

Increasing Recycling in New Mexico

EXECUTIVE SUMMARY

May, 2016

**Recommendations and Strategies in Response to
“Study Solid Waste Recycling”, House Memorial 51, 2014**

**Coordinated by
the New Mexico Recycling Coalition**



NMRC
NEW MEXICO RECYCLING COALITION

Increasing Recycling Project 2015

Abstract

House Memorial 51, sponsored by Representative Jeff Steinborn passed in 2014 and tasked the New Mexican Recycling Coalition (NMRC), in partnership with the New Mexico Environment Department: Solid Waste Bureau (NMED) to research and develop strategies to reach the statewide diversion goal of 50% as set in the New Mexico Solid Waste Act of 1990. NM's diversion rate is currently at 23%.

NMRC led the research and stakeholder input process, which included three large stakeholder meetings, breakout groups, surveys and feedback opportunities in 2014 and 2015. This document provides a comprehensive executive summary of the process, proposed steps to increase diversion and stakeholder input. Overall stakeholder recommendations to attain the 50% diversion rate as outlined in the Solid Waste Act are listed below. Readers are encouraged to read the entire document in order to gain more in-depth information pertaining to the recommendations below.

Overview of Increasing Recycling/Diversion Options

Short-term recommendations include strategies and policies that are divided into categories based on the anticipated timeline to implement:

include:

Early-Implementation (1-3 year timeline)

- Implement new recycling/diversion measurement methods and goals based on per capital disposal
- Provide assessments, resources and technical assistance to state agencies and institutions no pollution prevention, source reduction, reuse, recycling, composting and other diversion opportunities,
- Conduct outreach/training about recycled-content preference in state procurement code

Mid-range Implementation (3-5 years)

- Extended Producer Responsibility (EPR) for electronics/TVs, mattresses and paints, which requires producers to create a mechanism and funding to take back their product for proper recycling
- State Procurement Code Reform to require life-cycle analysis for eligible procurements and take-back/recycling in state contracts
- A recycling equipment tax credit to support private businesses to respond to the requirement of all solid waste haulers to provide recycling collections and containers, as well as expand other collection and processing infrastructure to assist communities in meeting diversion goals
- Recycling Market Development Zones, which will stimulate economic development in the sector around the state
- Implement requirements for communities to develop waste diversion plans

Long-term Implementation (5-10 years)

- A local community menu of options that may be scaled by population size, allowing communities to choose which diversion tactics fit best for their community. Options include diversion of construction and demolition waste, organics collections, food waste collections and expanded education and outreach.
- Implement requirements for solid waste haulers, both public and private, to provide recycling containers and collections offered for one joint solid waste fee, as well as to provide financial incentives to divert with different cart or bag/tag options where customers essentially pay for what they throw away
- Incentives and penalties for communities to meet the required goals

Funding

- A significant funding mechanism to support communities as they expand recycling and solid waste infrastructure is required for all mid-range and long-term strategies and is further discussed in this document

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Introduction

House Memorial 51 (HM51), “Study Solid Waste Recycling,” passed in the 2014 legislative session and was sponsored by Representative Jeff Steinborn. The Memorial requested that strategies be developed to reach the State recycling goal of 50% (New Mexico Solid Waste Act, 1990) The Act established a statewide waste diversion goal of 25% by 1995 and a 50% goal by 2000. The state is currently at a 16% recycling rate and a 23% waste diversion rate (2014, NMED).

Key deliverables from HM51 include:

- A. analyze the current recycling capacity in New Mexico and the potential to increase that capacity;
- B. develop recommendations for legislative and state agency actions designed to enable New Mexico to attain the fifty percent recycling rate goal established in the Solid Waste Act, including budget recommendations and a projected timeline.

The New Mexico Recycling Coalition (NMRC), working in partnership with the New Mexico Environment Department (NMED), agreed to lead the research and stakeholder group process to address the requirements of this Memorial. NMED assisted with specific research estimating infrastructure needs, as well as state agency and construction and demolition (C&D) waste diversion research. The information gathered was presented to stakeholders in October of 2015. The recommendations of this report are based on online and phone call research, as well as stakeholder feedback from more than 40 individuals that attended the stakeholder meeting in October 14th, 2015 (please see stakeholder attendee list in Appendix A). The outcome of this process will provide guidance for future strategies to reach the 50% waste diversion rate through a 5-year plan. Both the NMRC Policy Committee and the New Mexico Environment Department have reviewed these results.

