California's New Goal: 75% Recycling

May 9, 2012

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Thoughts from the Director

California has come a long way since passage of the Integrated Waste Management Act and the Beverage Container Recycling and Litter Reduction Act in the 1980s. Single-digit recycling rates, sparse infrastructure and few end markets for recyclables was the landscape. These statutes spurred California to the success it now enjoys: a diversion rate equivalent of 65%, and a beverage container recycling rate of 82%. This was accomplished with the hard work and dedication of all of our partners in this endeavor including local jurisdictions, the waste and recycling industry, and the public who embraced the new programs.

Now, California's Legislature and Governor Brown, through enactment of AB 341, (Chapter 476, Statutes of 2011) has directed CalRecycle to propose a plan for the next step in the evolution of California's solid waste stream management. The law establishes a policy goal for California that not less than 75% of the solid waste generated be source-reduced, recycled or composted by 2020. It also requires CalRecycle to provide a report to the Legislature by January 1, 2014 detailing strategies to achieve that policy goal.

We intend to take advantage of AB 341's invitation to define the future. Our report will offer the Legislature concepts for legislative change and a vision of a new paradigm for solid waste management in California. We will also examine options within existing CalRecycle authority, and will act on those that can help us achieve our goals. We will engage our sister agencies, inform them of our efforts, and work with them to move concepts forward. We intend to develop this plan with California, not CalRecycle, as the scope of our responsibility. We are planning for action!

As an organization, we have long strived to be transparent and receptive to input, and that will not change. We expect our stakeholders to help and will seek their thoughts and input throughout our work on this plan. We view this document as a "conversation starter" and offer it in advance of our first public workshops on the 75% plan on May 14 (Sacramento) and May 21 (Diamond Bar). We commit to keeping our stakeholders informed and engaged as we move forward. We envision a series of workshops, webinars, and working groups to honor this commitment over the coming 18 months.

This document is primarily a collection of the department's emergent ideas and concepts we believe have the potential, if implemented, to assist in achieving 75% by source reduction, recycling or composting by 2020. Many of the ideas will look familiar since they have been previous topics of conversation, sometimes for years. There are new ideas as well. Some ideas include more substance than others. This isn't a reflection of priority or importance, it just means we have more background or experience with that particular issue. It is premature to consider these ideas recommendations or policy perspectives of the department or the administration. At this early stage of development, we are asking stakeholders to help us build on this set of concepts with thoughts and ideas we may have missed.

I can say that this process will be exciting and thought-provoking. It will have blasts from the past and déjà vu moments. It will be frustrating at times, tempered with times of clarity. I am not sure what the final products are going to look like but I'm confident they will reflect the potential California has to make changes that will move us toward a more sustainable future. We look forward to getting this project started. We have learned much from nearly 25 years of implementing our programs. Let's use that knowledge to move us into our new paradigm.

Yours in the journey,

Caroll

The Numbers! What does 75% Recycling Mean?

AB 341 calls for the 75% goal to be achieved by source reduction, recycling and composting. So what does this mean? We are proposing, for the purposes of the discussion, to stick with a generally more intellectually honest definition of recycling.

As we all know, the 939 policy direction, whose foundation was the 50% diversion mandate on local jurisdictions with potential penalties for those that failed to achieve it, has created a robust collection, separation, and processing infrastructure for recyclable and compostable materials.

Although we rightfully tout California's "world leading" diversion rate, we know it is not necessarily resulting in a high rate of recycling, at least not from a purist's perspective. California's high diversion rate is, in part, a result of past policy-making that allows activities such as waste-derived materials being used at landfills (Alternative Daily Cover, intermediate cover, tipping pads, roads and waste tires and solid waste residuals used as fuel) to constitute diversion; So we need to be mindful of the differences between '"recycling" and "diversion" when we are setting a baseline, establishing targets, and measuring success. This needs to be included in the process from the very beginning. Thus we are proposing the following concepts.

Measuring 75% "Recycling"

For years following enactment of AB 939, jurisdiction compliance was determined by a calculation of "Diversion" of waste away from landfills. This was replaced a few years ago by the more accurate and timely method of measuring per capita "Disposal Reduction." While never a 939 mandate, calculating a statewide rate of diversion has long served as an accepted indicator of overall progress in California's campaign to recycle, reduce, and reuse its discards. Today, a "diversion rate equivalent" of disposal reduction is employed to identify where California stands in the historical trend, factoring both past and present measurement methods.

There will be many quantitative and qualitative indicators with which we can measure achievement relative to pursuit of the 75% statewide "recycling" goal established by AB 341. These indicators include expansion of the recycling infrastructure, supply and demand for recycled-content products, and more.

A fundamental indicator will be the statewide recycling rate itself. It is evident that the 75% recycling goal is an aspirational leap beyond the mandates of AB 939, which established the existing 50% diversion requirement for jurisdictions in California. Furthermore, given the shift from diversion to disposal reduction as the basis for jurisdiction compliance with AB 939, we are further challenged to establish a commonly understood and accepted representation of our progress toward and eventual achievement of the 75% recycling goal.

Also factoring into the challenge of measuring progress toward and achievement of 75% recycling is that CalRecycle recommends certain disposal-related activities previously accepted as diversion should be excluded from the definition of recycling. These include alternative daily cover (ADC) used at California landfills; alternative intermediate cover at California landfills; beneficial reuse at California landfills; material transformed at California transformation facilities; and used-tire derived fuel at California facilities. This proposal captures the intent of AB 341 by raising the bar relative to what qualifies as recycling. In doing so, we are compelled to further distinguish measurement under AB 341 from how jurisdiction compliance with AB 939 is measured.

This section will explore a way to measure statewide recycling for the 75% goal. While the specific approaches and numbers used could be refined or improved based on input, some fundamental components will exist in any measurement system: (1) the BASE to measure against; (2) the TARGET to strive for; and (3) the ACTIVITIES TO TRACK to determine if California meets the 75% "recycling" goal.

1. The BASE:

In the AB 939 paradigm, the BASE is the average per capita solid waste generation from 2003 to 2006. However, this period is nearly at the peak in terms of historical generation. Annual waste generation nearly doubled between 1990 and 2007 (82% increase), while per capita generation increased by half (45% increase).

However, given the ambitious course charted by AB 341, we should not assume solid waste generation is destined to increase. Following the existing AB 939 compliance construct for jurisdictions, per resident disposal of waste – a metric most people can grasp – could serve as a simple and consistent metric for the 75% recycling goal. Factoring population growth into the equation would make this metric even more reflective of the reality on the ground.

Considering historical fluctuations in how much waste people generate, though, it would not be appropriate to base the 75% recycling goal on a few high-generation years resulting from relatively strong economic activity and a related spike in the housing market. Therefore, we will not use the 2003 to 2006 average from the AB 939 paradigm (12.6 lbs/resident/day). CalRecycle does believe it is necessary to use a multi-year timeframe, owing to significant variations found among single-year values. Despite the wide economic swings experienced in recent years, it is also important to factor those in because of improved quality and collection of data over years past. Given these issues, CalRecycle selected the long-term average (1990 through 2010) per-resident generation of 10.7 lbs/person/day as the BASE.

2. The TARGET:

With a BASE per resident generation of 10.7 lbs/person/day, the 75% recycling goal will require California to recycle 75%, or 8.0 lbs/resident/day, and allow not more than 25%, or 2.7 lbs/resident/day, to be directed toward disposal-related activities.

3. The ACTIVITIES TO TRACK:

Because recycling activities are much more diffuse, varied, and difficult to measure, the TARGET measurement will focus on the relatively small number of disposal-related activities. These activities tend to be more regulated, more concentrated and easier to measure accurately (less potential for double counting, scales, in-place reporting mechanisms, etc.). Table 1 below shows rough estimates for total annual (2010) throughputs for various "Disposal-Related" activities. The Disposal Reporting System currently tracks tonnages for all but one of these activities, so CalRecycle would only need additional tracking or reporting mechanisms for tire derived fuels.

Table 1. Rough Estimates of Disposal-Related Materials Flows in 2010 under the proposed 75% recycling paradigm.

Activity	"Disposal-Related" Activities Rough Estimate of Total Annual throughput (Tons) for 2010
Traditional Disposal	
SW Disposed from CA at in-State Landfills	30,000,000
Disposed from CA at out-of-State Landfills	400,000
Subtotal:	**30,400,000**
Additional Disposal-Related	
Transformed at CA Transformation Facilities	800,000
Alternative Daily Cover at CA Landfills	3,500,000
Alternative Intermediate Cover at CA Landfills	100,000
Beneficial Reuse at CA Landfills	2,100,000
Used Tire Derived Fuel at CA Facilities	70,000
Subtotal:	**6,570,000**
ALL DISPOSAL-RELATED - GRAND TOTAL:	**36,970,000**

A Quick Comparison of the Diversion and Recycling Measurement Systems

Under the Diversion system – that is, the "diversion rate equivalent" explained previously – California had a 2010 diversion rate equivalent of 65%. Under the Recycling system – identified above as the BASE we will measure against – California had a 2010 recycling rate of 49%. Two factors cause this difference: first, the exclusion of nearly 7 million tons of disposal-related activities from recycling credit as proposed by CalRecycle (those activities listed under "Additional Disposal-Related" in Table 1); and second, the reduced per-resident generation BASE of 10.7 lbs/resident/day. To reach a 75% diversion rate equivalent in 2010, California would have needed to reduce disposal by an additional 9 million tons. To reach a 75% recycling rate in 2010, California would have needed to reduce disposal-related activities by almost 19 million tons.

