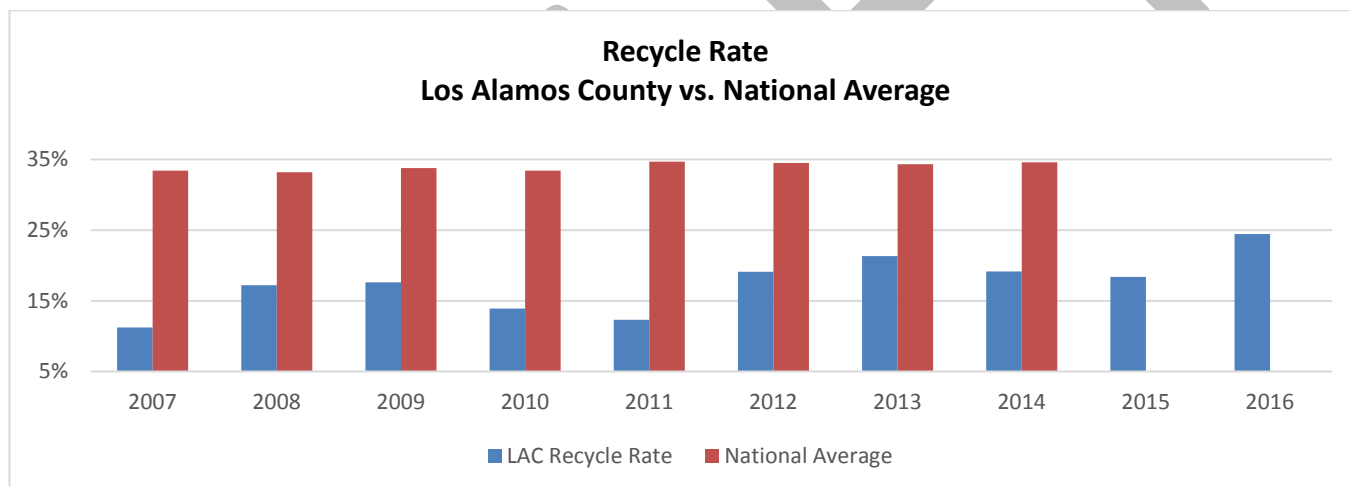


Figure 5: Los Alamos County recycling as percentage of total waste generated from 2007 to 2016 versus national average for same time period, 2015 and 2016 data not yet available. This measurement does not include Waste Water Treatment Plant (WWTP) sludge, asphalt, concrete, clean dirt, or construction and demolition debris.

To determine the recycle rate, the following categories of recycle material are included: residential curbside recycling, commercial recycling, Los Alamos National Laboratory recycling, recycling at the Sullivan Field and Overlook Park convenience centers and recycle received at the Eco Station. The scope of materials included in the standard Municipal Solid Waste (MSW) recycle rate include: routine solid waste, food scraps, glass containers, lead-acid batteries, aluminum/tin/steel cans, other ferrous metals, consumer electronics, household hazardous waste, light bulbs, brush and wood pallets, tires, paper product, plastics #1 through #7, and oil. This measurement does not include Waste Water Treatment Plant (WWTP) sludge, asphalt, concrete, clean dirt, or construction and demolition debris.

Strategy: In order to effectively increase the recycling rate in Los Alamos County it is important to have an understanding of the waste stream. Two waste audits were performed in April 2016 and September 2016 to better

understand the composition of the waste stream and to identify the materials that make up a large percentage of the waste stream that can help direct effective diversion strategies. **Table 3** shows the results of the audit performed in April 2016.

SORTED MATERIALS	March 25, 2016 Weight in (lbs.)	September 29, 2016 Weight in (lbs.)	Total Weight (lbs.)	Percentage of Material Total
Total Sorted Waste	6,280	8,170	14,450	100%
Food	880	1,580	2,460	17%
Yard Trimmings	720	1,340	2,060	14%
Mixed Recycling	400	600	1,000	7%
Glass	400	475	875	6%
Cardboard	180	20	200	1.4%
Trash	3,700	4,025	7,725	53%

Table 3: Results of waste audits performed on residential municipal solid waste.

Figure 6 is a breakdown of the U.S. waste stream for 2010. More than half of the waste typically generated falls into the categories of paper, food scraps, and yard trimmings; making these materials important areas to focus recycling efforts. Other opportunities to explore are incentive based programs such as RecycleBank as well as continue to educate the public regarding reduce, reuse and recycle.



The reestablishment of a composting program in Los Alamos County has recently enabled the County to better capture organic yard trimmings. In 2013, the County implemented a fully functioning windrow composting facility in Bayo Canyon at the site of the old wastewater treatment plant.

The windrow composting facility has the potential to provide opportunities to expand beyond organic yard trimmings and accept food scraps which will keep more materials out of the landfill and further decrease greenhouse gas emissions. The County will continue to investigate the addition of food scrap to the composting stream to ensure it will not negatively affect the quality of the finished compost product and/or cause operational problems. A food scrap composting program could also accept soiled paper, which is not currently being recycled.

The County also worked to increase local business participation in the recycling program. An analysis was

performed, identifying a handful of businesses that were estimated to generate a decent amount of recyclables who were not recycling due to cost. In response, the County decreased the commercial recycling rates to incentivize more commercial recycling. Outreach and education to businesses informing them about these adjusted rates and the benefits of recycling will continue.

The County glass drop-off recycle program started in late September 2012, and has certainly helped increase the recycle rate. Initially, the glass recycle program was estimated to divert 100 tons of glass from the waste stream on an annual basis. In 2012, the County recycled 54.81 tons of glass, by 2016, glass recycling increased to 194.38 tons. The glass is crushed and then given away for free for use by residents or non-residents in landscaping and other projects. The County also uses the crushed glass in a variety of different projects including fill material for roads for street projects