Background

Future Impacts of Increasing Recycling in New Mexico

Increasing the recycling/diversion rate in New Mexico would:

- Allow the state to **comply** with the 50% diversion goal as outlined in the 1990 NM Solid Waste Act
- Create **jobs** within the recycling sector, estimated at 3,500 direct new jobs created in NM and 9,000 jobs created both in state and out of state (as measured by increasing the current diversion rate from 23% to 50%)
- Spur **economic development** and the potential for new businesses to be added to the recycling sectors, such as composting, construction/demolition, hauling and Extended Producer Responsibility programs
- Include **funding** to be provided to local communities to help with their ongoing municipal solid waste management programs

Building on Recent Diversion Successes in NM

The current state of recycling in New Mexico includes:

- Access to Recycling – 87% of incorporated communities have access to recycling
- Hub and Spoke Model – NM has 22 processing hubs, many new or improved, and 40+ new collection spokes that have been added in recent years
- Material Marketing Success – The Rural Recycling Resources (R3) Marketing Cooperative assisted smaller communities gain market value for their materials
- Economic Development – NMRC recently completed a project that built economic development partnerships and provided entrepreneurs with small-scale niche recycled material business models

Recycling Capacity in NM

New Mexico is currently at a 16% recycling rate and a 23% waste diversion rate (NMED, 2014). There are 15 communities and sub-divisions that offer curbside recycling collections and almost 100 incorporated municipalities, counties and tribes that offer some form of access to recycling. There are limited commercial-sector recycling offerings in NM. Most solid waste management entities offer a means to divert yard waste, and there are 39 NMED registered composting facilities, many of which are wastewater treatment plants. There are only 3 composting facilities actively managing food waste for

composting on a larger-scale. There are no construction and demolition (C&D) debris mixed material sorting facilities in the state, and there are currently limited opportunities to divert C&D debris materials found in this waste stream. In order for recycling/diversion to increase, recycling equipment infrastructure estimates have been developed (see Section III. Recycling Infrastructure Estimates to Increase Recycling/Diversion in NM).

Stakeholder Meeting Background

NMRC hosted one meeting in 2014 and two meetings in 2015 to gain feedback from stakeholders regarding diversion policy and strategy options.

The first stakeholder meeting convened in June 2014 with initial results presented to the NM Legislature Water and Natural Resources Interim Committee on December 2, 2014. The Executive Summary and results from the associated stakeholder meeting presentation can be found online at www.recyclenewmexico.com/increasing-recycling/ and outlines the general requirements of the Memorial.

A second stakeholder meeting, in June 2015, specifically targeted funding strategies to support increased recycling. The third meeting, held in October of 2015, was a one-day stakeholder meeting held in Albuquerque, which included a live-streaming option. The meeting included presentations on policy strategies to increase recycling (covering both short and long-term strategies outlined in 2014), techniques to best measure recycling and waste diversion, recycling infrastructure estimates and further discussion of funding proposals. The day included soliciting feedback on the presented material. The presentation and survey results provide the research and background on the discussed subjects in this Executive Summary and can be found online at www.recyclenewmexico.com/increasing-recycling/. The attendee lists from all stakeholder meetings are in Appendix A.

Legislative and State Agency Recommendations and Strategies

I. Measuring Diversion and Setting Goals with Incentives and Penalties

How to best capture the clearest picture of waste diverted in New Mexico and nationally continues to be an ongoing conversation. Currently the NMED Solid Waste Bureau uses US Environmental Protection Agency (EPA) guidelines to track and measure the state's recycling and diversion rates (<https://www.env.nm.gov/swb/AnnualReportsandForms.htm>).

Three proposals were discussed as options:

- Continue to use EPA guidelines and use the diversion rate as the primary form of measurement
- Expand what is counted as diversion
- Use per capita waste or general waste disposal reduction goal

When asked to rank options for measuring diversion (1 being “not supportive” and 5 being “very supportive”), according to survey feedback from the attendees of the meeting, the proposal that received the highest amount of “very supportive” feedback was using “a per capita waste disposal reduction goal” (36%). When examining “supportive” and “very supportive” responses, both “expanding what is counted as diversion” (69%) and using “a per capita waste disposal reduction goal” (67%) were closely matched as the leading supportive responses.

Implementing strong incentives and penalties for communities to meet the adopted state-level goal will be critical to reaching the reduction goal. Incentives may include having access to grant funds, local-level funding distributions, and expedited registration and community planning assistance. Penalties may include inability to apply for grants or receive local-level distributions, daily or annual penalties or Notices of Violation.

Although the requirement for community diversion plans was not discussed in great detail in the 2015 stakeholder meeting, many high-performing states have a state-level requirement for communities to submit and have approved integrated solid waste management plans, ranging from 5 to 10 year re-submittal time frames, that outline how the community will reach the state diversion goal.

Recommendation: Use a per capita waste disposal reduction goal, while still tracking and measuring diversion of materials. Reduce per capita waste disposal rate to 3.5 pounds/person/day for municipal solid waste, C&D, and cleanfill materials by 2026 using 2014 as a baseline year with 5.6 pounds/person/day. This would represent 25% less waste landfilled, and reduce to 1.75 pounds/person/day by 2050, which would represent a 55% reduction of materials landfilled. Include in the policy clear guidance on how materials diverted for waste-to-energy will be counted and managed in calculations. Include in this policy clear and enforceable incentives and penalties for communities in regard to reaching this goal. Include community diversion plan requirement.

II. Funding Recycling/Diversion

Stakeholders noted that adequately funding recycling is a critical component to the success of this initiative and necessary to support any state-level policy. It is imperative to offer a significant funding mechanism to support communities to develop their programs as well as allow the State to provide technical assistance and the ability to manage new programs.