The Lift Needed to Reach 75% Recycling by 2020

Given the proposed measurement system, CalRecycle estimated the potential growth in traditional disposal and disposal-related activities, and the amount of additional recycling needed to meet the 75% goal in 2020. Chart 1 below shows projections of traditional disposal under different economic scenarios. For simplicity, CalRecycle will use the medium growth

projection in the rest of this discussion (dashed green line), but acknowledges that future disposal may differ significantly from this, depending on the timing and extent of economic recovery. In 2020, the medium growth projection shows 36 million tons of traditional disposal.

Chart 1. California Statewide Historical and Projected Traditional Disposal (Landfilled in CA or Exported for Disposal)

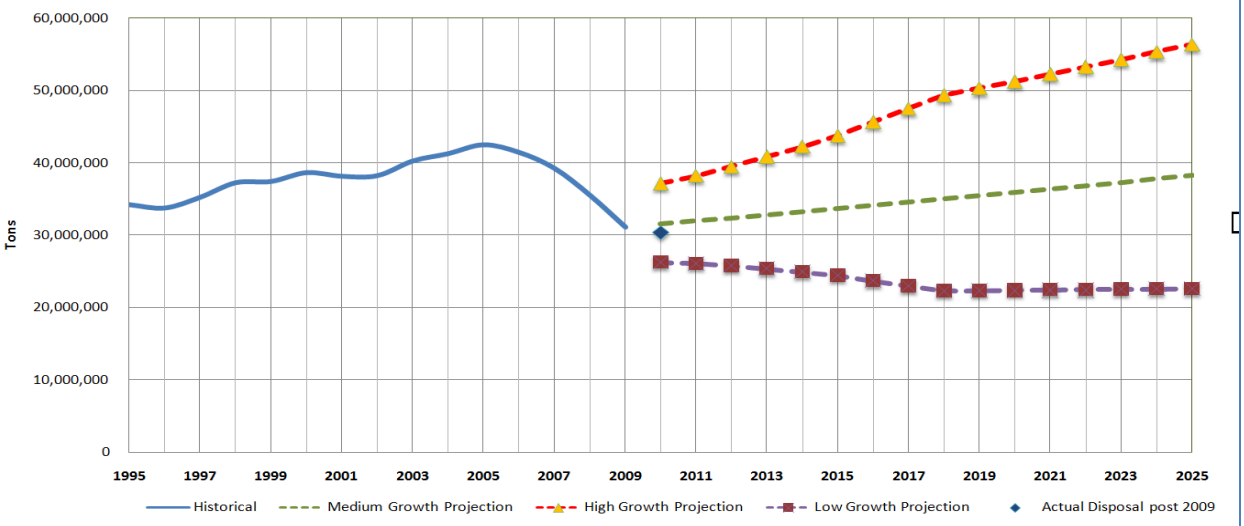


Chart Explanation

The chart above shows: 1. Historical 1995-2009 Solid waste disposal (landfilled in CA or exported for disposal) originating in California as reported to CalRecycle's Disposal Reporting System,, 2. Projected 2010 to 2025 solid waste disposal using Woods & Poole inc. econometric data to generate high, medium, and low growth factors (as adjusted & modified to remove transformation), 3. Actual Disposal for years after 2009 for comparison purposes (not used in the projection calculations).

To be consistent with the recycling goal and measurement system, the approximately 7 million tons of previously excluded disposal-related activities referenced above must be added to the 36 million tons of traditional disposal, to yield a grand total of 43 million tons of <u>potential</u> disposal-related activity in 2020. This potential disposal-related activity is projected to happen if no additional steps are taken to increase recycling. Chart 2 below shows the potential disposal-related tonnage from 2010 to 2025, and the amount of allowable disposal-related tonnage – 25% of all waste generation – to achieve 75% recycling in 2020 and beyond.

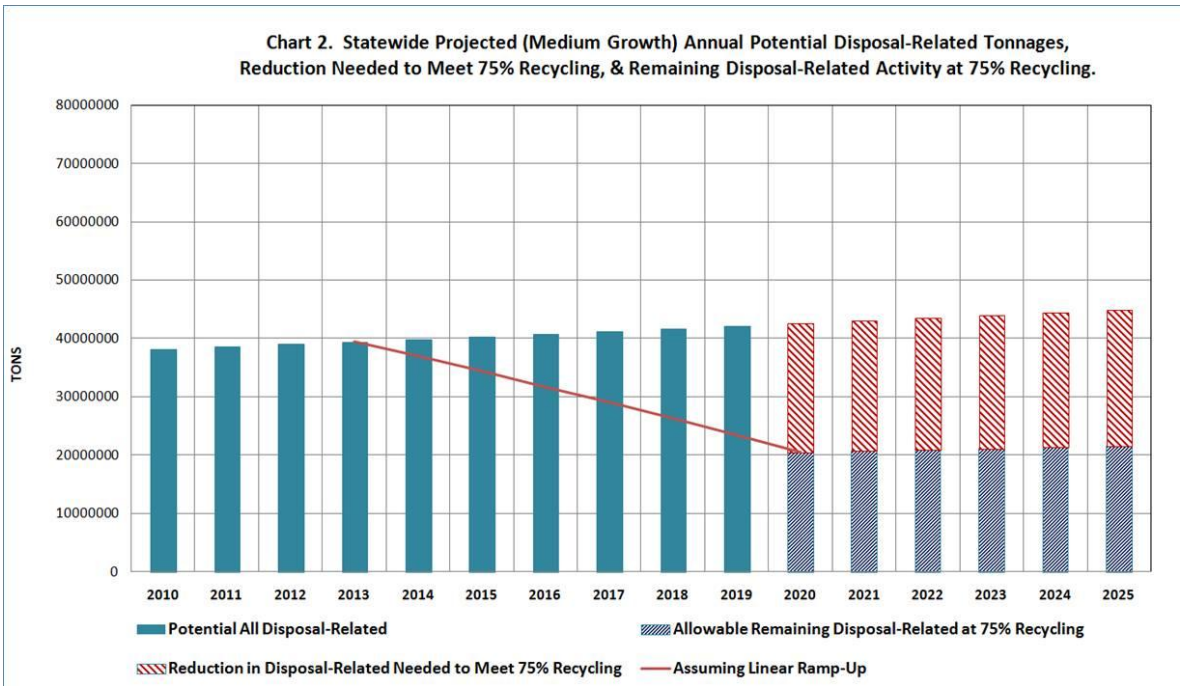
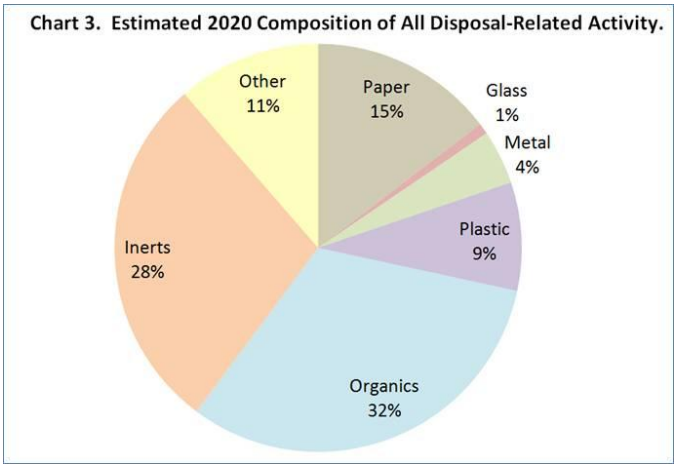
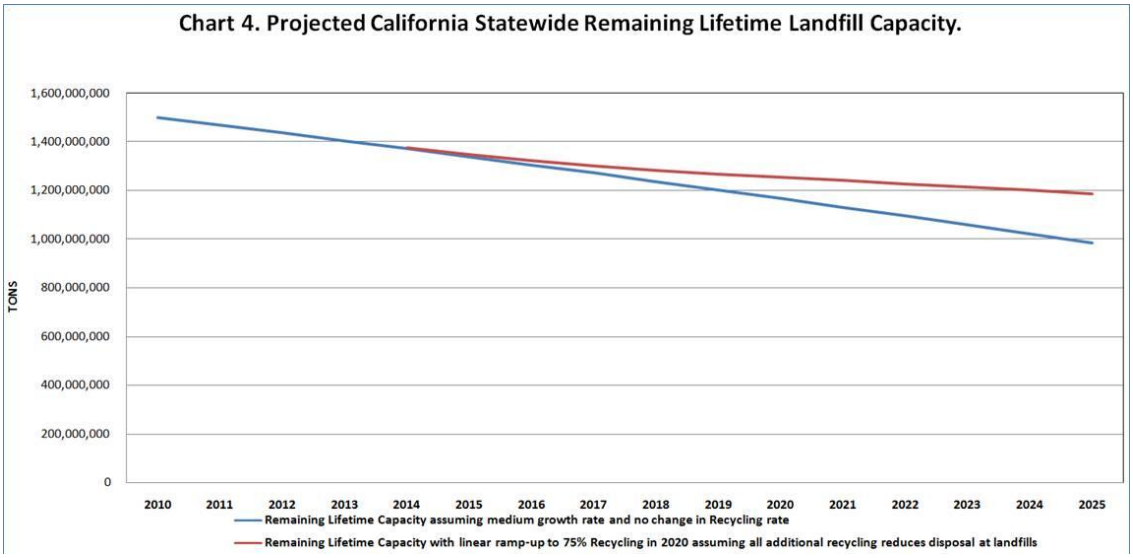


Chart 3 below represents the 43 million tons of disposal-related material to manage in 2020. More than half of this (22 million tons), will need to be redirected in order to reach the 75% recycling goal.