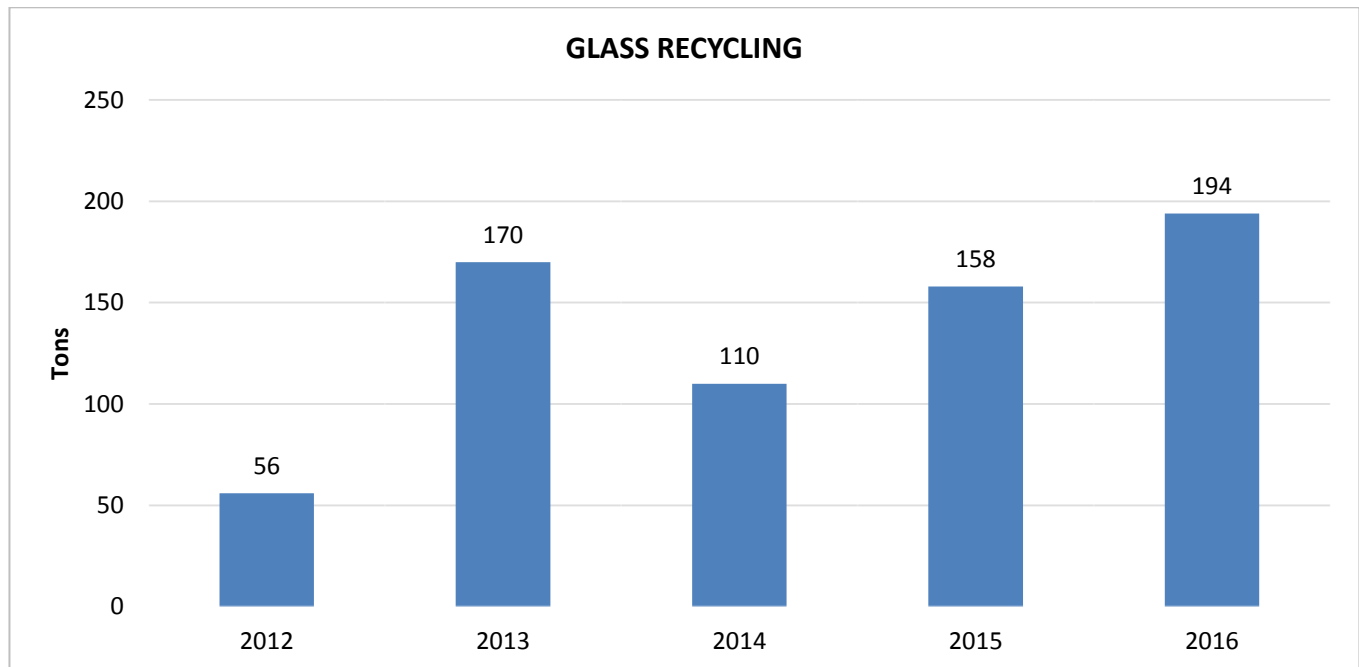


Figure 7: Total amount of glass recycled in tons from 2012 – 2016. Glass is sent to Santa Fe and crushed into cullet for landscaping and used as fill for other projects.

The public was asked to prioritize other possible strategies to reach the goal of a 40% recycling rate by 2020. Input was collected during two public meetings and through an online survey, **Table** shows the results.

Rating	Recommended Strategy	Total Score
1	Increase materials accepted in curbside mixed recycling	100
2	County reuse center	96
3	Save-As-You-Throw (SAYT)	72
4	Curbside collection of organic yard trimmings	71
5	Mandatory commercial recycling	70
6	Commercial glass recycling pickup	64
7	Landfill ban	19

Table 4: Results of prioritization exercise in which public was asked to rank their three favorite strategies to reach recycling goal.

The County recently pursued the recommended strategies rated #1 and #2 in Table 4. A new Material Recycling Facility was constructed in Albuquerque that accepts commingled materials including plastics #3 through #7, paperboard, aluminum and tin cans and mixed paper products. In 2014, Los Alamos County expanded the list of materials accepted in curbside mixed recycling including plastics #1-#7, aluminum and tin cans, and mixed paper products. The County also opened a reuse center located at the Eco Station. The reuse center accepts all gently used

items and is another opportunity to divert waste from the landfill. Residents can place items for reuse such as tires, old sewing fabric, dishes and furniture. Other residents can collect items from the reuse area free of charge.

Recommended strategy #3, Save-As-You-Throw (SAYT), has been reviewed briefly by the Environmental Sustainability Board (ESB) and requires more research and analysis as well as public comment. A SAYT program charges variable rates dependent upon the amount of waste generated by each customer, thereby financially incentivizing waste reduction. SAYT programs have been successfully adopted in cities across the country and around the world and are found to be a very effective means of increasing waste diversion. The cities who have adopted the SAYT strategy have realized a 50% waste reduction. The County and ESB are currently analyzing the option of switching to a SAYT system. The County and ESB will utilize the results of the prioritization exercise in future program planning and development.

Recommended strategy #4, curbside collection of organic yard trimmings, was approved by County Council in February 2017 and the program is expected to roll out at the beginning of FY19. This program will eliminate the quarterly brush and bulk item collection program and is expected to significantly reduce the amount of organic yard trimmings entering the waste stream which is currently 14% or 1,017 tons of total material sent to landfills.

Community Indicator 4: Construction & Demolition Waste Diversion

Goal: Achieve 75% diversion of construction and demolition (C&D) materials and debris by 2020.

Performance: The Eco Station receives the majority of the construction and demolition materials generated throughout the County and within the LANL complex. In 2012, approximately 64% of construction and demolition materials was diverted from the landfill. By 2016, approximately 83% of construction and demolition waste was diverted from the landfill. The concrete and asphalt were crushed and reused in a variety of construction projects including roads and streets projects. To calculate the C&D diversion rate the following materials are included: C&D debris, asphalt, concrete, shingles, gypsum (drywall), and carpet.

Strategy: Environmental Services will evaluate the current marketing approach to target construction contractors to expand the customer base and increase all opportunities to capture C&D materials at the Eco Station. The County offers a discounted tipping fee of \$5.00 per ton for clean asphalt and concrete. As a result of marketing and financial incentives, the customer base and C&D diversion rate is expected to increase and bring the County closer to achieving a 75% C&D diversion rate. The Environmental Sustainability Board is investigating other opportunities to divert C&D waste such as roof shingles and lumber.