According to the June 2015 Funding Recycling stakeholder meeting - breakout group feedback and a follow-up survey - the following two types of funding options were identified as the most viable to provide significant funding. They were subsequently presented and discussed at the October 2015 meeting.

1. **Retail Fee:** A transaction or percentage fee charged on all eligible transactions - A “Just A Penny” fee would be charged on retail transactions greater than \$2 (developed by Michigan); or a “Recycling Fee” would charge a very small percentage on retail transaction amounts. This fee represents a manner to connect the consumer with the management of the product’s end to a useful life.
2. **Variable Disposal Surcharge Fee:** Utilize a variable state landfill disposal surcharge fee depending on level of compliance with state diversion goals (based on Iowa model). Connects the consumer with the end of a product’s useful life in regard to solid waste management.

A retail recycling fee was found to be more supported than a variable disposal surcharge in survey results, with 77% either “very supportive” or “supportive” of the retail fee and 43% falling into those categories for the surcharge fee. The surcharge fee registered 20% in non-supportive responses.

Funding Distribution

The presentation provided options for the distribution of funds. These options included a certain percentage of funds to support communities with grants, to support state-level positions and education, to provide funding directly back to communities for eligible solid waste and recycling activities and to support NMED’s regulatory requirements of permitting and enforcement activities. The actual distribution of funds can be determined pursuant to the enacted legislation.

Feedback from the survey found that 91% of respondents were supportive of a certain percentage of funds going directly back to local communities and that 74% were supportive of funding to be used to support NMED permitting and enforcement activities.

Although grants and local-level distributions will only be available to eligible public entities, opportunities to assist the private sector to participate in recycling infrastructure expansion include public-private partnerships, the use of the Local Economic Development Act (LEDA) and proposing recycling equipment tax credits.

Recommendation: Implement a retail recycling fee, either per transaction or using a percentage, on identified eligible retail sales in New Mexico. The fee can be set based on estimated infrastructure and state-level needs to expand recycling to outlined goals.

In distributing the funds, there is strong support for sending a certain percentage directly back to communities for use on eligible solid waste and recycling activities; and general support for funding NMED: Solid Waste Bureau (SWB) to support

solid waste enforcement and permitting, coordinate new programs, provide technical assistance, state-level education and outreach and state-level recycling grant programs.

III. Infrastructure Estimates to Increase Recycling/Diversion in NM

The projected estimate for comprehensive capital equipment investment to expand diversion opportunities throughout New Mexico for residential, business, C&D debris and organics management lands at \$217,600,000. This does not include staff or ongoing operational costs, but represents equipment and trucks needs that the State could provide assistance through a significant grant program to eligible public entities. This figure has been updated from the presentation to include complete rollout of curbside recycling collections and Pay-as-You-Throw (PAYT) conversion. Please refer to Appendix B for calculations.

A \$217.6M estimated figure of infrastructure investment includes the following assumptions:

- NM communities convert to a PAYT solid waste variable rate billing system, requiring the switch-out of trash carts/dumpsters to offer different sizes/options and related collection trucks
- Statewide residential curbside recycling collections
- Business recycling collections
- Existing processing hubs expand their processing and collection capacity, adding 4 new regional hubs
- Three larger-scale C&D debris sorting facilities placed in population hubs and up to 10 smaller-scale regional mobile concrete crushers
- Organics collection and processing facilities added and expanded throughout state, to include food waste collections

IV. Policies and Strategies

A. Universal Recycling and Pay (or Save) -As-You-Throw = USAVT

In order to provide a financial incentive to divert materials and provide statewide access to recycling that is as convenient as trash collection/drop-off, an overarching joint policy was proposed that includes the following elements:

- Universal Recycling
 - Universal Recycling requires all solid waste haulers (both public and private) to provide recycling containers and collection offered as one joint solid waste fee that targets residential, multi-family and commercial collections. Delaware serves as a model.
- State-Level Pay-As-You-Throw (PAYT)
 - PAYT provides a financial incentive to divert more and dispose of less comes. Customers have variable solid waste rates that are dependent on cart/dumpster size or use of bags/tags. Modeled in Minnesota and Washington.

In the survey, 78% of respondents were “supportive” or “very supportive” of USAVT, with 11% rating neutral and 11% not supportive. To be noted, when survey respondents were asked questions earlier in the survey about PAYT and Universal Recycling as their own concepts, important feedback was provided. In considering PAYT, evaluating strategies to combat illegal dumping will be critical and how best to plan for rural community implementation. 17% of respondents were not supportive of state-level PAYT as a concept on its own.

Recommendation: Implement a USAVT, Universal Recycling *and* Pay-As-You-Throw, policy. Phasing-in of certain targets can be an option, e.g. start with larger commercial and residential entities and add in smaller commercial operations and multi-family housing units in another 1-3 years after initial rollout. NMED can provide guidance on community size and appropriate compliance requirements to meet USAVT objectives and to outline USAVT protocol for situations where solid waste collections are managed through drop-off opportunities. The phasing-in of projects would also help space out grant funding requests.