To redirect 22 million tons of material in 2020 will require major efforts on many fronts. This will include, as referenced above, the expansion or siting of many facilities to accommodate higher recycling volumes, which will in turn create more recycling-based jobs in California. It will also require stronger markets for recycled materials, ideally within our state, and in fact within regions of our state to make those markets sustainable and responsive to local needs and opportunities. It will also demand successful implementation of other policies such as increased commercial recycling as mandated by AB 341. And, it will call for even greater participation in recycling behaviors by the general public.

Chart 4 below shows that in addition to the resource conservation and job creation benefits, more than 200 million tons worth of California statewide landfill capacity will be preserved between 2014 and 2025. This estimate assumes a linear ramp up to 75% recycling from 2014 to 2025 and that each additional ton of recycling will result in a one-ton reduction in disposal at California landfills.



Policy Drivers

As we move to construct the new paradigm, it is helpful to consider pressing societal concerns or "drivers" that will shape our thinking. By identifying drivers, we can better define the many benefits of our future policy proposals that aim to fulfill the directives of AB 341. Our existing legislative mandates, in combination with the language of AB 341, point us toward the following set of social, economic, and environmental drivers (with no attempt at prioritization):

- Preserve natural resources
- Maximize source reduction
- Decrease reliance on landfills
- Minimize the impact of problematic waste materials
- Increase protection of public health and the environment
- Reduce GHG emissions, and reduce localized air pollution.
- Reduce dependence on oil by increasing in-state production of bioenergy/biofuel
- Reduce the overall energy demand
- Increase economic opportunity, manufacturing, and jobs in California
- Reduce costs to local governments
- Preserve local control
- Provide stable state funding as necessary to implement and maintain a sustainable materials management program

As we further develop the implementation concepts identified in the following sections of this document, these policy drivers will help us identify the most impactful and beneficial strategies in our final plan. To begin the discussion, we suggest that taking action in the following major areas will be critical for reaching the 75% goal:

1) Increase Recycling Infrastructure
2) Organics
3) Increase Commercial Recycling
4) Establish Extended Producer Responsibility
5) Reform Beverage Container Program
6) Increase Procurement/Demand
7) Other Materials
8) Governance/Funding
9) Source Reduction
10) The Other 25%

The remainder of this document provides brief write-ups of specific implementation concepts for each of these 10 areas. The write-ups are intended only to be suggestive, not conclusive and not encompassing all nuances, variations, or details. At present, CalRecycle is not soliciting detailed comments on these write-ups, but rather is seeking input on whether the major areas identified above and the implementation concepts described below make sense, and whether any key areas/concepts are missing. Future workshops will explore implementation concepts in more detail.

1. Increase Recycling Infrastructure

1a - Funding for Infrastructure
Description • Substance –Financial incentives are needed to facilitate the development of new recycling manufacturing/processing infrastructure in California, on the order of dozens and perhaps over 100 new or expanded facilities. Potential funding sources include IWMA tipping fee increase, Cap & Trade auction proceeds, funding from other agencies (e.g., AB 118 funding via CEC), tax credits (see Options 6f and 6g). Funds could be used for activities such as RMDZ loans; grants for manufacturing (including anaerobic digestion) using food waste, fibers, resins; production payment incentives (e.g., modeled after existing plastic payment incentive program). • Contribution to 75% - The 75% goal likely cannot be reached unless in-state manufacturing (from recycled materials) and energy generation facilities are developed. Developing such infrastructure will allow realization of associated quantifiable benefits such as GHG emission reductions and job creation, and of non-monetized environmental benefits such as improved soil quality from compost.

Brief Evaluation
• Legal/Statutory Authority – Depends on funding source. Legislation needed for IWMA tipping fee increase. Budgetary language needed for provision of Cap & Trade funds. AB 118 funding decided on annual basis by CEC, with CalRecycle on Advisory Committee.
• Implementing Authority(ies) – CalRecycle, ARB, others
• Implementation:
  ○ Form of implementation – Depending on funding source and intended use, may require development of new grant/payment programs. Likely will not require new regulations. New grant/payment programs would need development of criteria, applications, payment tracking, etc.
  ○ Information needs and barriers – None
  ○ Technical needs and barriers – None
  ○ CalRecycle resource needs and barriers – Existing CalRecycle staff could administer expanded loan activities. Existing grant staff could administer a new grant/payment program, but not necessarily if other new grant programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues.

1b1 - Regulatory Oversight
Description • Substance –Adjust programs and regulations to better ensure sites can be part of a sustainable infrastructure, through increased oversight and inspections of all types of solid waste facilities and operations. • Contribution to 75% – Indirect contribution. With increased amounts of materials going to solid waste facilities and operations other than landfills, CalRecycle needs to increase the level of evaluation of facilities and operations to ensure they operate in a manner that continues to be protective of public health, safety and the environment and that they continue to be good neighbors and part of a sustainable infrastructure.

Brief Evaluation
• Legal/Statutory Authority – Statute requires the Department to inspect landfills and transformation facilities every 18 months. Statute allows the Department to inspect solid waste facilities to evaluate the local enforcement agency and to ensure that state minimum standards are met (PRC § 43219).
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of Implementation
  ▪ As different types/proportions of materials are sent to solid waste facilities and operations other than landfills, more direct observation and data collection will be needed to continue to determine if potential public health and safety and environmental impacts are being mitigated.
  ▪ Currently CalRecycle inspects only a few of the almost 1000 solid waste facilities and operations other than landfills in any given year. The number of facilities will increase as the recycling/ composting infrastructure increases. Greater presence would allow the state to identify issues and information/assistance earlier, reducing the number of problems that could lead to non-compliance.
  ▪ Set schedule for inspecting solid waste facilities and operations other than landfills, or mandate timeframe for inspections in statute.
  ○ Information needs and barriers – None.
  ○ Technical needs and barriers – To be determined when issues arise that need to be researched.
  ○ CalRecycle resource needs and barriers – Additional resources will be needed to conduct inspections at facilities/operations other than landfills.
  ○ Operators and LEAs may not support increased CalRecycle oversight.

1b2 - Regulatory Oversight
Description • Substance – Adjust solid waste regulations to better ensure sites can be sustainable. • Contribution to 75% – As more waste is diverted from disposal there will be more and larger waste streams sent to recycling or composting activities. Regulations that provide an appropriate level of oversight help to ensure that the facilities handling this waste operate in a manner that is protective of public health, safety, and the environment. Compliant facilities are generally "better neighbors" that can offer the promise of continued and/or expanded services and be part of a sustainable infrastructure.

Brief Evaluation
• Legal/Statutory Authority – PRC 40502, 43020, 43021
• Implementing Authority(ies) – CalRecycle and other environmental regulatory agencies
• Implementation:
  ○ Form of Implementation:
  ▪ Continue to review and adjust solid waste regulations as currently being done for the compostable material handling regulations.
  ▪ Work with state, regional and local agencies on regulations associated with solid waste facilities and recycling facilities (see option 2f for organics)
  ▪ Review and make appropriate changes to source separated/ separated for reuse criteria
  ▪ Evaluation of current waste derived ADC performance and consistent evaluation of new proposed types of waste derived ADC
  ▪ Provide a clear regulatory framework for the development of new waste handling technologies to ensure they are as protective of public health, safety, and the environment
  ▪ Assess existing regulations to determine if facility types are appropriately placed within the current tiered regulatory structure
  ○ Information needs and barriers – Potential cross-agency issues to work through
  ○ Technical needs and barriers – Continued scientific research in relation to basis for regulations and development of new technologies
 	
CalRecycle resource needs and barriers – No additional resources

1b3 - Regulatory Oversight

Description

- Substance – Promote facility operator training and/or certification to better ensure sites can be operated in a manner that will allow them to be part of a sustainable infrastructure.
- Contribution to 75% - Better and consistent training and or certification of facility operators will help keep facilities in compliance and an active part of a sustainable infrastructure.

Brief Evaluation

- Legal/Statutory Authority – PRC Sections 43101, 43217, 43303
- Implementing Authority(ies) – CalRecycle or its representative
- Implementation:

  Form of Implementation:
  - Focus on Compost Facility and Transfer Processing Operator Training and / or Certification Program.

    Example objectives for compositing would be to provide a comprehensive training program on operational, technical, and regulatory aspects and issues related to composting of organic materials. This could include: Physical and Chemical Fundamentals, Feedstock Materials, Control and Management of Temperature, Pathogen and Odor Control, Product Quality and Control, Record Keeping, Safety, Public Relations (complaint management)
  - Information needs and barriers –
    - Needs local complaint data to drive course development; defined level of proficiency required of the operators and how will it be measured; management of a new certificate program, including management of funds collected to cover costs
    - Barrier - Data not readily available due to various local and state entities that get involved: Air Districts, Code Enforcement, LEAs, and CalRecycle.
  - Technical needs and barriers –

    Needs: Technical information, for example methods to handle various types of feedstock materials in various combinations.