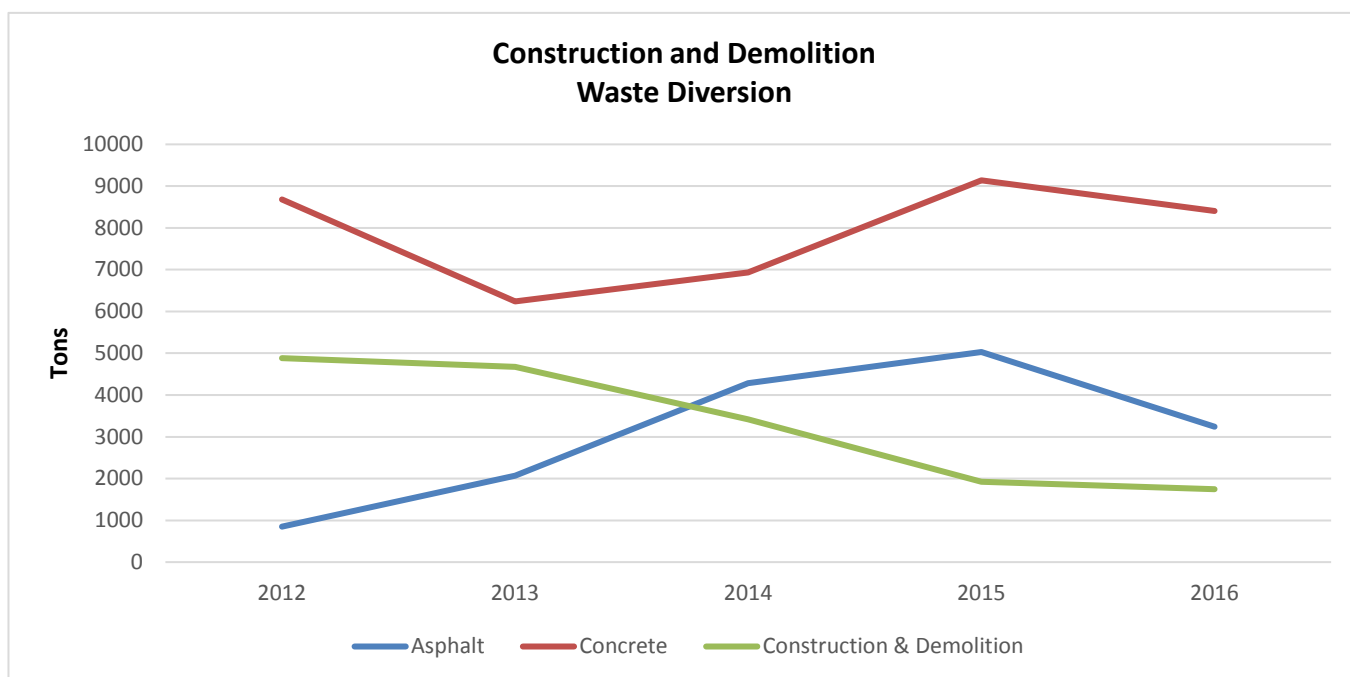


Figure 8: Total asphalt, concrete and construction & demolition disposed of at Eco Station from 2012 – 2016.

Community Indicator 5: Quality of Residential Recycling Services

Goals: Receive an excellent or good rating from at least 75% of respondents in 2020 survey.

Performance: Performance for this measure is based on responses to the following statement in the community survey conducted every other year: Quality of residential recycling services. **Table 5** shows citizen responses to the statement in the 2010 and 2012 survey.

Do you feel the quality of each item is:	2010	2012	2014	2016
Excellent	16%	12%	36%	46%
Good	50%	61%	52%	42%
Fair	24%	22%	10%	7%
Poor	8%	5%	1%	1%

Table 5: Responses from 2010 to 2016 community survey question regarding the quality of the residential recycling services

Before 2014 Los Alamos County only accepted plastic #1 and #2, paper goods (newspaper, office paper, magazines, etc.), aluminum cans, and corrugated cardboard for recycling. In 2014, with the construction of the Friedman Recycling facility in Albuquerque the County was able to add plastics #3 - #7 as well as ridged plastic toys, hard/soft back books, phone books, and cereal/cracker boxes. This change increased the citizen satisfaction with residential recycling services and brought us well above the goal of 75% of residents rating the quality of residential recycling services as excellent or good.

Strategy: County staff will continue to work collaboratively with community groups to increase awareness and citizen education in terms of recycling. Over the past several years the County has had great success partnering with community groups to develop new programs and increase the effectiveness of existing programs. The work of County

government teams focused on the topic of sustainability will also assist greatly in increasing awareness internally, and generating more educated employees who can interact with the community. The publication and annual updates to this document and the Department of Public Utility's Energy and Water Conservation Plan will be integral in raising citizen awareness and participation in the community sustainability programs.

Los Alamos County Local Government Indicators

Due to many recent changes to County facilities it was determined that in order to accurately set local government goals 2011 should be used as the baseline year for facilities-related indicators. For non-facility related measures 2006 is utilized as the baseline.

Local Government Indicator 1: LEED Certified County Facilities

Goal: 100 percent of new County facilities over 5,000 sq. feet will meet or exceed LEED Silver certification.

Performance: Leadership in Energy and Environmental Design (LEED), is an internationally recognized green building certification system developed by the US Green Building Council. With the completion of the Judicial Complex and Pajarito Cliffs Site in 2010, approximately 40% of the total square footage of County facilities was at least LEED Silver Certified. The Pajarito Cliffs Site was awarded LEED Gold and the County will continue to strive towards LEED Gold when cost effective. In 2015, the County completed construction of the Pajarito Environmental Education Center (PEEC) a 6,000 square foot building which was awarded LEED Gold certification. In 2016, the Los Alamos Community Building (now the Los Alamos Teen Center) was remodeled and is working toward LEED Silver Certification. Due to the Environmental Sustainability Initiative, the County increased the percentage of total building square footage that is LEED certified from 0 to 60%.

Strategy: All new County buildings over 5,000 square feet will meet or exceed the LEED Silver building standards adopted by the County Council. As old buildings are replaced, LEED Silver certified or better facilities will take their place.

Local Government Indicator 2: County Operations Greenhouse Gas Emissions

Goal: Reduce greenhouse gas emissions from County operations by 22% below 2011 levels by 2020.

Performance: This measure includes emissions from fuel usage in County vehicles, and electricity and natural gas usage in County operations, **Table 6**. One common measure that was not included is emissions from waste due to the fact that there is no accurate way to ascertain County government waste from total County waste figures.