B. Incentives for Private Business

Business incentives were outlined in the 2014 stakeholder meeting and would include offering incentives to the private sector using tactics such as a recycling equipment tax credits or Recycling Market Development Zones that ensure investments are spread throughout the state. This type of policy was often seen in the high-performing recycling states, but its contribution to increasing the diversion rate was not as significant as other policies. This policy could be important for the USAVT policy introduction, where the private sector has the same requirements as the public sector to provide recycling access, but the public sector will have access to the recycling grant fund and the private sector will not (unless public-private partnerships or LEDA enable sharing of granted resources). Recycling equipment tax credits range from 5% - 50% and types of eligible equipment can be defined in the bill.

Recommendation: Introduce a recycling equipment tax credit to assist in private sector investments required to rollout USAVT program and other private sector investments for diversion activities. A later phase would introduce Recycling Market Development Zones to stimulate end-market remanufactures around the state.

C. Construction and Demolition (C&D) Waste Diversion

Construction and Demolition waste represents 25% of NM's waste stream. Three policy options were presented to divert nonhazardous construction and demolition waste from the landfill. The options presented include:

- Mandate 50% nonhazardous C&D debris diversion (67% supported in survey);
- Ban disposal of nonhazardous C&D debris and (54% supported);
- Require a disposal surcharge for nonhazardous C&D debris to encourage reuse/recycling (57% supported).

Although considered as an option to be introduced as a state-level policy, feedback indicated that C&D debris diversion would best be managed locally through a menu of options.

Another consideration noted through feedback is to look at policy in regard to managing cleanfills (operations only accepting nonhazardous waste to include broken concrete, brick, rock, stone, glass, reclaimed asphalt pavement, or soil that is uncontaminated), and its implications to increase C&D debris diversion for beneficial use. Please refer to "Section V. Recommendations for Implementation, Local-Level Menu of Recycling/Diversion Options," for more information about the local-level menu option.

Recommendation: Through state legislation, offer municipalities options for waste diversion and recycling that could include C&D debris recycling and diversion as an option.

A longer-term recommendation could include a recycling and diversion requirement for cleanfills under NMED Solid Waste Act regulations.

D. State Agency Waste Diversion

NMED presented on several tactics that the State could implement without the need for additional state policy. These opportunities include:

- Conduct outreach/training about recycled-content preference in state procurement code,
- Initiate cut-it-and-leave-it policy and/or require composting for yard/landscaping trimmings, and
- Encourage universities to compost food court and landscaping waste.

NMRC presented on procurement reform for state agencies would include updating State policy, requiring the following:

- To conduct a life-cycle analysis on purchases (which is currently in the code as an option),
- Implementing supply chain management as part of state procurement and modifying contracts so suppliers take back packaging/recyclable item (e.g. carpet, electronics).

Other opportunities for policy include requiring NM Department of Transportation (NMDOT) projects to use mulch/compost and for state construction projects to amend soil with compost.

Survey respondents provided feedback on the state agency initiatives. The concepts are listed in order of support below:

- Conduct outreach and trainings on recycled-content preference (86% responding supportively)
- Create a composting policy for yard trimmings (77%)
- Encouraging universities to compost on-campus (74%)
- Create a cut-it-and-leave-it policy for yard/landscaping waste (56% support and 39% neutral)

Survey respondents also provided feedback on updating state procurement policy in regard to requiring life-cycle analysis (69% supportive, 29% neutral) and modify state contracts to ensure take-back of packaging and recycling of end-of-life products (75% supportive, 25% neutral). State government source reduction and recycling information can be found at NMSA 74-9-15.

Recommendations: Create incentives and/or penalties to ensure state agencies and post-secondary educational institutions comply with the requirements of NMSA 74-9-15 and 74-9-16 (NM Solid Waste Act) and designate NMED as the lead agency. Require state agencies and post-secondary educational institutions to institute activities to increase diversion as outlined above with priorities given based on stakeholder feedback. Update procurement code to make adjustments to life-cycle analysis, product/package take-back and compost/mulch use guidance for NMDOT and state construction projects.

E. Landfill Bans

Bans on the disposal of certain materials have been shown to support economic development and job growth, with examples including yard waste, electronics and C&D debris bans. Bans have proven to increase the diversion of targeted materials, especially where a strong plan and enforcement were created in support of the legislation. Bans can also be complements to Extended Producer Responsibility bills (see next section for more information).

Important considerations for bans also include phased-in steps in order to ensure infrastructure is in place; consideration for regional availability; and rural communities lacking infrastructure and therefore not being able to comply.

In the stakeholder survey, landfill bans received more “non-supportive” feedback in comparison to most of the other pieces of policy outlined. On the other hand, when considering supportive survey responses to landfill bans, the following items led with stakeholder support:

- Cardboard (75% supportive, 14% not supportive)
- Construction and Demolition (74% supportive, 17-20% not supportive)
- Paper (67% supportive, 19% not supportive)
- Green/Yard Waste (61% supportive, 19% not supportive)
- Food Waste (59% supportive, 28% not supportive)

Recommendation: Consider landfill bans in the planning process, after accomplishing other higher priority bill passages and seeing their effects on material diversion. Cardboard and C&D debris would be the two priorities for bans when time for consideration. Bans could be offered as one or several of the Local Recycling Menu options.