    Barriers: If a certification program was part of a training program, there would be a potential conflict with existing operator based and SWANA-sponsored certifications. Defining the balance between certification and the level of regulatory oversight
  - CalRecycle resource needs and barriers –
    - Needs: Technical staff resources
    - Barriers: Availability of technical resources.

1c - Strategic Facilitation and Incentivizing Of Facility Siting
Description • Substance – Develop and implement strategies to facilitate local government process for siting new or expanding facilities associated with recycling, composting, and anaerobic digestion. Develop and implement capacity criteria regarding the siting or expansion of solid waste landfills • Contribution to 75% - Increase the capacity of the recycling, composting and AD infrastructure to handle the increase in materials diverted from disposal. Better ensure that landfill siting and capacity is portioned appropriately within the State.

Brief Evaluation
• Legal/Statutory Authority –PRC 40509, 43305
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of Implementation: Strategies could include, for example:
  ▪ Develop Program EIRs for facility types, such as was done for Anaerobic Digestion facilities
  ▪ Facilitate a sustainable material management approach to project evaluation during the project planning and environmental review process
  ▪ Liaison with community action groups regarding benefits from hosting facilities associated with recycling
  ▪ Seek authority to require a demonstrated need for additional disposal capacity as part of the solid waste permitting process
  ○ Information needs and barriers – NA
  ○ Technical needs and barriers – Technical expertise regarding diversion facility project impacts and mitigations.
  ○ Resource needs and barriers – Fiscal impact to support development of EIRs

1d – Modify RMDZ Program To Be Statewide
Description • Substance – The RMDZ Program, begun in 1993, provides assistance and loan activities in 35 zones covering over ½ of the state. The program has relied heavily on local Zone Administrators (ZAs). This option explores modifying the program to better assist in expanding statewide recycling manufacturing infrastructure and to address the limited resources of ZAs. Two variations: 1) keep current Zones and support from CalRecycle as is, but allow for loans to be available to recycling manufacturers statewide where partnerships exist with local governments; or 2) change the program to a statewide RMD loan and assistance program. This second approach would entail not having specified zone areas and focusing CalRecycle staff effort on technical and financial assistance to any recycling manufacturer. This would include collaborating with state and local agencies with common business development goals (e.g., identifying available feedstock sources, location selection, permitting assistance, etc.), and marketing CalRecycle programs to manufacturers state/world-wide. Also see Option 1e re: business assistance. • Contribution to 75% - An additional 46% of the state would be eligible for loans and other services. Policy Drivers: Increased economic opportunity, manufacturing, and jobs in California, reduced greenhouse gas emissions.

Brief Evaluation
• Legal/Statutory Authority –CalRecycle has authority to provide loans on a statewide basis, but only where partnerships exist with other public entities; to effectuate this, CalRecycle would have to define (either in regulations or eligibility criteria) what "partnerships" means in this context. Statutory change would be needed to eliminate the current Zones and change the program into a statewide program. However, on its own CalRecycle could dedicate its resources to providing more business assistance on a statewide basis.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation –Some regulatory and statuary changes would be needed. Would also need to discuss the role of current ZA's in a new program. CalRecycle would focus on collaborating with other agencies that can assist recycling manufacturers, opportunities for marketing assistance to recycling manufacturers, and further increasing staff's expertise in assisting recycling manufacturers.
  ○ Information needs and barriers – No information
  ○ Technical needs and barriers – Minor tweaks to current zone- and facility-related databases to track manufacturers.
  ○ Resource needs and barriers – Depending on number of new loans and increased funding allocation, additional loan staff may be needed. Existing LAMD staff that already coordinates with RMDZs can continue to work with ZAs and economic development entities to provide assistance to manufacturers.

1e – Increase Recycling Manufacturing Business Assistance
Description • Substance -- Increase CalRecycle's ability to respond to recycling manufacturers' business assistance needs by creating a CalRecycle assistance team to respond to requests from manufacturers and by leveraging other organizations such as GO-Biz. These actions would allow CalRecycle to better meet manufacturers' needs (e.g., attraction, retention and expansion services; site selection; permit assistance across agencies; and business plan development). This service would be available to both for manufacturers in CA and those interested in siting in CA. Two primary channels through which to leverage other organizations are continued and enhanced participation in the: 1) Interdepartmental Working Group for Small Business Success (IWGSBS); and 2) CalEPA Small Business Programs Workgroup (CalEPA SBPW). • Contribution to 75% - Increasing assistance to recycling manufacturing businesses will ensure that material is processed and recycled into new products either in CA or domestically. By assisting these businesses we can increase the amount of material that is remanufactured in CA and reduce greenhouse gas emissions and increase jobs. Policy Drivers: Increased economic opportunity, manufacturing, and jobs in California, reduced greenhouse gas emissions, and preservation of natural resources, within the state and globally.
Brief Evaluation • Legal/Statutory Authority – CalRecycle could redirect staff to establish an assistance Team. Authority also exists for involvement in interagency working groups: 1) AB 29 (Pérez, Chapter 475, Statutes of 2011) creates GO-Biz as lead agency for economic strategy and business development through collaboration and partnership and offers a framework of supporting economic, workforce, financial, infrastructure, regulatory, and assistance data/information within which CalRecycle business-related programs can be integrated. 2) Executive Order S-05-10 directed CalEPA to coordinate business support activities with the GO-Biz. • Implementing Authority(ies) – CalRecycle • Implementation: o Form of implementation – Develop an internal Red Team to: 1) Continue participating in bimonthly IWGSBS. 2) Continue participating in the CalEPA SBPW. 3) Develop additional assistance tools (this could include resources discussed in other options, such as program EIRs to assist siting, statewide loans, etc.). 4) Note this assistance team would be integral in implementing a statewide RMD program (Option 1d). o Information needs and barriers – Nothing more than current. o Technical needs and barriers – Nothing more than current. o Resource needs and barriers – Redirect some MMLA staff to add this to their duties. Aforementioned Assistance Team would participate in interagency meetings and coordinate related activities. Some additional training in business and economic development would be needed.

1f – Increase Collection Efficiency/Quality
Description • Substance –Promote increased collection efficiency and quality to ensure that the maximum amount of materials is recycled. • Contribution to 75% - Increasing collection efficiency and quality will increase the amount that can potentially be recycled at a lower cost.

Brief Evaluation
• Legal/Statutory Authority – Most requirements for collection efficiency and quality are found in franchise agreements, waste removal contracts, or facility design. CalRecycle does not have authority over either franchise agreements or waste removal contracts (PRC §§ 40004 and 40059) and concurs with a facility permit when it meets state minimum standards, not design specifications in addition to state minimum standards.
• Implementing Authority (ies) – CalRecycle, environmental and solid waste management organizations
• Implementation:
  ○ Form of implementation – CalRecycle, environmental and solid waste management organizations can develop information on collection efficiency and quality and provide this information on their respective websites. The information can also be presented at trainings and conferences.
  ○ Information needs and barriers – Much of the information on facility design and terms of waste removal contracts is proprietary and not readily available.
  ○ Technical needs and barriers - – Much of the information on facility design and terms of waste removal contracts is proprietary and not readily available.
  ○ Resource needs and barriers – The information will need to be updated frequently as methods/technology changes.

1g - Streamline Planning Documents
Description • Substance – Planning Documents: 1. Eliminate the requirement of submittal of Five-Year County or Regional Integrated Waste Management Plan (CIWMP) or (RAIWMP). 2. Change Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE) and Countywide Siting Element (CSE) revisions to an update process similar to the new Nondisposal Facility Element update process. 3. Develop a programmatic EIR (Negative Declaration) for new SRREs, HHWEs, and CSEs. 4. Modify measurement of local disposal reduction under SB 1016 to a countywide basis. 5. Allow state agencies to contract for their own recycling services and keep any revenue they receive from the sale of the recyclables to enhance their own agency recycling programs without having to seek approval from CalRecycle. The timeline would depend on legislation. • Contribution to 75% - These streamlining changes will save jurisdictions money and time, allowing them to focus more on program implementation.
Brief Evaluation • Legal/Statutory Authority –Most of these changes would require new statutory authority or eliminating existing statutory requirements (programmatic EIR would not require statute). • Implementing Authority(ies) – CalRecycle • Implementation: Form of implementation – Subsequent to statutory changes, regulatory changes and technical guidance to jurisdictions would be needed. Information needs and barriers –Would need to assess how much a programmatic EIR would help and if some counties would still want to prepare a full EIR document. Technical needs and barriers – N/A Resource needs and barriers – Preparing an EIR might require contract funding and staff with CEQA experience

1h - Communications Outreach on Infrastructure
Description • Contribution to 75% - A well-designed and executed outreach effort will serve to inform Californians about the importance of achieving greater waste reduction, the types of facilities that can help us reach the 75 percent goal, and the economic and environmental benefits of having facilities located strategically within geographic regions. Framing issues effectively will help break down barriers to the necessary increase in infrastructure.
Brief Evaluation • Legal/Statutory Authority – PRC 42600-42602 • Implementing Authority(ies) – CalRecycle • Implementation: ○ Form of implementation – Fully integrated communications plan designed to highlight positive aspects of improved and increased recycling infrastructure. Plan would include elements informing the opinions of key stakeholders, decision-makers, and the general public. It should consider traditional marketing/communications tools such as public relations, earned media, paid media, social media, and partnership building, but also seek to develop and employ new, innovative tactics. ○ Information needs and barriers – Public opinion research via surveys and/or focus groups would be useful in informing the direction of a communications effort. Likewise, information on the positions held by key stakeholder groups, such as local jurisdictions and the solid waste industry, and decision-makers at the local and state level would be valuable. ○ Resource needs and barriers – If it is decided a contractor would be helpful in informing public and stakeholder opinion, contract funding would be needed.