		Electricity (MWH)	Natural Gas (MMBTU)	Gasoline (Gallons)	Diesel (Gallons)	Total Emissions
2011	Usage	10,084	36,501	163,762	141,594	11,090
	Emissions (Metric Tons)	5,899	2,166	1,441	1,584	
2012	Usage	11,014	37,581	183,378	167,164	12,597
	Emissions (Metric Tons)	6,881	2,233	1,613	1,870	
2013	Usage	10,628	42,725	151,487	122,065	11,877
	Emissions (Metric Tons)	6,640	2,539	1,333	1,365	
2014	Usage	9,977	38,165	144,245	131,490	11,241
	Emissions (Metric Tons)	6,233	2,268	1,269	1,471	
2015	Usage	9,779	32,500	143,097	145,507	10,927
	Emissions (Metric Tons)	6,109	1,931	1,259	1,628	
2016	Usage	9,435	32,952	153,035	174,324	11,458
	Emissions (Metric Tons)	6,130	2,180	1,346	1,802	

Table 6: County electricity, natural gas and vehicle usage and the resulting greenhouse gas emissions for 2011 - 2016.

Through the formation of the Green Team, the County has created a centralized body to work on developing policies and implementing specific sustainability initiatives to reduce energy and fuel usage. The team is comprised of County employees from a wide range of County departments and divisions tasked with creating a more sustainable County government. This team has also spawned a new team focused specifically on greening the County fleet. This internal team, combined with ideas and support provided by the Environmental Sustainability Board will ensure that the sustainability efforts of the County continue to move forward.

Strategy: While buildings play a significant role in energy usage, they also play a significant role in greenhouse gas emissions. Therefore, when focusing on reducing emissions, the County must utilize the strategies mentioned in the previous section focused on the energy intensity of facilities. Another approach the County is pursuing is the installation of on-site renewable energy systems at County facilities. On-site renewable energy systems generate electricity from a renewable source such as sun or wind, and result in no greenhouse gas emissions. These sources can be used in place of carbon intensive electricity that results in high levels of greenhouse gas emissions. On-site renewables in the form of solar thermal panels to generate hot water are currently in use at the new Justice Center, Animal Shelter and at the Eco Station.

Local Government Indicator 3: Energy Usage of County Facilities

Goal: Reduce the energy usage of County facilities 15% per square foot below 2011 levels by 2020.

Performance: Energy usage is a measure of the total annual amount of purchased energy used in County facilities; this includes natural gas and electricity, **Figure 8**. In 2012, County facilities utilized a total of 72,907 million BTU's of energy; 46% from electricity and 54% from natural gas. This was a 6% increase from the 68,844 million BTU's of energy used in 2011. In 2014, County facilities utilized a total of 70,168. This is a 4% decrease from the 72,907 million BTU's of energy; 45.6% from electricity and 54.4% from natural gas used in 2012. In 2016, County facilities utilized a total of 65,132 million BTU's of energy; 46.4% from electricity and 50.6% from natural gas. This is a 5% decrease from the

70,168 million BTU's of energy used in 2014. Total energy use reduction from 2011 to 2016 is 3.5%

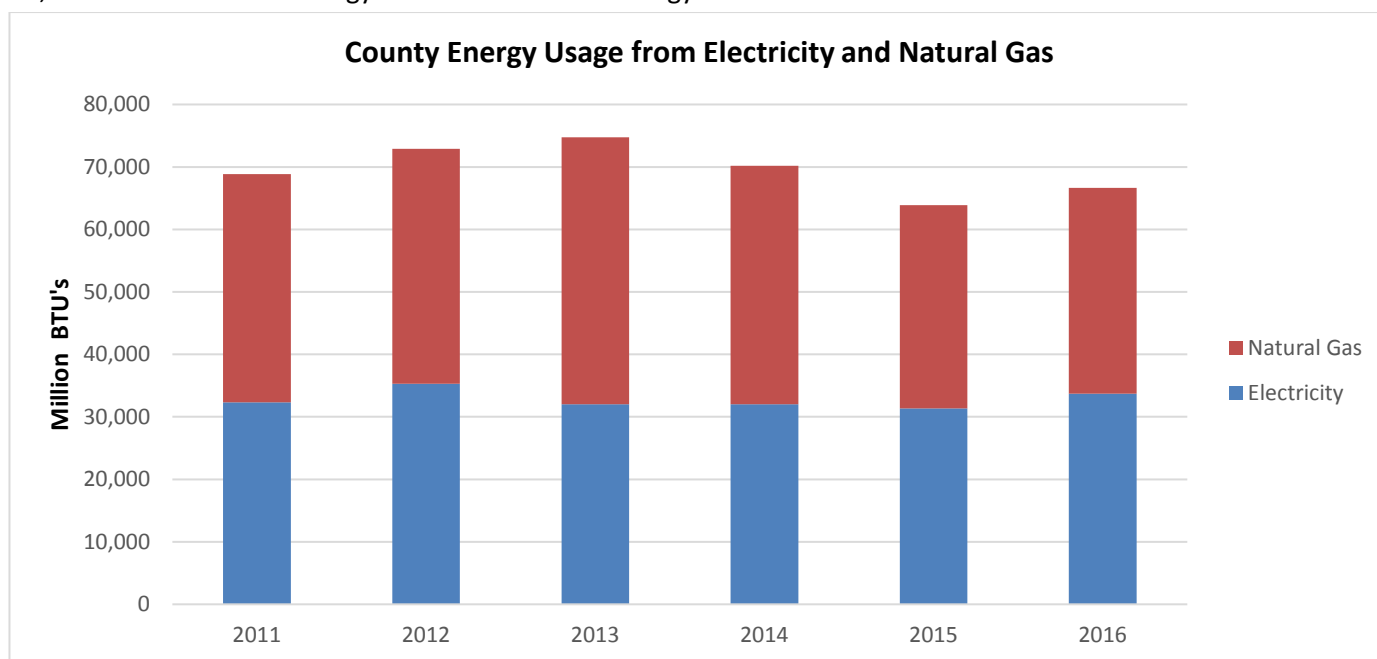


Figure 9: County facilities energy usage in millions of BTU's 2011 - 2016

One policy that will continue to greatly assist in minimizing emissions resulting from energy usage is the County Green Building Policy. This policy reduces energy usage by ensuring that all new County facilities are built in a way that maximizes energy efficiency and promotes alternative transportation. The County also performed building assessments and energy audits on all county facilities expected to be in operation into the foreseeable future. These audits identified approximately 50 potential modifications and energy management changes that have a simple payback of less than ten years. Implementing these changes will greatly reduce building energy usage and save the County money.