F. Extended Producer Responsibility (EPR)

EPR legislation requires producers to create a mechanism and funding to take back their product for proper recycling. In response to a 2013 legislative memorial, a NM Product Stewardship Task Force was created that outlined three top priority products for EPR: electronics/TVs, paint and mattresses. These items were identified as hard-to-manage by community programs and also had national industry support to bring in such a legislative proposal here in NM.

Electronics were identified as the top priority of the three proposed items, with mattresses and paint receiving equal support as next in line for introduction. When respondents were asked to rank other products for EPR legislation, the top 3 were tires, mercury-containing devices (including compact fluorescent lamps) and carpet.

Survey respondents were overall supportive of EPR policy, with only one respondent not in support and the rest of respondents landing on the neutral to very supportive spectrum.

Recommendations: Introduce electronics/TV EPR first, followed by paint and mattresses. Consider other items over time. Use a “framework” format for the EPR legislation that sets the stage for EPR bill passage and then allows targeted products to be added under that framework.

V. Recommendations for Implementation

Local-Level Menu of Recycling/Diversion Options

The October stakeholder group was presented with two policy options:

- One method was to introduce all policies on a state-level, and
- Another method would be to pass some state-level legislation with several of the components to be left to the local communities to select from a menu based on their community size.

The Oregon Opportunity to Recycle Act is a model for this latter method, which provides a state-level requirement for local governments to select and then create local ordinances/programs based on options listed in a menu of outlined strategies. Considerations include the size of the community and the number of options the community must select. A couple of the stakeholders present offered to assist in the final development of menu options, as only four initial options were proposed at the October meeting. Offering the use of landfill bans in general or for certain items can be part of the menu offerings.

When presented with the option of having all policy brought in on a state level or leaving some opportunities for the local community to select from, survey respondents provided greater support for a combined offering of both state and local-level policy making. The combined State and Local-Level Policy option received 55% “very supportive” and overall 91% supportive responses, which is one of the strongest positive stakeholder feedback responses in this survey. The state-level only option received 69% supportive responses.

For example, communities would have several local-level programmatic and policy options to choose from, such as:

1. Expanded Education and Outreach Program
2. Construction and Demolition Diversion
3. Universal Yard/Green Waste Collections
4. Universal Food Collections

Communities could use population guidelines, using these as an example:

- Communities/counties with less than 10,000 need to choose at least 1 item
- Communities/counties with 10,000 – 40,000 choose at least 2 items
- Communities/counties with 40,000+ must choose at least 3 items (depending on population density)

Recommendation: In addition to bringing in certain policies via state-level legislation, propose a Local-Level Recycling Menu bill, which would provide an opportunity for local communities, based on their population, to choose from a list of targeted diversion programs, while working towards the new state diversion goal. This policy could be part of the Diversion Goals, Measurement, Incentives and Penalties piece of legislation.

VI. Increasing Recycling Five-Year Strategic Plan Proposal

This plan provides a framework of many policy options, to increase recycling and waste diversion in NM. As many of the topics have more than one strategy and involve many stakeholders, further outreach will be necessary for collaboration and finalizing proposed legislation and policies that would be amenable to all parties and feasible. The following table provides a proposed timeline for implementation and includes time for such collaboration and program development.

Summary of Potential Legislation

Policy	Year To Introduce to Legislature	Importance of Timing	Considerations
Recycling Fee/Just A Penny	2017	Critical first/early piece of legislation to support the funding of all the projects	
Diversion Goals, Measurement, Incentives and Penalties, Local-Level Recycling Menu	2017	Recycling Fee is a natural complement to support the mandate of reaching a new diversion goal (per capita)	One bill outlines new measurement technique and goals, incentives and penalties, as well as community plan requirement. Local-level menu compliance can be phased in, but will be instrumental to support community planning
USAVT	2017	All 4 bills introduced in 2017 are supportive of each other	Phasing-in targeted sectors will ease implementation and requests to grant fund
Recycling Equipment Tax Credit for Business	2017	Would provide a tax credit to the private sector to assist in complying with the USAVT policy.	Focus on concept of tax credits for trucks, containers and other processing equipment needed to meet the USAVT policy and other diversion infrastructure.
Electronics/TV, paint or mattress Extended Producer Responsibility	2019		Consider if an EPR framework bill would be the best first step in complement to one of these targeted items
Policy	Year To Introduce to Legislature	Importance of Timing	Considerations
State Procurement Code Updates	2019	Require life-cycle analysis for eligible bids, contracts include a product/packaging take-back and compost/mulch use guidance	
Mercury-Containing Devices to Include CFLs and Carpet Extended Producer Responsibility	2021		
Recycling Market Development Zones	2021	Longer-term policy, supportive of increased economic development in this sector with focus in remanufacturing sector.	
Landfill Bans		For future assessment	Could be offered as a Local-Level Recycling Menu option

Conclusions and Next Steps

Increasing recycling in NM will have an overall positive impact on NM's economy, communities and environment. Implementation of the suggested strategies can be realistically attained when planned out over a 20-30 year time frame - but action needs to be taken *now* over the next several years.