2. Organics

2a –Greenwaste ADC
Description • Substance – Revise/Repeal PRC Section 41781.3, which established that ADC and other waste materials beneficially used at landfills constitute diversion through recycling. An alternative approach(among others) would be to require that all green waste (GW) used for ADC at the landfill, be subject to the tipping fee. • Contribution to 75% - Depending on the approach (and how much that changes behavior), this could result in an increase in the amount of diverted material by as much as 1.7 million tons (amount of GW ADC used in 2010; source: KIB Analysis).

Brief Evaluation
• Legal/Statutory Authority – PRC Section 41781.3
• Implementing Authority – CalRecycle
• Implementation:
  ○ Form of implementation – Legislation would be necessary to revise/repeal PRC Section 41781.3, as well as revisions to existing regulations (27 CCR 20680, et seq). Other conforming changes may be needed as well.
  ○ Information needs and barriers –
  Impact on 939 compliance: Jurisdictions in ten counties contribute 93% of all GW used as ADC in California, with nearly two-thirds from Orange and Los Angeles counties (source: KIB Analysis). Further analysis may be necessary to better understand the impact that a ban would have on specific jurisdictions.
  ○ Technical needs and barriers –
  Markets: Although this issue would be much more prominent under 2(b), some may question whether the existing composting infrastructure, particularly in Southern California and the Bay Area, is capable of absorbing the additional GW material that would likely no longer be going to a landfill.
  Cross-Regulatory: More of an issue under 2(b), where a significant number of new facilities are going to be needed to deal with an organics disposal ban, but should an GW ADC ban require the siting of additional facilities as well, the ongoing issues relative to the regional air and water districts will likely serve as barriers, particularly given the geography of which regions are using GW ADC today.
  ○ CalRecycle resource needs and barriers – No additional resources would likely be needed to implement a ban. That said, dis-incentivizing the use of GW ADC could create a need for more market development resources, although that need would be much greater under 2(b), where the focus is much broader and the “push” is much greater.

2b - Organics Disposal Phase-out
Description • Substance – CalRecycle Adopted Strategic Directive 6.1 in December of 2007 which called for diverting 50% of organics from the waste stream by 2020. Despite numerous attempts to support and incentivize organics facilities progress has been slow. A phase out of landfilling organics in combination with additional incentives for organics facilities and the products they produce would increase organics diversion and help achieve the strategic directive as well as the 75% recycling goal of AB 341. • Contribution to 75% - The 75% goal cannot be reached unless a significant amount of organics now being landfilled is instead used in new composting/AD facilities.

Brief Evaluation
• Legal/Statutory Authority –Depends on the approach--Some approaches to phasing out organics from landfills would require statutory authority, while others may be incorporated into the Mandatory Commercial Recycling program under existing authority.
• Implementing Authority(ies) –CalRecycle
• Implementation:
  ○ Form of implementation –There are a number of potential approaches to phasing out organics form landfills. One approach, for example, would be to require generators of significant amounts of organics to source separate their material for collection, and then prohibit the landfilling of source separated organics.
  ○ Information needs and barriers –
  ○ Technical needs and barriers – See 2a
  ○ Resource needs and barriers –

2c - Funding for Organics Infrastructure
Description • Substance –Although the composting industry grew significantly in the 1990s and early 2000s, it has since plateaued and compostable organics materials still constitute 1/3 of what is landfilled every year. Financial incentives are needed to facilitate the development of dozens of new organics management facilities in California, including anaerobic digestion facilities. As noted in Option 1a, potential funding sources include IWMA tipping fee increase, Cap & Trade auction proceeds, funding from other agencies (e.g., AB 118 funding via CEC), tax credits (see Options 5f and 5g). Funds could be used for activities such as RMDZ loans; grants for facilities using food waste; compost or AD gas production payment incentives; etc. • Contribution to 75% - The 75% goal likely cannot be reached unless a significant amount of organics now being landfilled is instead used in new composting/AD facilities. Developing such infrastructure will allow realization of associated quantifiable benefits such as GHG emission reductions and job creation, and of non-monetized environmental benefits such as improved soil quality from compost.

Brief Evaluation
• Legal/Statutory Authority – Depends on funding source. Legislation needed for IWMA tipping fee increase. Budgetary language needed for provision of Cap & Trade funds. AB 118 funding decided on annual basis by CEC, with CalRecycle on Advisory Committee.
• Implementing Authority(ies) – CalRecycle, ARB, others
• Implementation:
  ○ Form of implementation – Depending on funding source and intended use, may require development of new grant/payment programs. Likely will not require new regulations. New grant/payment programs would need development of criteria, applications, payment tracking, etc.
  ○ Information needs and barriers – None
  ○ Technical needs and barriers – None
• CalRecycle resource needs and barriers – Existing CalRecycle staff could administer expanded loan activities. Depending on funding allocation and number of eligible entities, existing grant staff could administer a new grant/payment program, but not necessarily if other new grant programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues.

2d - Indirect Incentives
Description • Substance – In addition to Options 2a, 2b, and 2c, indirect incentives – such as climate change offsets, low-carbon fuel pathways, etc. -- are needed to make a substantial increase in composting and recycling of organic materials economically viable. Landfilling of organic materials remains relatively inexpensive compared to other organic materials management options. At least in part as a result, organics materials constitute approximately 1/3 of what is landfilled every year, but they could instead provide an in-state supply of offset credits and a source of sustainable feedstock for production of renewable electricity and low carbon transportation fuel. In addition to the goals of AB 341, the State of California also has established an ambitious set of environmental goals to reduce its emissions of greenhouse gases while simultaneously reducing its reliance on fossil fuels for the production of electricity and transportation fuel. However, use of organic materials at California facilities to generate GHG Offset Credits or as sustainable feedstocks for the production of electricity and transportation fuels is constrained for multiple reasons (e.g., cheap landfilling, lack of sufficient information to develop offset protocols, etc.). • Contribution to 75% - The 75% goal likely cannot be reached unless a significant amount of organics now being landfilled is instead used by composting, anaerobic digestion, and recycling facilities.

Brief Evaluation
• Legal/Statutory Authority – AB 32, AB118, CPUC EPIC Proceeding(s)
• Implementing Authority(ies) – ARB, CEC, CPUC, CalRecycle
• Form of implementation – Work with the agencies listed above to develop and provide indirect incentives for the use of organics:
  o New compliance offset project protocols to reduce GHG emissions.
  o New LCFS Pathways
  o Grant funding and RMDZ loans for facility development to produce low carbon transportation fuels
  o Funding through EPIC for production of electricity using organic material as feedstock and associated R&D, to generate renewable electricity.
  o Information needs and barriers – Environmental performance data from facilities producing fuel and electricity from organic materials. Information which supports the premise that GHG reductions from new organic material offset project protocols are permanent, real, additional, verifiable, and enforceable.
  o Technical needs and barriers - Quantification of GHG benefits of composting, organics recycling, and carbon intensity of transportation fuels.
  o Resource needs and barriers – May require funding for research contracts and additional technical staff.

2e - Regulatory Changes re: ADC, food, etc
Description • Substance – Adopt regulatory changes that increase the likelihood that organic material will be composted or beneficially used • Contribution to 75% – Over 30% of the waste disposed in landfills in California is compostable organic material

Brief Evaluation
• Legal/Statutory Authority – PRC 40502, 41781.3, 43020, 43021
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of Implementation – Regulatory changes
  ▪ For ADC --Only waste streams that meet performance requirements (See 1b2) and that have been subjected to an infrastructure that can remove 75% of recyclable/compostable materials can be used as ADC
  ▪ Food Material -- De-tier co-composting (green/food) if equivalent protection of public health, safety, and the environment is provided
  ○ Information needs and barriers – Need data on separation efficiencies and measurement methodologies. Need for information on conditions necessary to provide for the continued economic development, economic viability, and employment opportunities provided by the composting industry.
  ○ Technical needs and barriers – Continued scientific research in relation to basis for regulations
  ○ CalRecycle resource needs and barriers – Additional, limited-term staffing resources needed for rulemaking activities. Additional, permanent staffing resources needed for evaluation of new ADC materials.

2f - Cross-Agency Regulatory Issues
Description • Substance – Ease the burden on organics recycling entities that must obtain authorization to operate from, and comply with, permit conditions issued by multiple regulatory agencies. Collaborate with other agencies to build a streamlined permitting process that provides clear standards and an unambiguous pathway to compliance for all public health and environmental goals. Reduce the time, complexity and cost to receive a permit, while increasing the likelihood that investors will back proposals to bring capital-intensive facilities or projects involving novel technology to CA. • Contribution to 75% – The 75% goal likely cannot be reached unless a significant amount of organics now being landfilled is instead used in new composting/AD facilities. Developing such infrastructure will allow realization of associated quantifiable benefits such as GHG emission reductions and job creation, and of non-monetized environmental benefits such as improved soil quality from compost.