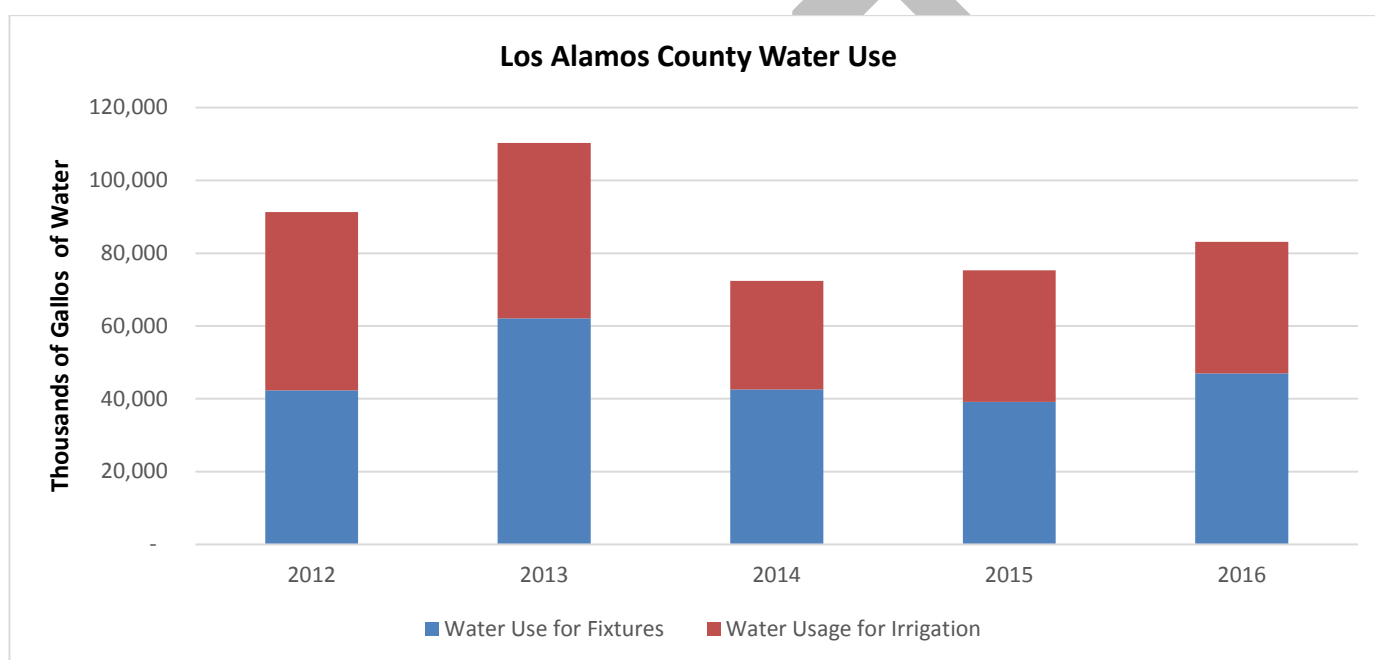
Strategy: The County must ensure that the Green Building Policy continues to be implemented, thereby ensuring new facilities are energy efficient. In terms of existing facilities, the County needs to enact the energy saving measures identified in the recent energy audits. These energy saving measures may come with a high upfront cost, but all identified measures will pay themselves off within ten years and result in more efficient and greener County infrastructure. The implementation of these energy savings measures in conjunction with the building assessment strategy used by the County will ensure existing facilities are performing efficiently.

Creating energy efficient facilities is only part of the solution since it is the behavior of building occupants that leads to a significant portion of energy usage in County facilities. Therefore, the County will continue to educate its employees in order to reduce inefficient behaviors, such as reminding County employees to turn off their computers at the end of the work day in order to help reduce electricity usage. The amount of education and information disseminated to County employees will increase, spearheaded by the Green Team. Changing wasteful and inefficient behaviors such as leaving the light or computer on when not in the office, or using a space heater during the cooler months, can have a noticeable impact on energy usage, and can also help develop behaviors in employees that will save them energy and money at home.

Local Government Indicator 4: Water Usage by County

Goal: Reduce potable water usage in Los Alamos County by 20% below 2012 levels by 2020.

Performance: In 2012, the County used 42,337 thousands of gallons of potable water by water fixtures and 48,923 thousands of gallons of potable water were used for irrigation of County parks and other green space. In 2016, 46,972 thousands of gallons of potable water was used by water fixtures and 36,142 thousands of gallons of potable water were used for irrigation of County parks and other green space. This is a 2% increase of use by water fixtures and a 26% decrease from use for irrigation. The Parks Division continues to take proactive measures to help minimize the water needs per acre of grass. Frequently aerating grassy areas and planting grass species best fit for the local environment ensure that a beautiful landscape is created while minimizing water use.



Strategy: Reduce the amount of water used by indoor water fixtures and for irrigation through the installation of timers and evapo-transpiration sensors, and expand the availability of an effluent water supply system that will increase the acreage that can be irrigated with effluent water. Reducing water use will require a thorough facility water audits and irrigation audits in order to identify potential areas to be converted from high water use to low water use without negatively affecting community usage of facilities and/or significantly increasing labor requirements.

Plan Update Process

A report will be published every two years collaboratively by the Environmental Services Division and Environmental Sustainability Board, updating the County's progress towards the established goals. The report will contain updates on the sustainability indicators, provide information on accomplishments and cite any necessary adjustments to strategy as a result of unsatisfactory performance. The Los Alamos County Environmental Sustainability Plan is meant to be a very dynamic document allowing for the addition of new goals or significant changes to current goals. Critical analysis of goals and strategies on a biennial basis by the Environmental Services Division and Environmental Sustainability Board will ensure that issues of environmental sustainability are continually at the forefront of importance in Los Alamos County, guiding the community toward a sustainable future.



County of Los Alamos

Staff Report

September 21, 2017

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Angelica Gurule

Legislative File: 9931-17

Title

August 2017 Residential Sustainability Report

Recommended Action Motion

N/A

Body

The ESB will review and discuss the August 2017 Residential Sustainability Report.