Supporting increased diversion will create jobs and support the launch and expansion of the private sector. An estimated 3,500 new direct jobs will be created in New Mexico when a 50% diversion rate is reached. For every 1 job landfilling material, there are approximately 5-10 jobs in the diversion sector handling that same amount of material.

Natural resources will be conserved and costly landfill expansions will occur less frequently as the increased diversion of materials in New Mexico increases, providing benefit to the residents of our state.

Next Steps for 2016

- 1) Outline ongoing roles for NMRC, NMED and the Recycling and Illegal Dumping Alliance.
- 2) Reach out to key stakeholders and potential legislative partners in regard to specific policy initiatives to work towards building policy consensus and support, to include the NM Municipal League and NM Association of Counties.
- 3) It is expected that this is a **multi-year process** as evidenced by what other states are in the process of conducting and it is our hope to maintain the energy and impetus here in New Mexico to create a comprehensive and attainable plan towards significantly increasing recycling in New Mexico.

Appendices

- A. Attendee List Summary for Increasing Recycling Stakeholder Meetings
- B. Recycling Infrastructure Estimate Calculations

Appendix A: Attendee Lists for Increasing Recycling Stakeholder Meetings

HM51 Stakeholder Meeting Attendees, June 11th, 2014, Albuquerque

Name	Organization
Rick Sprott	Angel Fire Municipal League/Angel Fire Sustainability Committee
Joy Esparsen	Association of Counties
John Zarola	Bernalillo County Extension Master Composters Association
Charles Wohlenberg	Central NM University
Jill Holbert	City of Albuquerque
Bobby Sisneros	City of Albuquerque
Melissa Lopez	City of Grants
Jim Fisk	City of Grants
Lawrence Garcia	City of Santa Fe
Armando Gabaldon	City of Santa Fe
Karen Sweeney	Eldorado/285 Recycles
Joseph Eigner	Eldorado/285 Recycles
Allyne Scott	Eldorado/285 Recycles
Susan Daniel	Eldorado/285 Recycles
Dwight McDonough	Estancia Valley Solid Waste Authority
Morris Friedman	Friedman Recycling
Matt Nowakowski	General Mills
Charles Fiedler	Gordon Environmental
Gerald O'Hara	McKinley Citizens Recycling Coalition
Mary Canavan	Navarro Research and Engineering, NASA White Sands
Ralph Anderson	NM Composters
Dora Dominguez	NM Economic Development Department
Antoinette Vigil	NM Economic Development Department
Michael Vonderheide	NM Environment Department
Auralie Ashley-Marx	NM Environment Department: Solid Waste Bureau
Joan Snider	NM Environment Department: Solid Waste Bureau
Tim Gray	NM Environment Department: Solid Waste Bureau
Regina Romero	NM Municipal League
English Bird	NM Recycling Coalition
Jessi Just	NM Recycling Coalition
Sarah Pierpont	NM Recycling Coalition
Audrey Herrera-Castillo	NM Tourism Department
Marlene Feuer	NMRC Board Member
Cindy Padilla	NMRC Board Member
Chris Campbell	NMSU Institute for Energy and the Environment
Ric Morgan	Recycle Cibola
Ralph Wrons	Sandia National Labs
Bert Sanchez	Sandoval County
Danita Boettner	Santa Fe Solid Waste Management Agency
Adam Schlachter	Santa Fe Solid Waste Management Agency
Patrick Peck	South Central Solid Waste Authority
Terry Timme	Town of Silver City
Joshua Chavez	Village of Los Lunas
Marcus Montoya	Village of Los Lunas
Lance Allen	Waste Management

Funding Recycling Stakeholder Meeting Attendees, June 3rd, 2015, Albuquerque

First Name	Last Name	Organization
Lance	Allen	Waste Management
Auralie	Ashley-Marx	NM Enviro Dept: SW Bureau
Iverson	Bailon	Santo Domingo Tribe
English	Bird	NM Recycling Coalition
Danita	Boettner	Santa Fe SW Management Agency
Shawna	Boyd	City of Rio Rancho
Travis	Brown	UNM
Tarkeysha	Burton	South Central SW Authority
Mary	Canavan	NASA - White Sands Test Facility
Jamie	Castro-Salazar	City of Sunland Park
Tejinder	Ciano	Reunity Resources
Robyn	Cunningham	The Recycle Ranger
Andy	Daniels	NM Rural Water Association
Terri	Del Ferraro	South Central SW Authority
Neal	Denton	NM Enviro Dept: SW Bureau
Walter	Dods	Soilutions
Travis	Edington	Whole Foods
Joseph	Ellis	Estancia Valley SWA
Charles	Fiedler	Gordon Environmental
Susan	Flores	Keep Tularosa Beautiful
David	Friedman	Friedman Recycling Co
Armando	Galbadon	City of Santa Fe - Enviro Services Div
Mary	Garwood	City of Carlsbad
Scott	George	UNM
Joseh	Godfrey	The Recycle Ranger
Tim	Gray	NM Enviro Dept: SW Bureau
Angelica	Gurule	Los Alamos County
Irene	Holquin	Keep Dona Ana County Beautiful
Wardell	Jeffries	BPI Commercial Flooring
Alvin	Jiron	City of Las Vegas
Roselyn	John	Navajo Nation - Baahaali Chichiltah Regional Solid Waste Transfer Station
Jessi	Just	NM Recycling Coalition
Andrea	Lawrence	NM Clean & Beautiful
Dominic	Lopez	City of Santa Fe - Enviro Services Div
Rand	Marco	City of Santa Fe - Enviro Services Div
Charles	Martinez	Town of Red River
Sam	McCord	Sandia National Labs
Patrick	McCoy	Santa Fe Community College
Dwight	McDonough	Estancia Valley SWA
Koryn	Misbach	City of Rio Rancho
Jay	Morrow	NMRC Founding Member
Ralph	Murphy	Otero County Solid Waste

