



County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Agenda - Final Environmental Sustainability Board

*Lisa Bakosi, Chair; Heather Ward, Vice-Chair; Susan Barns;
Dorothy Brown; Amanda MacDonald; Warren Mazanec; and
Heidi Rogers; Members*

Thursday, July 18, 2019

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**

[12133-19](#) Approval of the June 20, 2019, Environmental Sustainability Board
Minutes

Presenters: Heather Ward

Attachments: [A - Draft ESB Minutes June 20, 2019](#)

5. **BOARD BUSINESS**

[12134-19](#) Los Alamos County Energy Use and Green House Gas Emissions
Report by Robert Gibson

Presenters: Heather Ward

Attachments: [B - Los Alamos County Energy Use and GHG Emissions
Report.](#)

[12135-19](#) Save As You Throw Update

Presenters: Heather Ward

Attachments: [C - SAYT Update July 2019](#)

6. **REPORTS**

A. **Chair's Report -Lisa Bakosi**

B. Board Member Reports**C. Liaison's Reports**

- 1). Board of Public Utilities - Sue Barns
- 2). Planning and Zoning Commission - Vacant
- 3). Transportation Board - Heather Ward/Don Machen
- 4). Parks and Recreation Board - Heidi Rogers
- 5). Community Development Advisory Board - Warren Mazanec
- 6). County Council Liaison - Antonio Maggiore

D. Subcommittee Reports

- 1). Sava As You Throw - Sue Barns
- 2). Los Alamos Public Schools Subcommittee - Angelica Gurule
- 3). Zero Waste Los Alamos - Dorothy Brown/Sara Thurgood

7. STAFF REPORT

[12137-19](#) June 2019 Residential Sustainability Report

Presenters: Angelica Gurule

Attachments: [D - Residential Sustainability Report - June 2019](#)

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

July 18, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Heather Ward

Legislative File: 12133-19

Title

Approval of the June 20, 2019, Environmental Sustainability Board Minutes

Recommended Action Motion

I move that the Environmental Sustainability Board approve the June 20, 2019, minutes as presented.

Or

I move that the Environmental Sustainability Board approve the June 20, 2019 minutes as amended.

Body

The ESB will review and approve the June 20, 2019, Environmental Sustainability Board Minutes.

Attachments

A - Draft ESB Minutes June 20, 2019



County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Minutes

Environmental Sustainability Board

Lisa Bakosi, Chair; Heather Ward, Vice-Chair; Susan Barns; Dorothy Brown; Amanda MacDonald; Warren Mazanec; and Heidi Rogers; Members

Thursday, June 20, 2019

6:45 PM

1000 Central Avenue, Council Chambers

1. CALL TO ORDER - ROLL CALL

The ESB Chair, Lisa Bakosi, called the meeting to order at 6:48 p.m.

The following members were in attendance:

Present: Board Chair Bakosi, Vice-Chair Ward, Member Barns, Member Brown, Member MacDonald and Member Rogers.

Absent: Member Mazanec

2. PUBLIC COMMENT

Lisa Bakosi thanked Philo Shelton for his support for the ESB and congratulated him on his promotion to Utility Manager.

3. APPROVAL OF AGENDA

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

The motion passed unanimously.

4. APPROVAL OF MINUTES

[12070-19](#) Approval of the May 16, 2019, Environmental Sustainability Board Minutes

Presenters: Lisa Bakosi

Attachments: [A - Draft ESB Minutes May 16, 2019](#)

A motion was made by Member Brown, seconded by Vice-Chair Ward, that the May 16, 2019 minutes be approved as presented.

The motion passed unanimously.

5. BOARD BUSINESS

[12072-19](#) Discuss Council Revisions to ESB FY20 ESB Work Plan

Presenters: Lisa Bakosi

Attachments: [C - Council Approved FY20 ESB Workplan](#)

The ESB discussed Council revisions to the FY20 ESB Work Plan related to the Board's priorities and responsibilities. County Council added a task to continue to outreach to other Board and Commissions (Parks and Recreation Board and Community Development Advisory Board) regarding pesticides and herbicide use. Task is added to ensure that the 3 boards work as a team developing a policy and public education program.

12075-19

Discuss Progress and Concerns of Zero Waste Events at Summer Concert Series

Presenters: Lisa Bakosi

Attachments: [D - Zero Waste Events Total Material Diverted](#)

The ESB discussed the Zero Waste Stations at the Summer Concert Series including public feedback, steps to improve, and reviewed total material collected and diverted.

Member Barns commended everyone who has been helping make the concerts Zero Waste, especially Environmental Services, Parks and Recreation, and volunteers.

6. REPORTS

A. Chair's Report - Lisa Bakosi

Chair Bakosi and Staff Liaison Gurule attended the Chamber Fest Banquet to announce the Zero Waste Champions of the Year. Chair Bakosi also thanked the board and Environmental Services for their hard work on all the successful events that had been happening including hosting tables at farmers market for SAYT.