Brief Evaluation
• Legal/Statutory Authority – Clean Air Act (federal), Clean Water Act (federal & California), Air district rules, Food & Ag Code
• Implementing Authority(ies) – CalRecycle, Cal/EPA BDOs, Air Districts, CDFA, SWRCB
• Implementation:
  ○ Form of implementation:
  ▪ Work with the agencies listed above to eliminate duplication in the regulation of, for example:
  • Aerobic composting
  • Anaerobic digestion located at dairies, WWTPs, or stand alone
  • Processing of animal tissue and inedible kitchen grease
  ▪ Implement existing programs such as the Consolidated Permit Procedure (27 CCR 10200-10210), or explore new ways to streamline the permitting process
  ▪ Also see Option 1b2
  ○ Information needs and barriers – Willingness of APCDs and RWQCBs to participate, incentives for participation, cooperation of agencies in streamline permitting process and enforcement/arbitration process when conflicts occur
  ○ Technical needs and barriers –Potential data gaps for conversion technologies, composting of food waste or digestate, competing low-cost uses such as ADC or direct land application, etc. that would need to be filled.
  ○ CalRecycle resource needs and barriers – While implementing streamlined permitting may not require additional resource needs for permitting agencies other than defining data gaps, the facilities themselves may need economic incentives to comply with increasing regulatory requirements. See Option 2c – Funding for Infrastructure.

2g - Biomethane Pipeline Issue
Description • Substance – There are two significant issues associated with pipeline biomethane. The first is that biomethane from in-state landfills is currently prohibited from being injected into the pipeline, in contrast to biomethane from out-of-state landfills. Second, is that pipeline biomethane used for energy has uncertain status with regard to RPS eligibility. Policies are needed to allow the use of in-state biomethane, while at the same time ensure there are no unintended consequences associated with allowing biomethane to be injected into the pipeline (in particular, to ensure that such an allowance does not result in more organic materials being disposed in landfills in the future, contrary to AB 341.) • Contribution to 75% - providing additional markets for biomethane is key to supporting the development of organics facilities.

Brief Evaluation
• Legal/Statutory Authority –
• Implementing Authority(ies) –Legislature
• Implementation:
  ○ Form of implementation –Policies would recognize the localized environmental benefits of organics facilities, and prioritize incentives accordingly. A path allow landfill biomethane to be injected into the pipeline would be combined with corresponding polices to phase organics out of the landfill (e.g, see Option 2b). This would ensure that we divert organics from the landfill as well as maximize the benefits of landfill gas.
  ○ Information needs and barriers –
  ○ Technical needs and barriers –
  ○ Resource needs and barriers –

3. Increase Commercial Recycling

3a - Reduce Thresholds for Commercial Recycling
Description • Substance – Two variations: 1) change requirements in the commercial recycling regulations to include more businesses, by lowering the threshold from ≥ 4 cubic yards/week of solid waste to a lesser amount such as ≥ 2 cubic yards per week and include all multifamily complexes; and 2) alternatively, keep the current threshold but require regulated businesses to recycle > 50% and document tonnages recycled. The timeline would depend on legislation for both variations. • Contribution to 75% - Lowering the threshold would require perhaps an additional 0.5 million businesses, generating approximately Y million tons annually, to recycle their solid waste. Depending on compliance levels, this could result in several million more tons recycled each year. The alternative (recycle ≥50%) could result in an unknown amount of tons recycled each year. Also would be affected by implementation of MRF performance standards (see Option 3b). Policy Drivers: Preservation of natural resources, within the state and globally, reduction of GHG emissions within state and globally, and increased economic opportunity, manufacturing, and jobs in California.

Brief Evaluation
• Legal/Statutory Authority – PRC 42649 *et seq*. Legislation would be needed to change the threshold or require businesses to recycle at a specified level.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – For either variation, legislative and regulatory changes would be required in 14 CCR 18835 *et seq*. For #2, a reporting and tracking system would need to be established. CalRecycle would need to decide whether jurisdictions are responsible for collecting and transmitting tonnage information, or whether businesses would report directly to CalRecycle. CalRecycle also would need to decide on whether and how enforcement actions would be taken (see Option 3c).
  ○ Information needs and barriers – For #1, jurisdictions would need to identify additional businesses for outreach, education, monitoring. For #2, a systematic means of identifying and listing regulated businesses would need to be established at either the jurisdiction or statewide level, to allow for reporting and tracking. Also, some type of system to verify the accuracy of the tonnage recycled would be necessary.
  ○ Technical needs and barriers – For #1, nothing additional beyond current efforts. For #2, extensive database development and maintenance, developing protocol for determining if they met 50% requirement since most commercial accounts are volume based.
  ○ CalRecycle resource needs and barriers – For #1, no additional resources. For #2, a unit would need to be established, perhaps similar in size to Tire manifest system.

3b - Increase Requirements for MRF (Material Recovery Facility) Performance
Description • Substance –MRFs exhibit a wide range of technology used, size, efficiency, contract requirements, etc., but there may be great potential for more recovery at mixed waste MRFs and "lower end" clean MRFs. Also, AB 341 requires mixed waste processing services used by businesses to yield diversion results comparable to source separation. MRF performance standards could be based on recovery rate, amount of recyclables in residuals, or implementation of best management practices. May take 1-2 years to develop standards and regulations. • Contribution to 75% - Increases types and amounts of materials processed and recovered by MRFs overall, but especially from the commercial sector. Policy drivers - Preservation of resources, reduction of GHG emissions

Brief Evaluation
• Legal/Statutory Authority – PRC 42649 *et seq*, specifically PRC 42649.2(b)(2), and PRC 41821.5(b). Current authority over MRFs as facilities is related to health & safety only, not recovery standards, so some MRFs fall outside of CalRecycle's purview. Also, authority related to CRV payments.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – CalRecycle would have to decide on the types of performance standards to be met, how MRFs would demonstrate that they are meeting them, and how they would be audited. Standards could be imposed on all MRFs or incentives could be developed to encourage MRFs to voluntarily meet the standards. Regulations may need to be developed. May need to be coordinated with 1f and 3d.
  ○ Information needs and barriers – Needs: comprehensive list/information on MRFs in CA such as feedstock type, tonnages, technology used, etc. Current CalRecycle data on MRFs (in DOR, SWIS, DRS, FaCIT) is disjointed and incomplete. These systems may need to be expanded (i.e., require other information to be reported) or modified so comprehensive data can be compiled and housed in FaCIT. Critical information from MRFs is not currently required to be reported, and voluntary reporting/surveys have not been successful in the past.
  ○ Technical needs and barriers – Cost of upgrading equipment, facilities, and increased staffing at MRFs to rise to a "high-performing MRF" level could be challenging. Revenue generated from increased quality of material may not be high enough to warrant upgrading of MRF equipment, increasing staff, etc. Current contractual arrangements with haulers, cities, etc. may limit ability to change processing.
  ○ Resource needs and barriers –Staff would need to develop performance standards and possibly best management practices; review documentation from MRFs demonstrating compliance, audit records, possibly conduct field verification and enforcement; modify current data collection systems to provide FaCIT with newly-reported data, and continually maintain/update data.

3c - Establish Business Enforcement Component
Description • Substance – There are two variations: 1) Require jurisdictions to establish enforcement programs focused on businesses and multifamily complexes that do not comply with commercial recycling requirements, or 2) establish CalRecycle program to take enforcement actions against non-compliant businesses and multi-family complexes. The timeline would depend on legislation and regulation development. • Contribution to 75% - As with Option 3a, depending on compliance levels, this could result in several million more tons recycled each year. Also would be affected by implementation of MRF performance standards (see Option 3b). Policy drivers: Preservation of natural resources, within the state and globally, reduction of GHG emissions within state and globally, increased economic opportunity, manufacturing, and jobs in California.

Brief Evaluation
• Legal/Statutory Authority – PRC 42649 for overall authority; however, additional legislative authority needed for CalRecycle to take direct enforcement action against businesses/multifamily complexes or to require local jurisdictions to do so. Regulations would be needed. Timing and triggering of implementation could be based on 2014/15 characterization study that will assess effectiveness of commercial recycling regulations.
• Implementing Authority(ies) – CalRecycle and/or local jurisdictions
• Implementation:
  ○ Form of implementation – Legislative and regulatory changes, including penalty levels, would be required in 14 CCR 18835 *et seq*. CalRecycle would need to decide whether jurisdictions are responsible for taking enforcement actions against non-compliant businesses, or whether CalRecycle is responsible.
  ○ Information needs and barriers – Either jurisdictions or CalRecycle would need to identify non-compliant businesses. While monitoring is currently required, subsequent enforcement actions could require additional documentation. A large reporting and tracking system might need to be established, especially if tracking of recycling tonnage is needed for enforcement purposes. If jurisdictions are responsible, CalRecycle could require summary reporting in Electronic Annual Reports.
  ○ Technical needs and barriers – Reporting and tracking system needed. Could be challenging to track so many businesses when many communities don't have business licenses, etc. Financial impacts on businesses and multi-family complexes that are penalized.
  ○ Resource needs and barriers – If jurisdictions are responsible for enforcement, new resources would be needed locally. If jurisdictions are responsible for reporting non-compliant businesses to CalRecycle, some additional local resources might still be needed. If CalRecycle is responsible, a new enforcement program might be needed to document cases and take subsequent enforcement actions.