Cynthia	Naha	Santo Domingo Tribe
Stephen	Nez	Navajo Nation - Baahaali Chichiltah Regional Solid Waste Transfer Station
Gerald	O'Hara	McKinley Citizens' Recycling Council
Patrick	Peck	South Central SW Authority
Sarah	Pierpont	NM Recycling Coalition
Katelyn	Quiroz	Association of Counties
Kathryn	Roberts	NM Enviro Dept: SW Bureau
Selina	Robinson	Waste Management
Sarah	Schnell	Gordon Environmental
Allayne	Scott	285/Eldorado Recycles
John	Shaski	Knowaste
Councilor Miguel	Silva	City of Las Cruces
Bobby	Sisneros	City of Albuquerque
Gloria	Skeet deCruz	Navajo Nation - Baahaali Chichiltah Regional Solid Waste Transfer Station
Mike	Smith	Friedman Recycling Co
Joan	Snider	NM Enviro Dept: SW Bureau
Marcia	Spears Cihon	Eldorado 285 Recycles
Terry	Timme	Town of Silver City
Juan	Torres	NM Economic Development Dept
Leigh	Tutterrow	McKinley Citizens' Recycling Council
Hector	Valverde	Master Fibers
Marylou	Ward	Dona Ana County - Sherrif's Office
Charles	Wohlenberg	Citizen
Ralph	Wrons	Sandia National Labs

Increasing Recycling Stakeholder Meeting Attendees, October 14th, 2015, Albuquerque

Name	Last Name	Organization
Ralph	Anderson	Citizen
Guilherme	Basto	General Mills
English	Bird	NMRC
Danita	Boettner	Santa Fe SW Manag. Agency
Shawnda	Boyd	City of Rio Rancho
Tarkeysha	Burton	South Central SW Authority
Chris	Campbell	NMSU/IEE Resources Center
Joshua	Chavez	Los Lunas
Tejinder	Ciano	Reunity Resources
Luther	Clayton	Former NMRC Board Member/Retired
Neal	Denton	NMED: SWB
Walter	Dods	Soilutions
Layne	Duesterhaus	NMED: SWB
Pamela	Egan	NASA White Sands Test Facility
Joseph	Eigner	285 Recycles
Joseph	Ellis	Estancia Valley SWA
Susan	Flores	Keep Tularosa Beautiful/Otero County
Jill	Holbert	City of Albuquerque
Alvin	Jiron	City of Las Vegas
Roselyn	John	Navajo Nation - Baahaali Chapter
Greg	Jojola	
Jessi	Just	NMRC
Andrea	Lawrence	NM Clean & Beautiful
Adrian	Marrufo	City of Gallup
Sam	McCord	Sandia National Labs
Koryn	Misbach	City of Rio Rancho
Marcus	Montoya	Los Lunas
Cynthia	Naha	Santo Domingo Tribe
Gerald	O'Hara	McKinley Citizens Recycling Coalition
Craig	O'Hare	Santa Fe County - Office of Solar Power and Energy Efficiency
Cindy	Padilla	NMRC Board Member
Connie	Pasteris	NMED: SWB
Patrick	Peck	South Central SW Authority
Sarah	Pierpont	NMRC
Arturo	Romero	Los Lunas
Gino	Romero	North Central Solid Waste Authority
Anna	Riggs-Eader	Estancia Valley SWA
Bert	Sanchez	Sandoval County
Bobby	Sisneros	City of Albuquerque
Gloria	Skeet deCruz	Navajo Nation - Baahaali Chapter
Guarena	Skeets	Navajo Nation - Baahaali Chapter
Mike	Smith	Friedman Recycling
Joan	Snider	NMED: SWB

Robert	Taylor	Friedman Recycling
Cordell	Tecube	Jicarilla Apache Tribe
Tomasita	Tenorio	Santo Domingo Tribe
Charles	Wohlenberg	Citizen
LIVE STREAM PARTICIPANTS		
David	Wentling	Grow Raton
Katelyn	Quiroz	NM Association of Counties
Terry	Timme	Town of Silver City
Angelica	Gurule	Los Alamos County