B. Board Member Reports

Member Barns reminded the Environmental Services to put out a press release of the Zero Waste Champion of the Year winners.

C. Liaison's Reports

1). Board of Public Utilities - Sue Barns

Member Barns reported that the Utilities Board Chair gave the Environmental Services and the ESB kudos on spreading the word about the SAYT Open House. They had a kickoff meeting regarding the smart meter project in late May and will start installing the meters in August and September. The proposal for the 1mw solar array project will be presented and voted on at the BPU July meeting. The utility billing software will be upgraded in October and the board is concerned about possible issues with this. The quarterly conservation program was discussed for FY20. BPU approved the hire of Philo Shelton as Utility Manager.

2). Planning and Zoning Commission - Vacant

Staff Liaison Gurule commented on the old LASO site development which will be building 149 apartment units.

3). Transportation Board - Heather Ward

Public Works Director Philo Shelton reported that there will be a presentation on the "Road Diet" recommendation to the lanes on Trinity Drive from Oppenheimer to Diamond Drive.

4). Parks and Recreation Board - Heidi Rogers

No report was given.

5). Community Development Advisory Board - Warren Mazanec

No report was given.

6). County Council Liaison - Antonio Maggiore

No report was given.

D. Subcommittee and Team Reports

1). Save As You Throw Research Subcommittee- Sue Barns

Member Barns thanked everyone for being at the Open House. The event went well and she received great comments and questions. She thought the interactive poll was great. She reported that the SAYT Research Subcommittee is reaching out to other communities and that they will be putting together Frequently Asked Questions to put on the website. She also reported that there will be an open forum at the end of July.

2). Los Alamos Public Schools Team - Lisa Bakosi

Chair Bakosi reported that Chamisa Elementary School is hosting a summer institute about how to start a green team at teacher's schools. There will be a "roll up our sleeves" meeting with Superintendent Kurt Steinhaus on July 29th.

3). Zero Waste Los Alamos - Dorothy Brown

Member Brown reported Cheryl Bell is putting together a brochure about food banks and Elchin Jafarov talked about anaerobic composting and how he can expand and help the community get compost. Members of the Zero Waste team met with Los Alamos County Code Enforcement staff to discuss possible issues with backyard composting. The team is working on a School Swap in the future to help get rid of school supplies no one will use and give them to people who will use them. The Zero Waste team is also trying to promote an app called Olio to help people share food.

7. STAFF REPORT

[12071-19](#)

May 2019 Residential Sustainability Report

Presenters: Lisa Bakosi

Attachments: [B- Residential Sustainability Report - May 2019](#)

Staff Liaison Gurule discussed May's Residential Sustainability Report.

12073-19

Planning and discussion for ESB Upcoming and Past Events

Presenters: Lisa Bakosi

The ESB discussed past events and plan for upcoming events. Future events include:

July 13, 2019 - Science Fest Discovery Day

End of July 2019 - Open Forum Poll

Friday Night until August 30th - Zero Waste Stations at Summer Concert Series

8. PREVIEW OF UPCOMING AGENDA ITEMS

1 - Open Forum Poll - SAYT end of July

2 - Robert Gibson - Los Alamos Energy Use and Green House Emissions report

3 - Yard Trimming and Recycling update

4 - Apartment complex rates for access to Eco Station

5 - Standing Item - SAYT

9. ADJOURNMENT

A motion was made by Member Barns, seconded by Member Brown that the June 20, 2019 meeting be adjourned. The meeting adjourned at 7:26 p.m.

The motion passed unanimously.

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

July 18, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Heather Ward

Legislative File: 12134-19

Title

Los Alamos County Energy Use and Green House Gas Emissions Report by Robert Gibson

..Suggested Motion

N/A

Body

The ESB will receive a presentation from Robert Gibson regarding his report about Los Alamos County Energy Use and Green House Gas Emissions Report.

Special note - Robert Gibson performed this study on his own accord. His position in this report is not that of the County and the County cannot confirm, deny, or agree with the conclusions drawn.

Attachments

B - Los Alamos County Energy Use and Green House Gas Emissions Report

**Energy Use
and
Greenhouse Gas Emissions
in
Los Alamos County
2000-2019**

Study performed and presented by
Robert B. Gibson
to
Environmental Sustainability Board
18 July 2019

Purpose: Provide Database for Change

- Identify the leverage
- Baseline for measuring progress
- Historical; no solutions
- LA County exclusive of LANL.