Attachments

D - Residential Sustainability Report - August 2017



Residential Sustainability Report

Service Period: August 2017

Recyclables Collected: 114.42 tons

Trash Collected: 496.99 tons

Compostable Materials Collected: 8.72 tons

Total Material Collected: 620.13 tons



LOS ALAMOS

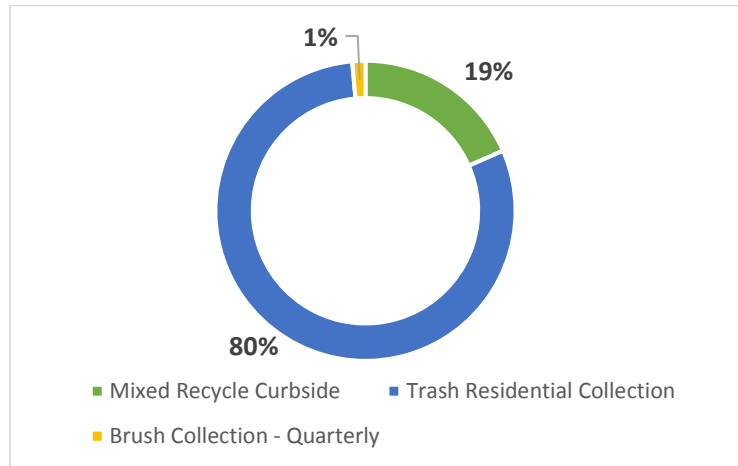
Monthly Collection Report

July Diversion Rate: 24%

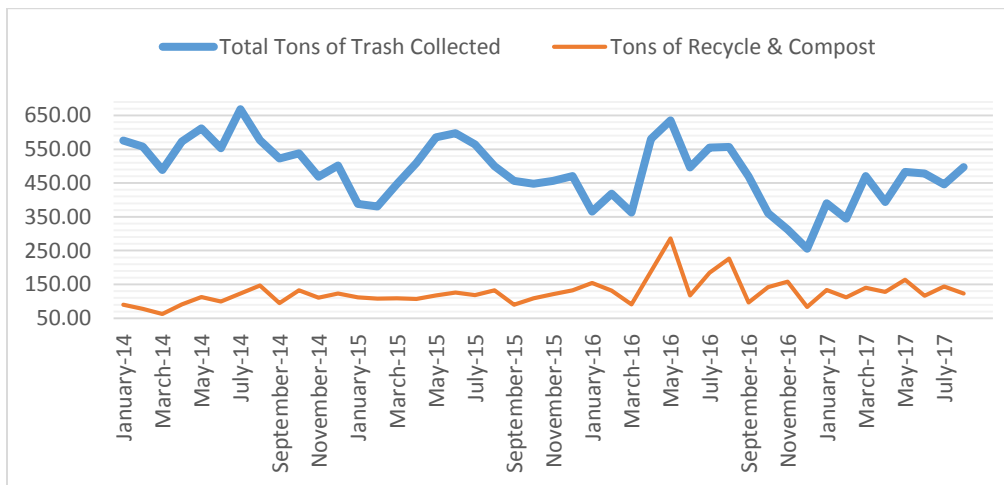
August Diversion Rate: 20%

A 18% Decrease in Diversion

The *diversion rate* is the percent of materials recycled and composted.



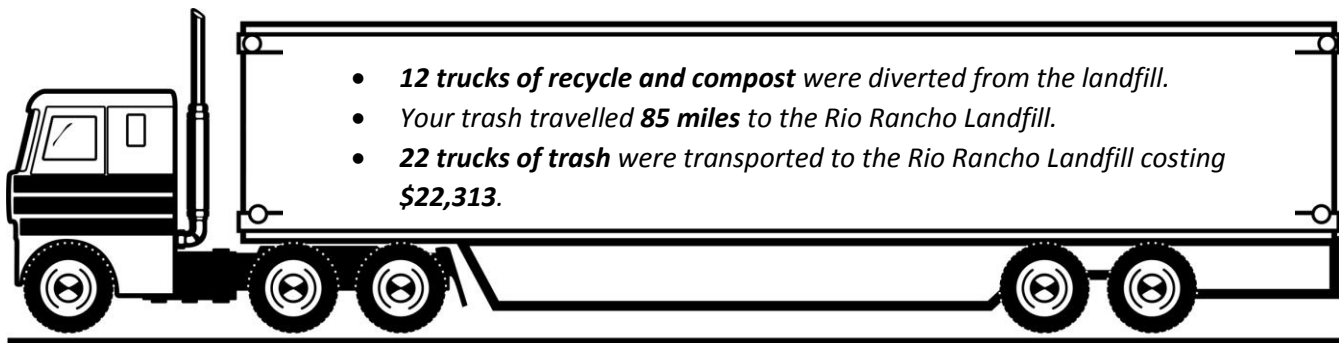
Month by Month Recycling Comparison



In 2007, 82% equalling 1.8 million tons of ewaste (various electronics e.g. TVs, cell phones, computers etc) ended up in landfills.

In 1998, the National Safety Council study estimated about 20 million computers became obsolete within 1 year. In 2007, that number increased to 40 million.

Electronic waste total approximately 2% of the waste stream in the U.S.





County of Los Alamos

Staff Report

September 21, 2017

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Angelica Gurule

Legislative File: 9934-17

Title

Environmental Services Update

Recommended Action Motion

N/A

Body

1. The Request for Proposals (RFP) for Solid Waste Transportation and Disposal Services was advertised September 3, 2017, and closes on September 20, 2017.
2. The Invitation for Bid (IFB) for Landfill Gas Collection and Control System Construction Project was advertised on September 10, 2017 and closes on October 6, 2017.
3. Volunteers needed for 3rd Annual Green Team Event to be held October 17, 2017, 9:00am to 12:00pm at Municipal Building Foyer. It is a community event.
4. ESB needs to develop a committee for the Recycle Fashion Show which is scheduled for Friday, November 3rd at Fuller Lodge.
5. Volunteers needed for recycle audit scheduled for Friday, September 22 and 29th, in White Rock. The goal is to audit ~500 homes.
6. Need to develop questions to ask other communities regarding SAVE AS YOU THROW.
7. Hand out FY18 ESB Work Plan and Schedule

Attachments

F- FY18 ESB Work Plan

G- FY18 ESB Work Plan Schedule

H - Invitation to Green Team Event



LOS ALAMOS
where discoveries are made

FY18 Work Plan for Los Alamos County Boards and Commissions

(Fiscal Year 2018: July 1, 2017 – June 30, 2018)