Appendix B: Recycling Infrastructure Estimate Calculations

Commercial Sector Diversion - \$96 million

Amount Needed for Trucks and Carts to service ALL of New Mexico's businesses - \$96 million (\$16 million for carts + \$80 million for trucks)

Assumptions

- Carts run about \$100 each or \$50 if bought in bulk and can service one to two businesses – dumpsters run about \$3000 each and can service up to 4 businesses
- \$220,000 truck with 109,159 businesses in state. And 1 truck can service 300 businesses per month + \$50 per cart for all businesses in state assuming an average of one cart per business = \$7.8 million for one cart per business or if one dumpster can service 4 businesses. For \$16 million total figured 1 cart per business and 10% would have dumpsters.
- Number of businesses based on US Census or estimated from City's existing number of commercial accounts if noted with an "*"
 - Albuquerque – 13,000*
 - Rio Rancho – 5,222
 - Las Cruces – 2,000*
 - Santa Fe – 2,400*
 - Entire State – 109,159

Construction & Demolition Diversion - \$6.5 million

Assumptions

- 3 regional small-scale mixed C&D debris sorting facilities. ABQ/Rio Rancho \$2 million, Santa Fe \$1 million and \$1 million in Las Cruces area
- 10 Regional Concrete Grinding Hubs each with a grinder that costs \$250,000

Statewide PAYT and Curbside Recycling Collections - \$71 million

Assumptions

- Las Cruces Math - 38,000 households, assuming \$50/cart = \$1.9 million for carts + 5 new trucks at \$220k each = \$78.94 per household. This is consistent with the actual rate of \$76.11 per household City of Abq spent for the trucks and carts for their city wide curbside recycling program. Amount used per household if a community also needs trucks is \$79. Amount used per household if community just needs carts is \$50.
- City of Abq Figures - Each recycling route averages 1,200 households per week. City of Abq bought a total of 19 new truck and over 140,000 96 gallon carts. Spent \$50.79 per house for carts.
- Average industry # for automated trucks is servicing 900 households per week.
- Households in NM 912,890 (US Census 2014 estimates) of which 323,900 are in the four largest cities and 588,900 are not in four largest cities
- \$79 per household in 4 largest cities and \$82 per household in smaller cities assuming they need more trucks, equipment, etc.
- To convert the 588,900 households (NOT in the 4 biggest communities would cost = \$47 million for carts and trucks to convert to curbside and PAYT (including trucks and carts)
- To convert the 4 biggest cities to PAYT at \$50 per household = \$16 million in carts
- Assume 36 new trucks needed at \$220,000 per truck to include curbside in areas currently w/o curbside = \$8 million.

Increased Hub and Spoke Collections and Processing - \$7.1 Million

Assumptions

- Improvements & Expanded Capacity Needed at most of 22 hubs
- Expanded spoke collection equipment
- 4 New Recycling Hubs needed in the State (proposed Clovis, Rio Arriba, Socorro, Gallup)
- \$250k per hub for autotie baler and new space for 16 hubs, \$150k per hub for new space, etc for 3 = \$4.5 million

- \$6k for compacting roll offs for 22 hubs approximately 5 per hub needed = \$660k
- \$500k for each new hub = \$2 million

Organics Diversion - \$37 million

Assumptions

- Tier I - Mulching only, regionalized grinders ideally private owned and operated but could be public. Perfect for public private partnership, 4 regions \$500,000 per region
- Tier II - Front End Loader + monitoring equipment, Communities sized 1000-10k, Bio-solids / Wood Chips / All other organics, 30 communities / \$55,000 per community
- Tier III - Windrow Turner + equipment – (Small Communities 10k-50k and large communities 50k+ populations), Bio-solids / Wood Chips / All other organics, Large = 9 communities / \$510,000, Small = 10 communities / \$255,000
- Trucks \$20 million
 - 3,200 grocery and restaurant businesses in NM On avg
 - 5-64 gal carts per store = 300 gal or 1.3 cubic yard container = 450 gal/store avg
 - 3,200 x 450 gal = 1,440,000 gallons of food waste in NM
 - For weight 20 carts per truck = 1280 gallons
 - 2.5 trucks/day = 3200 gallons per day
 - 3200/1,440,000 = 450 trucks
 - 450/5days in a week = 90 trucks needed @ \$220,000 per truck = 20 million
- Containers \$5.5 million
 - 64 gallon cart = \$50 3 cu/yd dumpster \$3000 to get avg
 - 1600 3 cu yd = 5 million
 - 5 – 64 gal/store = 8000x \$50= 500,000
 - Total carts 5.5 million

Totals:

Business Recycling Infrastructure: \$96 million

Construction and Demolition Recycling: \$6.5 million

Conversion to PAYT and curbside recycling collections: \$71 million

Expansion of hub and spoke capacity: \$7.1 million

Organics Infrastructure Expansion: \$37 million

TOTAL INFRASTRUCTURE ESTIMATE: \$217.6 million