**Primary Energy Use in LA Comes from
3 Sources**

- Natural Gas
 - 1 therm = 100,000 BTU = 105.5 MJ = 1.055×10^{-4} TJ
 - Data sources: LAC DPU
- Electricity
 - 1 kWh = 3.6 MJ
 - 1 MWh = 3,600 MJ = 3.600×10^{-3} TJ
 - Data sources: LAC DPU, DOE EIA
- Petroleum Fuels
 - 1 gal = 1,330 MJ (average) = 1.33×10^{-4} TJ
 - Data sources: NM TRD, LAC DPW, LAPS, Private vendors

Fig. 2.1A. Monthly Natural Gas Use Correlated to Heating Degree Days

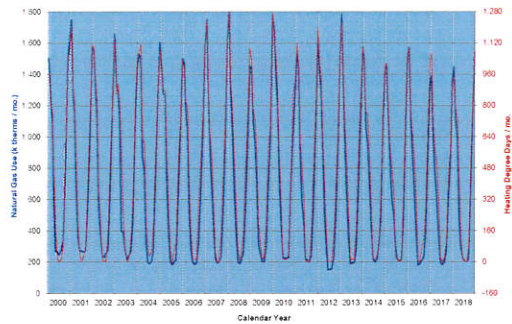


Fig. 2.1B. Annual Natural Gas Use Compared to Heating Degree Days

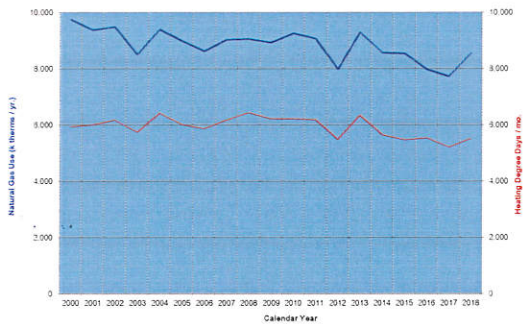
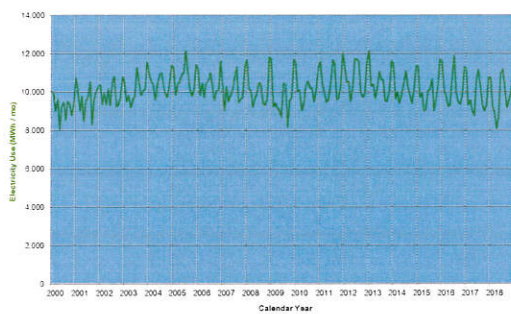
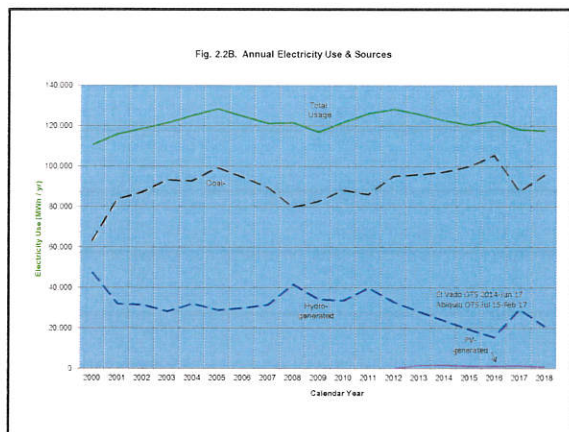
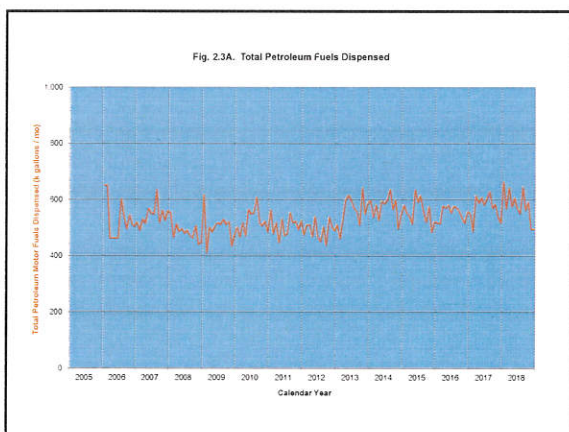
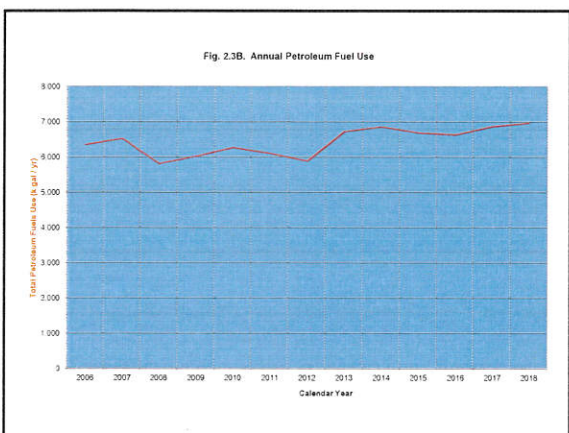