Board and Commission Name: Environmental Sustainability Board

**Date prepared: January 19, 2017 Date approved by Council: 6-6-17
Prepared by: Angelica V. Gurule**

**This work plan will be accomplished in the following time frame:
From: July 1, 2017 to June 30, 2018**

Chairperson: John Bliss Term: July 31, 2018

Members and terms:

John Bliss	July 31, 2018
Sarah Terrill	July 31, 2018
James Robinson	July 31, 2017
Sue Barns	July 31, 2018
Rebecca Chamberlin	July 31, 2017
Danny Katzman	July 31, 2017
Erik Loechell	July 31, 2018

Department Director: Philo S. Shelton III

Work plan developed in collaboration with Department Director?(Y/N?) Yes

Staff Liaison: Angelica Gurule

Administrative Support provided by: Public Works Staff

Council Liaison: Pete Sheehy Reviewed by Council Liaison? Yes

1.0 Provide a brief Summary of your Board or Commission's activities over the past twelve months. Please describe your Board or Commission's accomplishments and identify constraints. List any "lessons learned" and identify the greatest challenges faced by the Board or Commission.

Researched and identified alternatives regarding the brush and bulk collection program
Conducted public hearings regarding brush and bulk item collection
Presented final recommendation to County Council regarding brush and bulk item collection
Evaluated a third bin option for green waste collection
Conducted two residential waste stream audit
Deployed bear resistant dumpsters and bear resistant hardware for residential roll carts
Hosted presentation regarding bear awareness
Created definition of environmental sustainability
Conducted annual LA Clean Up Day
Updated and presented the Environmental Sustainability Plan to County Council
Conducted Recycle Fashion Show
Awarded fourth and fifth annual Business Recycler of the Year
Awarded sustainability oriented science fair projects
Performed public outreach at Energy Efficiency Expo, LAC Green Team Event, Earth Day and Science Fest
Supported the Environmental Sustainability Initiative
Investigated recycle incentive programs
Investigated food waste diversion opportunities
Investigated Pay as You Throw
Investigated waste to energy concepts
Hosted a public information session with Friedman Recycle Company
Conducted sustainability art contest with Los Alamos Public Schools
Provided input to staff on new household hazardous waste collection program
Took training on Open Meeting resolution
Worked with LAPS to educate and implement waste prevention and diversion programs
Provided input to staff on sustainability issues related to CIP projects
Hosted presentations on energy use in LAC buildings, Famine to Feast program, EPA webinars on recycling and food waste, Project Green Challenge, herbicide usage in LAC, LAC Recreational Bond Projects, and landfill methane emissions

2.0 Describe the future work plans for this Board or Commission using the following items and showing the relationship to those items: *(Please remember that Council approval of this work plan does not constitute official Council approval of proposed projects, assignments, or anticipated recommendations included in this work plan that have budget implications.)*

2.1 List any special projects or assignments given to this Board or Commission by Council or the Department director:

- Host annual LA Clean Up Day
- Continue researching pay as you throw
- Implement Bike to Work week
- Investigate recycle incentive based programs such as Recycle Bank
- Contribute, as appropriate, to the implementation of the new Green Waste Collection program (3rd bin)

2.2 List the guiding documents/plans (with approval or revision dates listed) used by this Board or Commission.

Environmental Sustainability Initiative

Environmental Sustainability Plan

NMED Solid Waste Rules

Los Alamos County Operation Plan

The Environmental Services Division prepares the NMED Annual Report that is an overview of all the waste streams and corresponding weights. For example waste, construction and demolition, electronics, glass, etc. The reports are due February 14th of each year.

2.3 Other projects/assignments proposed by the Board or Commission: *(Any projects or activities proposed in this section should be discussed with the Council Liaison prior to listing it in this work plan.)*

Update Environmental Sustainability Plan

Participate in Bear Festival to promote bear safety awareness

Develop and promote food waste minimization educational materials

Develop and implement environmental education and outreach

Monitor composting program

Research Pay as You Throw

Expand and improve Business Recycler of the Year award

Further develop partnerships with organizations such as PEEC, LAPS, and UNM-LA

Work with LAPS to educate and implement waste diversion programs including reduce, recycle, reuse and composting

Continue researching other glass recycling options

Implement Technical Widget Award which promotes sustainability

Develop Utility Bill Information Letters

Demonstrate solar photovoltaic systems

Host and potentially expand Recycle Fashion Show and form a committee of community partners to host/sponsor the event

Host workshop to create sustainable gifts and/or artwork

Investigate potential for food waste collection
Continue to investigate Waste to Energy Methods
Investigate diversion opportunities for construction and demolition debris.

3.0 Identify any interfaces for the goals/tasks in this work plan with County Departments and other Boards and Commissions. Specify the coordination required.

Continue to nurture and strengthen relationship with BPU to support energy and water conservation.
Partner with parks and recreation board on water conservation for potential splash pad features and other water features.
Continue outreach to other county boards and commissions regarding environmental sustainability.

4.0 List any special public information or involvement meetings or efforts to be conducted by this Board or Commission:

Earth Day
Bear Festival
Gordon Concert
Green Team Event
County Fair Event
Science Fest
Recycling workshops or lectures at PEEC and Los Alamos clubs

5.0 List the current subcommittees for this Board or Commission.

None at this time.

**5.1 For subcommittees with members that are not members of the parent board or commission:
List the subcommittee members and their terms.
Explain how sub- committee members are selected or appointed.
Provide a description of each subcommittee's charter or purpose.
Describe the expected duration for the subcommittee and their work plan(s) demonstrating how they support the Board or Commission:**

Attachment A: Provide a copy of your Board or Commission's "Purpose" and "Duties and Responsibilities" from Chapter 8 of the County Code:

- **Sec. 8-231. - Purpose.** The environmental sustainability board is established to serve as the central point of contact for environmental sustainability issues and as an advisory body to the county council on environmental sustainability issues.

(Ord. No. 02-078, § 2, 10-3-2006; Ord. No. 02-094, § 2, 6-10-08)

- **Sec. 8-232. - Membership, terms and qualifications.** The board shall consist of seven members. The members shall serve for staggered two-year terms beginning on August 1 and ending on July 31, except that three members on the initial board shall only serve for one-year terms.