3d - Grants for Multi-Family Recycling Programs
Description • Substance – Support and/or augment current commercial recycling requirements by providing grants to jurisdictions, waste haulers, non-profit organizations, colleges and regional partnerships for multi-family complex recycling programs. Potential activities could include enhanced outreach, education, and monitoring by jurisdictions; provision of internal recycling bins; hauling costs, etc. Timeline would depend on legislation to provide CalRecycle with general grant authority for this program. • Contribution to 75% - Multi-family complexes generate about 8% of the solid waste landfilled in California, but increasing recycling rates at these units has been difficult for many reasons. Enhanced outreach and other activities would help overcome some of the barriers and make it easier for complex owners and managers to provide adequate recycling opportunities. Policy drivers: Preservation of natural resources, within the state and globally, increased economic opportunity, manufacturing, jobs in California.

Brief Evaluation
• Legal/Statutory Authority – PRC 42649 for overall authority; additional authority to provide grants may be needed depending on funding source (e.g., CalRecycle has authority for beverage container grants, but does not have general grant authority for IWMA funds).
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Grant program, with accompanying development of grant criteria and application, etc. Need to decide between competitive or formulaic-type grants based on criteria such as number of multi-family complexes.
  ○ Information needs and barriers – If grant funding is provided on basis of criteria such as number of complexes, it may be difficult to determine the number of complexes $\geq$ 5 units in each jurisdiction. Need to understand current recycling practices and socio-economic factors of the community (e.g., current use of redemption and recycling centers. Research volume of materials recycled after commingled materials reach the MRF. Determine if more effective to provide infrastructure at the collection point or at the MRF (to improve recovery of materials).
  ○ Technical needs and barriers – May be infrastructure concerns, limitations at multi-family complexes; scavenging; space, aesthetics, contamination, resident/owner turnover and oversight is often labor intensive.
  ○ CalRecycle resource needs and barriers – Depending on funding level and number of eligible applicants, existing CalRecycle grant staff could administer a new program, but not necessarily if other new grant/payment programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues. A funding source (e.g., from increased tipping fee, CBCRF, or Cap and Trade funds) is needed.

3e - Awards for Businesses
Description • Substance – The Waste Reduction Awards Program (WRAP) has been in existence since 1993. To help further increase diversion from the commercial sector the awards program is being re-evaluated. Options to consider are: 1) Maintain existing WRAP program as is; 2) Modify WRAP program to make annual awards only to businesses that have demonstrated increased source reduction, diversion and/or procurement compared to the previous year; 3) eliminate/modify WRAP and work with other awards programs (such as of the ARB) to recognize businesses that achieve these same goals; and/or 4) eliminate/modify WRAP and work with DTSC to expand the DTSC Green Business certification program to a statewide basis. The program could be further modified to give awards to public entities and multifamily complexes that are required under AB 341 to recycle. Any changes to the program could be implemented within 2-3 months in time for an awards cycle in 2013 to commence. • Contribution to 75% - The commercial sector will play an important role in helping the state reach 75% diversion. An awards program provides an opportunity for the commercial sector to gain statewide public recognition for their outstanding waste reduction efforts. Policy drivers: Preservation of natural resources, reduction of GHG emissions and increased economic opportunity, manufacturing, and jobs in California.

Brief Evaluation
• Legal/Statutory Authority – There is no statutory authority that prohibits CalRecycle from having an awards program for the commercial sector or working with other agencies. CalRecycle already is statutorily mandated to assist DTSC with its Green Business certification program.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – If the WRAP program is modified, then the website and online application would need to be revised. Information and letters to stakeholders would need to be prepared and disseminated electronically.
  ○ Information needs and barriers – Need to determine what, if any changes are needed to the WRAP program.
  ○ Technical needs and barriers - Website and on-line application may need to be revised.
  ○ Resource needs and barriers – Staff from MMLA and ITS would work on any changes to the program tools. There are no major barriers to implementing a change to the awards program except for the lead time to help stakeholders understand what the program changes are. If the program stays as is, then staff just need time to inform stakeholders via electronic venues as to when the next cycle will be.

4. Establish Extended Producer Responsibility

4a - Authority to Decide Products and Targets
Description • Substance – Establish a process for CalRecycle to select products requiring management under an Extended Producer Responsibility (EPR) approach and to set enforceable end-of-life targets for those selected products. Legislation could include requiring CalRecycle to issue a list of potential products every X years, and requiring manufacturers of listed products that are not recovered at a rate of least 75% compared to a baseline to fund and establish an EPR program within 1 year of being so determined. CalRecycle would need to develop regulations encompassing measurement, reporting, enforcement, etc. • Contribution to 75% - This could address some relatively high-volume materials in the disposal stream, but particularly could address problematic household hazardous waste materials that are banned from disposal and that currently are a major cost for local government programs. Local government resources could then be spent on program implementation in other needed areas related to AB 939 and AB 341.

Brief Evaluation
• Legal/Statutory Authority – Requires statutory authority in PRC.
• Implementing Authority(ies) – CalRecycle would oversee and enforce manufacturers' and/or stewardship organizations' programs. Manufacturers and/or stewardship organizations may need to coordinate with other entities (e.g., DTSC, LEAs, etc.) as appropriate depending on product type and the nature of their program activities.
• Implementation:
  ○ Form of implementation – Product-specific regulations. Reporting and tracking system would need to be established. CalRecycle would need to decide how enforcement actions would be taken. CalRecycle would provide regular reports to the Legislature.
  ○ Information needs and barriers – Criteria would need to be developed to assess and to establish lists of potential products. Data may not be available for all relevant criteria for many products.
  ○ Technical needs and barriers – Database development and maintenance. Other specific technical needs/barriers may vary depending on type of product(s) selected.
  ○ Resource needs and barriers – Would require additional staff resources, although some existing may be utilized. Regulation development and general program oversight can be implemented with a relatively small unit, but could require more depending largely on enforcement approach. Statute can be structured to require that manufacturers and/or stewardship organizations compensate CalRecycle for its oversight and enforcement activities, either completely or partially.

4b - Packaging
Description • Substance – Packaging comprises nearly 1/3 of the U.S. municipal solid waste stream, and it continues to grow in volume and material complexity (e.g., composites, films, bio-based). Certain types of packaging (e.g., plastics) are implicated in litter, marine pollution, and other environmental impacts. The costs of managing packaging waste continue to increase and fall largely on the public sector -- according to the US EPA, containers and packaging generation increased by 13 million tons since 1990, adding $1.6 billion in government costs. A comprehensive approach has been difficult to discuss in part because packaging encompasses an enormous array of products and material types, and thus large potential universe of regulated manufacturers and retailers. A wide array of options including bans, minimum content requirements, and Extended Producer Responsibility (EPR) has been proposed to deal with these issues. This option consists of two EPR variations: 1) select a small set of "problematic" products/materials (e.g., non-CRV beverage containers) and establish a statewide pilot program that is operated for several years, before requiring additional packaging EPR programs; or 2) conduct a pilot that is comprehensive in terms of products/materials, but is limited to a small geographic area (e.g., coastal areas concerned with marine litter). Eventually, development of a longer-term EPR program could capitalize on the pilot as well as the experience of British Columbia's packaging and printed paper program (implementation to begin May 2014). • Contribution to 75% - Since packaging is a large component of the disposal stream, this would help achieve the 75% goal as well as support other policy drivers such as reducing local government costs.

Brief Evaluation
• Legal/Statutory Authority – Requires statutory authority in PRC.
• Implementing Authority(ies) – CalRecycle.
• Implementation:
  o Form of implementation – Requires development of regulations.
  o Information needs and barriers – Would need to decide how to define this category (see Option 4a), perhaps aligning with British Columbia's definition.
  o Technical needs and barriers – If the approach targets a subset of packaging, defining what types of packaging and printed paper to include will require extensive information, who is involved in manufacturing and distributing them, etc. A comprehensive approach involving the entire product category would not require as much data.
  o Resource needs and barriers – Additional staff resources needed, although some existing may be utilized. Can be implemented with relatively small unit, depending on enforcement approach. Statute can be structured to require that manufacturers and/or stewardship organizations compensate CalRecycle for its oversight and enforcement activities, either completely or partially. Resources needed for database development.

5. Reform Beverage Container Program

5a1 – Redefine Commingled Rate
Description • Substance – There is currently no ratio in statute for a commingled rate. One container in a load of non-CRV containers is technically a commingled load. CalRecycle needs to define what a commingled rate is and to establish the minimum ratio to be still considered a commingled load. In addition, consider streamlining requirements regarding individual commingled rates (e.g., conduct biannually instead of annually). • Contribution to 75% – Minimal. Consumers will continue to have opportunities to redeem their containers at buy-back centers. However, operators must now inspect loads to ensure appropriate ratios are met for both segregated and commingled loads. Proper payment of CRV and more accurate redemption data will result from the implementation.

Brief Evaluation
• Legal/Statutory Authority – PRC 14506.7
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Statutory change would be required of PRC 14506.7. CalRecycle would need to define what a commingled rate is.
  ○ Information needs and barriers – Studies will need to be done to determine what an acceptable minimum percentage is for a commingled load – possibly within one standard deviation.
  ○ Technical needs and barriers – Nothing additional would be needed.
  ○ Resource needs and barriers – An increase in employees to deal with increased work load.