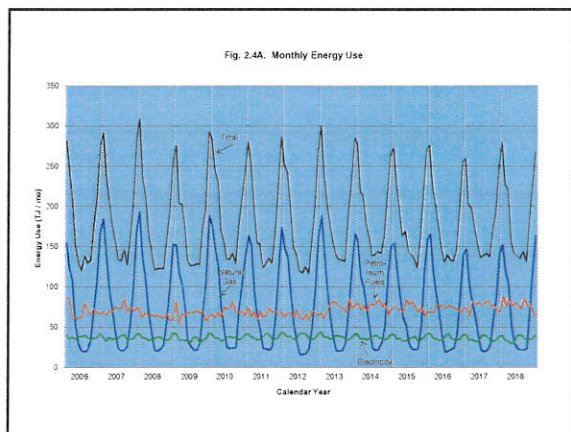
Fig. 2.2A. Monthly Electricity Use

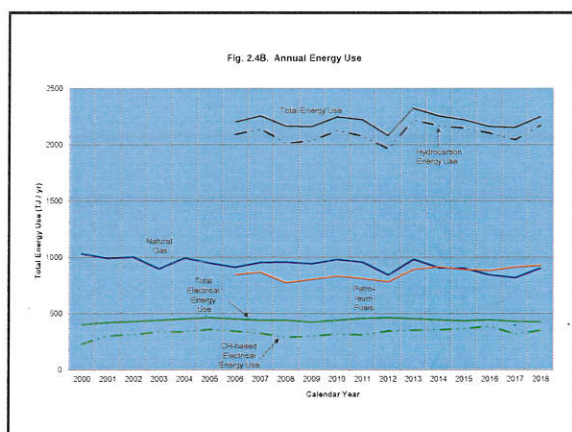


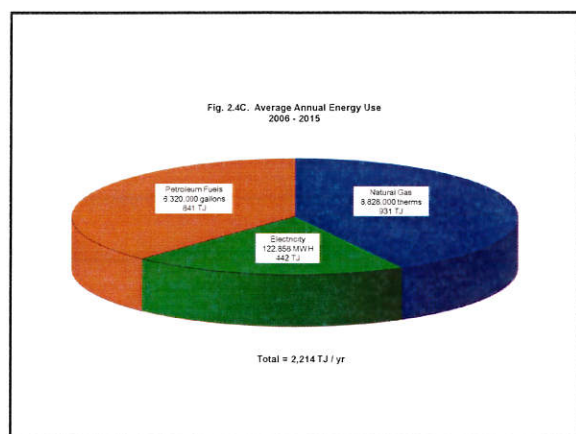












All Hydrocarbon Fuels Produce CO₂ when Burned



- Natural gas
 - 50 mt / TJ
 - 17 mt CO₂e in methane (CH₄) released
- Electricity
 - Coal: 257 mt / TJ
 - Gas: ~120 mt CO₂ + ~40 mt CO₂e in CH₄ = 160 mt CO₂e
 - Hydro, nuclear, solar, wind: zero
- Petroleum
 - 67 mt / TJ

Fig. 3.4A. MONTHLY GREENHOUSE GAS EMISSIONS

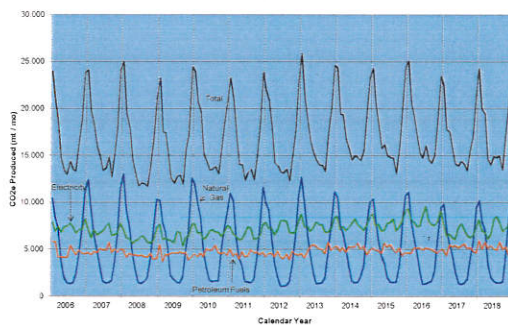
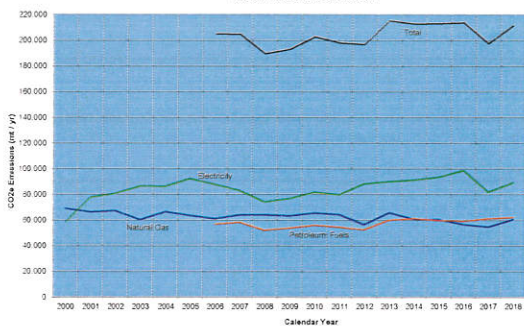
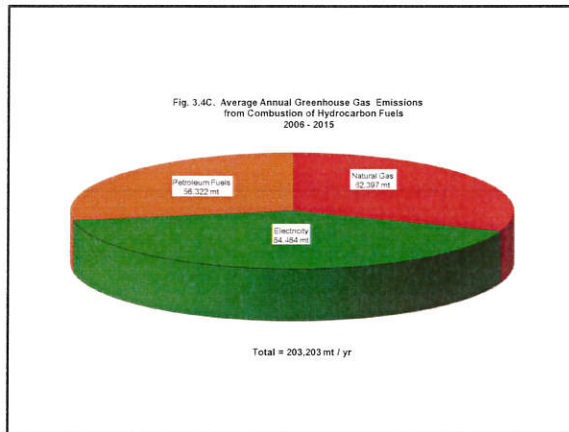