(Ord. No. 02-078, § 2, 10-3-2006; Ord. No. 02-094, § 3, 6-10-08)

- **Sec. 8-233. - Duties and responsibilities.** The environmental sustainability board shall serve in an advisory capacity to the county council and shall have the following functions, responsibilities and duties:

- (1) Gather and provide citizen input to staff and council on ways to improve the county's environmental sustainability and on proposed environmental sustainability policies, programs and services. For this purpose, the board shall gather public input in ways appropriate to the circumstances.
- (2) Recommend ways to involve and educate the community on environmental sustainability issues. Review and comment on public involvement and information plans (PIIPs) related to environmental sustainability projects outside the department of public utilities.
- (3) Review and comment to council on environmental sustainability master plans.
- (4) Review all environmental sustainability related matters submitted to the board by council.
- (5) Coordinate with other boards as appropriate on environmental sustainability activities.

(Ord. No. 02-078, § 2, 10-3-2006; Ord. No. 02-094, § 4, 6-10-08)

Attachment B: Using the chart below, place an X in the column on the right if the Council Goal is related to the work of the Environmental Sustainability Board

Mark all that apply

Economic Vitality		
<u>Economic Vitality:</u>		
• Priority Area – Build the local tourism economy		
• Priority Area - Revitalize and eliminate blight in Los Alamos and White Rock		X
• Promote a strong and diverse economic base by encouraging new business growth		
• Collaborate with Los Alamos National Laboratory as the area's #1 employer		X
<u>Financial Sustainability</u>		
• Encourage the retention of existing businesses and assist in their opportunities for growth		

	<ul style="list-style-type: none"> Support spinoff business opportunities from LANL 	
	<ul style="list-style-type: none"> Significantly improve the quantity and quality of retail business 	
Quality of Life		
	<u>Housing:</u>	
	<ul style="list-style-type: none"> Priority Area -- Promote the creation of a variety of housing options for all segments of the Los Alamos Community, including infill opportunities as appropriate 	
	<ul style="list-style-type: none"> Priority Area -- Support development of affordable workforce housing 	
	<u>Education:</u>	
	<ul style="list-style-type: none"> Support Los Alamos Public Schools' goal of ranking among the top public schools in the nation 	
	<ul style="list-style-type: none"> Partner with Los Alamos Public Schools and the University of New Mexico – Los Alamos; and support, as appropriate, the delivery of their educational services to community standards 	X
	<u>Quality Cultural and Recreational Amenities:</u>	
	<ul style="list-style-type: none"> Implement a comprehensive range of recreational and cultural amenities that enhance the Los Alamos community 	
	<u>Environmental Stewardship:</u>	
	<ul style="list-style-type: none"> Enhance environmental quality and sustainability balancing costs and benefits including County services and utilities 	X
	<u>Mobility:</u>	
	<ul style="list-style-type: none"> Maintain and improve transportation and mobility 	

Quality Governance		
	<u>Operational Excellence:</u>	
	<ul style="list-style-type: none"> Priority Area – Implement the Comprehensive Plan with an emphasis on neighborhoods and zoning 	
	<ul style="list-style-type: none"> Priority Area – Simplify permit requirements and improve the overall development and building code processes to become easier to work with for all participants 	
	<ul style="list-style-type: none"> Maintain quality essential services and supporting infrastructure 	X
	<ul style="list-style-type: none"> Invest in staff development to create a high performing organization 	
	<ul style="list-style-type: none"> Manage commercial growth well following an updated, concise, and consistent comprehensive plan 	
	<ul style="list-style-type: none"> Establish and implement a mechanism for effective Utility policy setting and review 	
	<u>Communication:</u>	
	<ul style="list-style-type: none"> Improve transparency in policy setting and implementation 	X
	<ul style="list-style-type: none"> Create a communication process that provides measurable improvement in citizen trust in government 	X
	<u>Intergovernmental Relations:</u>	
	<ul style="list-style-type: none"> Strengthen coordination and cooperation between County government, LANL, and the regional and national partners 	
	<ul style="list-style-type: none"> Actively pursue land transfer opportunities 	

ESB FY18 Work Plan Schedule

Schedule

Meeting Date	Agenda Items/Special Projects
July 2017	
	Participate in County Fair Event
August 2017	
	Contribute as appropriate to the implementatin of the new Green Waste Collection Program - Selected Brush Bin Color - Brown
September 2017	
	Save as You Throw
	C & D Recycling Presentation
	Recycle Fashion Show - Develop Committee
	Green Team Event Volunteers
	Residential Recycle Audit
October 2017	
	Solar System technology @ Eco Station
	Update Environmental Sustainability Plan
	Plan workshop to create sustinable gifts and/or artwork
	Research additional glass recycling options
November 2017	
	Select committee for recycle based initiatives RFP
	Composting program (Jeff)
	Complete draft RFP for Recycle Bank - ESB on evaluation committee
December 2017	
	Election of Chair and Vice Chair
	sustainability(compost, etc.)
	Host workshop to creat sustinble fifts and/or artwork
January 2018	
	Expand and improve Business Recycler of the Year
	Develop guidelines for Technical Widget Award
February 2018	
	Tentative County Recreative Projects - Philo Shelton/Chris Wilson
March 2018	
	Food waste collection: develop budget & define regulatory hurdles
	Call out for - Technical Widget Award which promotes sustainability
April 2018	
	Demonstrate solar photovoltaic systems @ Eco Station
	Participate in Bear Festival to promote bear safety awareness
	Participate at Earth Day Festival
	Host Clean Up LA Day
May 2018	
June 2018	
	oil heater
	Implement Bike to Work Week
	As part of science fest - Display Technical Widgets which promotes sustainability - have award ceremony

**Presentations Subject to Change

3RD ANNUAL
**GREEN
TEAM
EVENT**

10.17.17

MUNICIPAL BLDG. LOBBY

9:00 A.M. – NOON



**COME LEARN HOW YOU CAN CONSERVE,
RECYCLE, AND WORK IN A MORE
ECO-FRIENDLY MANNER EVERYDAY!**

~INFORMATION BOOTHS~

- LANL
- Smith's Marketplace
- Mesa Public Library
- Parks & Recreation
- Business Recycler of the Year
- Recycle Information
- Information Technology
- Green Team
- PEEC

**FOR INFORMATION CONTACT ANGELICA GURULE
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