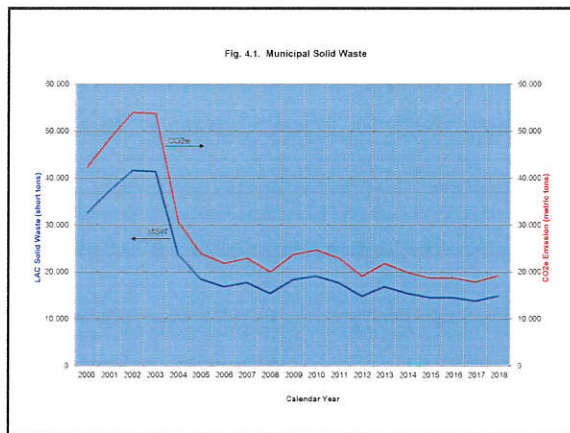
Fig. 3.4B. ANNUAL GREENHOUSE GAS EMISSIONS
FROM HYDROCARBON FUELS

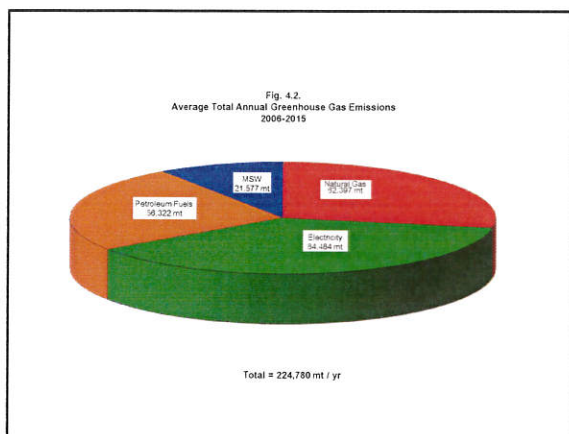




Municipal Solid Waste (MSW) Evolves Methane (CH_4) as it Decomposes

- 1 short ton of MSW evolves 62 kg of CH_4
- CH_4 has a Global Warming Potential 34 times that of CO_2 over 100 years.
- 1 short ton of MSW evolves 2.1 mt of CO_2e





Observations

- Overall primary energy use and GHG emissions in LA County have been roughly unchanged since 2000.
- >25% of natural gas not used for space heating
- Electricity
 - ~25% hydro; ~75% CH (mostly coal); <1% solar
 - Supply is pooled with LANL through ECA
 - LAC-owned hydro resources could supply >50% of energy
- Petroleum
 - Use rising slowly
 - “Behavior change” is possible

How Can LA Lower its GHG Emissions?

- Public and policy commitment
- Natural gas
 - Move to largely passive solar space heating
 - Reduce non-heating uses
- Electricity
 - More efficient use
 - Shift from coal to nuclear and solar supply (per FER)
- Petroleum
 - Support shift to electric motor vehicles
- MSW
 - Increase recycling



County of Los Alamos

Staff Report

July 18, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Heather Ward

Legislative File: 12135-19

Title

Save As You Throw Update

Recommended Action

N/A

Body

The Save As You Throw (SAYT) Research Subcommittee will provide an update about Save As You Throw findings and provide an update to the board regarding their research to date. The subcommittee has performed various education and outreach activities, as well as performed researched on other communities that have a pay as you throw, tiered rate system in place. The ESB will also be presented with a timeline for future events, including the Open Forum poll and recommendation process.

..Attachment

C - SAYT Update July 2019

The background of the slide features a photograph of several large recycling bins. In the foreground, a blue bin is on the left, and a black bin is on the right. Behind them, another black bin is visible. The bins are situated outdoors, with green foliage and a building wall in the background. A semi-transparent dark blue rectangular box is overlaid on the center of the image, containing the text.

UPDATE ON SAYT RESEARCH SUBCOMMITTEE ACTIONS

SAVE AS YOU THROW FOR LOS ALAMOS

July 18, 2019 Presentation to ESB

Subcommittee Goals



The purpose of the SAYT Research Subcommittee is to

- **research** tiered rate structures for Los Alamos County residential solid waste services,
- **gather public input** regarding a tiered rate structure and
- **provide a recommendation** to the Environmental Sustainability Board.

Education and Outreach Activities

APRIL 15 TO PRESENT

- Educational webpages at Environmental Services website, including graphics, calendar, resource list and Frequently Asked Questions (FAQs)
- Outreach booths at Earth Day, Farmers' Markets (2), ChamberFest, Discovery Day
- Presentations to Voices of Los Alamos and ESB
- Articles in Daily Post, LA Monitor and Reporter
- Social media announcements
- Open House
- Monthly email blasts with upcoming events
- Bi-weekly Subcommittee meetings
- Ongoing collection of public comments and questions



- Informational handouts
- Posters
- Social media graphics and text
- Website with graphics, calendar, resource list and FAQs

- Comments and questions recorded on notepads at every outreach event
- Survey form at Open House
- Poll Everywhere interactive poll at Open House
- Request for comments to ESB@lacnm.us
- Comments solicited from Environmental Services employees
- Comments solicited from businesses potentially affected by SAYT

Three black trash bins are shown, each with a white label indicating its capacity. The bins are arranged in a row, decreasing in size from left to right. The labels are '96 GAL', '64 GAL', and '48 GAL'.

SAYT is a unit based fee system that charges for the amount of trash you throw away.

Public Comments

RECEIVED SINCE APRIL

**QUESTIONS (AND
QUESTIONS MADE
FROM COMMENTS)
POSTED TO FAQ
PAGE ON WEBSITE,
JULY 9**

SAVE AS YOU THROW (SAYT) FREQUENTLY ASKED QUESTIONS

Questions have been drawn from public outreach events (booths, meetings) and sent to the Environmental Sustainability Board (ESB@lacnm.us). Source information on SAYT can be found on our [Resources](#) web page.

- Emails: 9
- Open House: Surveys 11
 - Poll Anywhere: 19
- Comments recorded: 72

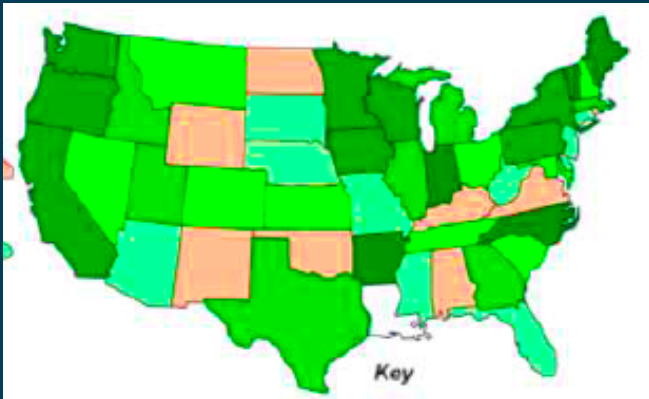
In one word describe how you feel about Save-As-You-Throw

A word cloud of responses to the question 'In one word describe how you feel about Save-As-You-Throw'. The words are arranged in a cluster, with 'great' at the top, 'next' and 'environment' below it, 'smart' and 'fair' to the left, 'quality' and 'step' to the right, 'reduce' in the center, 'innovative' below 'reduce', 'fantastic' to the right of 'innovative', 'responsible' and 'expensive' below 'innovative', 'sustainability' below 'expensive', and 'necessary' at the bottom. The words are in various colors including green, blue, orange, and purple.

great
next environment
smart fair quality step
reduce innovative fantastic
responsible expensive hi
sustainability
necessary

Research Efforts

LEARNING ABOUT SAYT FROM 7000+ U.S. COMMUNITIES, STATES AND EPA, ABOUT THEIR EXPERIENCE OVER THE PAST 25+ YEARS



INTERNET RESEARCH

Data gathering on SAYT topics including:

- SAYT planning and implementation
- Academic, governmental and consultant research
- Rate setting
- Issues and Resolutions
- Results/Benefits
- Public perception/resident satisfaction
- SAYT programs in other communities

OUTREACH TO OTHER COMMUNITIES

Calls and emails to communities with SAYT in place, to gather experiences from:

- Silver City, NM
- Golden, CO
- Longmont, CO
- Seattle, WA
- Ashland, MA
- Bloomington, IN
- Cranberry Twp, PA
- S. Kingston, RI
- Hermitage, PA

OUTREACH TO LOCAL BUSINESSES

How will SAYT impact Los Alamos businesses?

- Discussions about illegal dumping
- Impact to thrift stores, and how to mitigate
- Potential bag vendors (for bag-based SAYT)

Bags!

COSTS RECOVERED THRU BAG SALES

Bags sold at local grocers and other stores

ACCURATELY "METERS" TRASH

Only pay for number of bags needed, not "air"

USE ANY CART, ANY TIME

Keep current cart, share carts, use bear carts, any collection frequency

REVENUE TO COUNTY CAN FLUCTUATE

IMPLEMENTATION WILL REQUIRE EDUCATION AND ENFORCEMENT



Cans!

MONTHLY CHARGE BASED ON CART SIZE

Will require initial audit, change-outs, and ongoing tracking of roll carts

NO SPECIAL BAGS NEEDED

Use recycled bags if desired

STABLE REVENUE SOURCE FOR COUNTY

IMPLEMENTATION WILL REQUIRE EDUCATION AND ENFORCEMENT

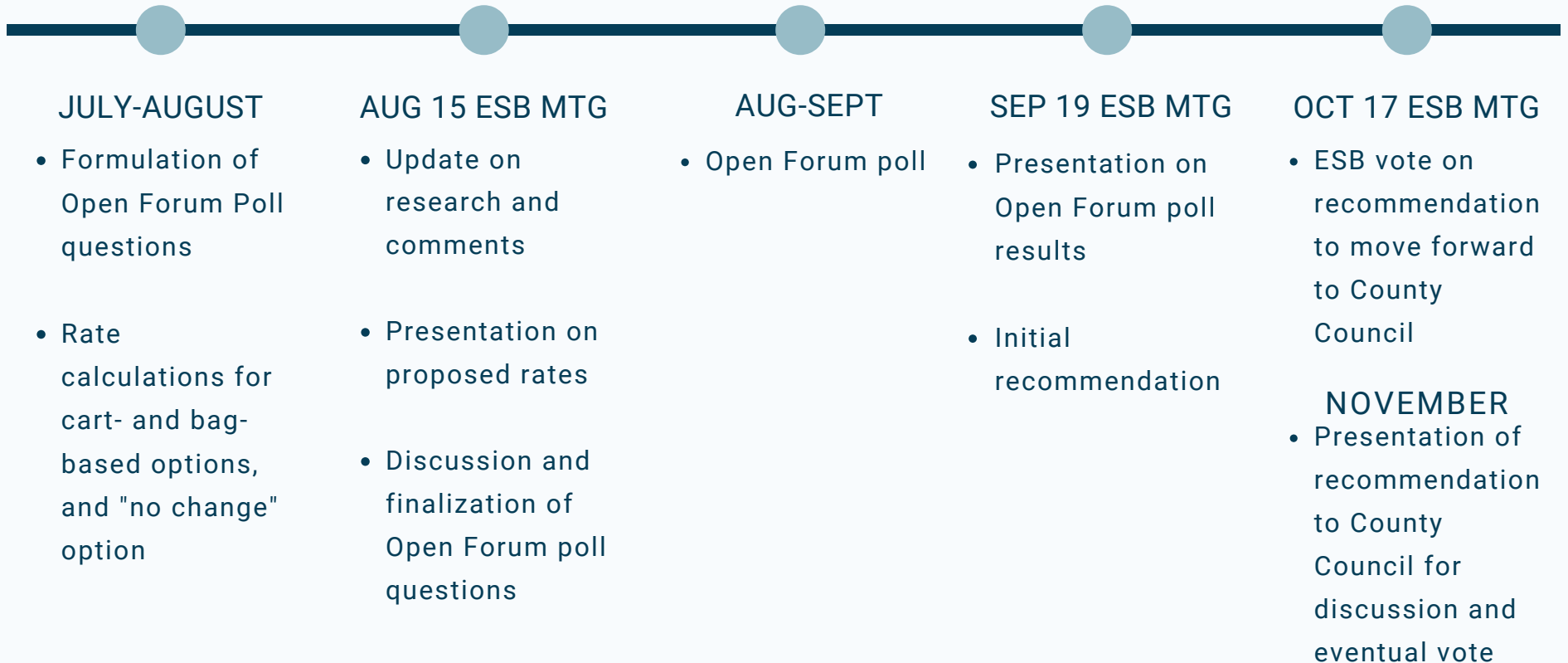


What have we learned?

- **A lot! Residents are very helpful, asking excellent questions.**
- **No deal-killers yet!**
- **Comments have been generally positive (or neutral/questions)**
- **Even split on carts vs. bags. Need to work up rate structure for both.**
- **Probably need more education leading up to Open Forum poll, for best results**
- **A consultant could be helpful re. rate setting, implementation tips**
- **Consider including costs and approaches for adding weekly recycling and/or composting to program?**

Next Steps

IN ADDITION TO ONGOING GENERAL RESEARCH AND CONTINUED OUTREACH/EDUCATION





County of Los Alamos

Staff Report

July 18, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:

Index (Council Goals):

Presenters: Angelica Gurule

Legislative File: 12137-19

Title

June 2019 Residential Sustainability Report

Recommended Action Motion

N/A

Body

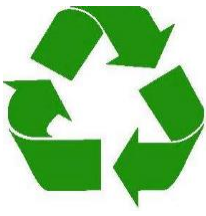
The ESB will review and discuss the June 2019 Residential Sustainability Report. The data now includes more data and graphs that will demonstrate overall diversion as a result of the new yard trimming program which began on July 9, 2018. The yard trimming program has been in place for 11 months.

Most recent additions to the report include greenhouse gas emissions reduced by recycling and composting.

The yard trimming has been voluntarily embraced by the community, with support from 59% or 4,092 households. Currently each household is limited to one cart per household to ensure each household has the ability to participate in the yard trimming program.

Attachments

D - Residential Sustainability Report - June 2019



Residential Sustainability Report

Service Period: June 2019

May Diversion Rate: **29%**

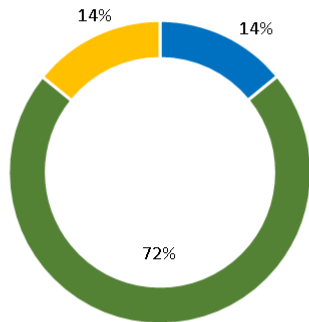
June Diversion Rate: **28%**



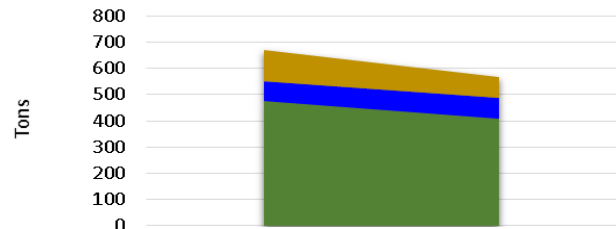
LOS ALAMOS

The *diversion rate* is the percent of recyclable and compostable material diverted from the landfill.

Monthly Collection Report

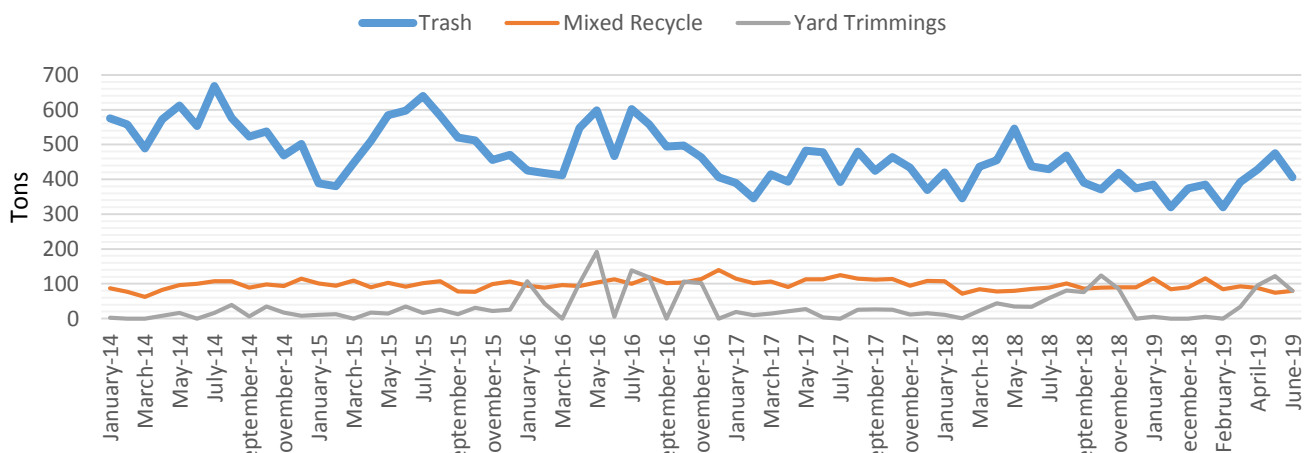


■ Mixed Recycle ■ Trash ■ Yard Trimmings

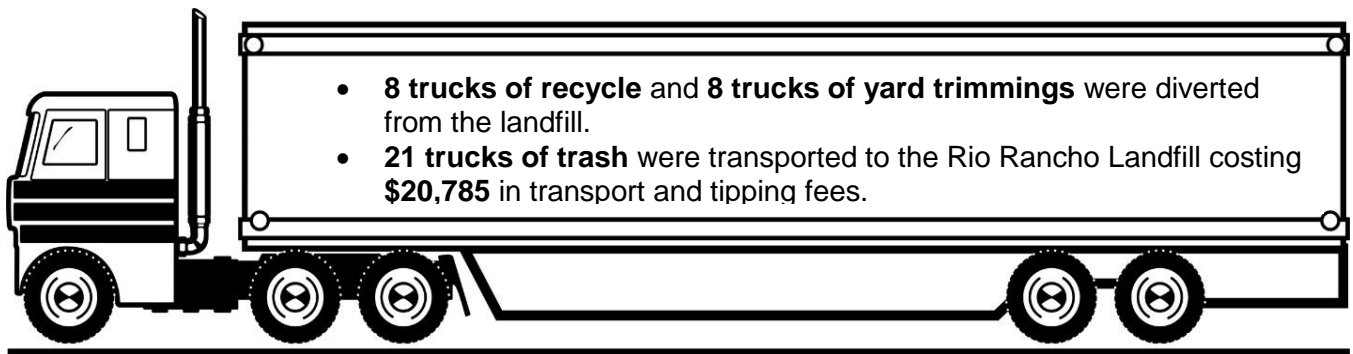


	May-19	Jun-19
Yard Trimming	122.33	80.04
Recycle	74.14	79.72
Trash	475.42	406.03

In June by recycling and composting Los Alamos County reduced GHG emissions by ~430 tons



In 2019 by recycling and composting Los Alamos County reduced GHG emissions by ~2492 tons



For more information contact Environmental Services Division at 505.662.8163 or email solidwaste@lacnm.us