5a2 – Expansion of Minimum Content Requirements
Description • Substance – Program currently contains a component that is designed to require glass container manufacturers to use a certain percentage of post filled glass in the manufacture of glass drink or beverage containers. However, the penalty for not meeting minimum content requirements is minimal ($1,000/annually) and is viewed by industry as a cost of doing business rather than an incentive to meet the requirements. In addition, with the high cost of enforcement, it is not economically feasible to investigate and enforce the current minimum content requirements. The current minimum content law needs to augmentation to bring glass container manufacturers into compliance, and to establish minimum content criteria for plastic container manufacturers. • Contribution to 75% – With new minimum content requirements, the recycling rate should increase in order to meet the demand generated by the need for more postconsumer material. With markets for glass and plastic postconsumer materials, material resource recovery (MRF) facilities will have incentives to recover more from the waste stream.

Brief Evaluation
• Legal/Statutory Authority – PRC 14549
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Statutory changes will be required of PRC 14549. CalRecycle will need to amend current law to expand the scope of the minimum content statute and impose similar minimum content requirements on plastic manufacturers.
  ○ Information needs and barriers – Determining which glass and plastic manufacturers need to comply with the minimum content law.
  ○ Technical needs and barriers – Nothing additional would be needed.
  ○ Resource needs and barriers – Dependent on how many manufacturers are brought into the program, may result in an increase in employees to deal with increased work load.

5a3 – Program Expansion of All Ready-to-Drink Beverages
Description • Substance – Program will include all ready-to-drink beverages for human consumption, except specified drinks (i.e. milk, medical food, and baby formula). • Contribution to 75% – Will lower contributions to landfill by introducing an incentive for containers not currently covered to consumers to return their material to recycling centers. By consumers returning their containers at buy-back centers instead of curbside bins, there is less contamination and the quality and quantity of recycled material is greater. With improved quality, less containers end up in the landfill.

Brief Evaluation
• Legal/Statutory Authority – PRC 14504
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Statutory changes will be required of PRC 14504. CalRecycle will need to determine what specific containers should and should not be included (i.e. milk, medical food, and baby formula).
  ○ Information needs and barriers – Educate current manufacturers to the expansion of containers and determine if there are any manufacturers not currently in the program.
  ○ Technical needs and barriers – Nothing additional would be needed.
  ○ Resource needs and barriers – Dependent on how many manufacturers are brought into the program, may result in an increase in employees to deal with increased work load.

5b1 – Elimination of 14581 Fixed Dollar Expenditures
Description Substance – Current program contains certain automatic continuous appropriations. These fixed dollar amounts are associated with certain allocations (e.g., $15M for curbside supplemental payment, $15M plus cost-of-living adjustment for Local Community Conservation Corps, $10.5M to cities/counties for their recycling activities, etc.). Instead, eliminate the automatic continuous appropriations and develop a 2-year or longer planning process, similar to the 5 Year Tire Plan, wherein CalRecycle would lay out its proposed programmatic priorities for surplus funds, which would only be expended if available and if appropriated in those years by the Legislature. This would allow for CalRecycle to plan more effective grant cycles and staff workloads; i.e., rather than implementing grant program A in year 1, grant program B in year 2, and grant program A or C in year 3, CalRecycle would propose priorities among grant programs and implement chosen ones for 2-3 year periods (assuming funds available). Another approach could be to allocate a % of the surplus funds to various 14581 programs, rather than specific $$ amounts. The amount of surplus available would be calculated by CalRecycle and be roughly equal to the amount of CRV revenues (after administrative costs retained by distributors) after deducting the following from those revenues: ❖ Refund value (CRV) paid to consumers for the redemption of empty beverage containers, ❖ Handling fees, ❖ Department administration; and ❖ A prudent reserve. • Contribution to 75% – Minimal. Could potentially reduce administration costs if program funding is reduced and/or stopped.

Brief Evaluation
• Legal/Statutory Authority – PRC 14581
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Statutory changes will be required of PRC 14581. CalRecycle will need to determine the amount of surplus available for allocations.
  ○ Information needs and barriers – Nothing additional would be needed.
  ○ Technical needs and barriers – Nothing additional would be needed.
  ○ Resource needs and barriers – Nothing additional would be needed.

5b2 – Fiscal Reform to Provide More Funding
Description • Substance – Reassign the processing fee payment and incorporate it along with redemption payment into a "recycling value" which would be paid without any offset by distributors to the department. • Contribution to 75% – Add costs to beverage product, but not to refund amount, which may create stronger incentive to recycle. Added cost may also result in fewer units sold which could be an added component to source reduction. Reduces program administration costs by eliminating the processing fee and having that money collected from distributors instead of manufacturers. Reduces program costs significantly by elimination of processing fee offset which currently amounts to $60M per year.

Brief Evaluation
• Legal/Statutory Authority –amendments to existing statutes required to bundle the redemption fee and processing fee into a single payment, eliminate beverage manufacturers as payers of processing fees, and discontinue processing fee offsets.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Able to use existing system for collecting redemption fees from distributors.
  ○ Information needs and barriers – Proposal will add about two cents to the cost of a beverage in a glass container which will not be refunded at a recycling center. Higher costs would probably apply to HDPE and #3-#7 plastic containers. Aluminum and PET containers generally not affected. Proposal shifts stewardship from beverage manufacturers to consumers. Could impose indirect pressure on manufacturers if consumers shift to buying product in a different container type or forgoes purchasing product altogether.
  ○ Technical needs and barriers – Retailers would need to display recycling value on sales receipts which would vary by type of container
  ○ Resource needs and barriers – Proposal would result in reductions in administrative costs for combining two payments into one. Proposal would result in significant savings of up to $60M per year in shifting costs of processing fee offset to distributors.

6. Increase Procurement/Demand

6a - Increase PCRC and EPP Purchases by the State
Description Substance - Reform EPP and PCRC law and work with DGS and other state purchasing entities (which may account for about 40% of state purchasing) to give higher priority to post-consumer recycled-content (PCRC) product and environmentally-preferable purchasing (EPP): 1) Contract-related: a. Develop contracts that require Vendors to provide information on PCRC/EPP (including third party eco-labels, take-back and end-of-life plans) that is readily available to purchasers (e.g., on-line catalogs, state procurement website). Direct vendors, through contracts, to electronically submit data on PCRC/EPP purchases to DGS/CalRecycle. b. Work with DGS and state purchasing entities to include more PCRC/EPP language in state contracts, including EPR and end-of-life (EOL) product management information. Establish more formal communications to directors and purchasing and operations personnel. c. Assist DGS in streamlining PCRC/EPP purchasing opportunities (e.g., faster process for getting contracts in place or additional delegation for certain purchases). d. Establish web-based method to track and measure PCRC/EPP purchasing (such as Fi$CAL). e. Provide preference in contracts to PCRC California-based processors and manufacturers (see Option 6b; similar to certification and preferences for Small Business and Disabled Veteran Business Enterprises). f. Continue or establish new state contracts for SABRC product categories (also see Option 6b) such as recycled latex paint and re-refined oil. g. Re-establish contracts for difficult-to-manage products (e.g., electronic waste, universal waste, batteries) in cooperation w/DTSC. 2) Institutionalization and Education a. Assist DGS with revisions the State Administrative Manual (SAM) and State Contracting manual (SCM) to institutionalize PCRC/EPP purchasing. b. Assist DGS to expand education of purchasers via classes in its procurement academy (e.g., information on mandates, proper EOL handling/recycling), website information, database tracking, etc. Educate vendors and SB/DVBE about PCRC/EPP requirements. • Contribution to 75% - The state can establish significant market drivers to help support California-based businesses through its purchasing practices.

Brief Evaluation

- Legal/Statutory Authority – None.
- Implementing Authority(ies) – Department of General Services (DGS)
- Implementation:
  - Form of implementation – Most require legislative change. DGS would update SAM/ SCM, training curriculum (with CalRecycle). DGS/ state agencies issuing contracts would revise contractor bid solicitations and user guidelines. CalRecycle would evaluate EOL plans, assist in education, and review EPP/PCRC purchase data.
  - Information needs and barriers – DGS lacks information about PCRC contracts, and EPP/EOL impacts.
  - Technical needs and barriers – DGS/CalRecycle would need a means to track, manage and review data provided by vendors. Develop more contracts offering PCRC/EPP products.
  - Resource needs and barriers – Existing CalRecycle staff can continue to provide assistance, although more resources may be needed to gather EOL and other information. DGS resource needs TBD.

6b - Reform SABRC Requirements and Add Enforcement
Description • Substance – 1) Reform statute to provide CalRecycle with enforcement authority if state agencies do not comply with the purchasing requirements. 2) Reform (e.g., delete, modify, add) SABRC product categories; post-consumer recycled content (PCRC) requirements; establish minimum purchasing percentages (e.g., for antifreeze, glass, oil, retreads, compost/mulch); in addition, include all state agencies (i.e., Community Colleges, UCs). 3) Reform statute to establish preference (bid points) and incentives (e.g. lower-cost state contract agreements, streamlining for faster purchasing) for state agencies to purchase from California-based PCRC manufacturers. 4) Continue targeted education to agency/department leadership and purchasing and operations personnel at key agencies that are high users of PCRC/EPP products (e.g., Corrections, Caltrans, DGS re: recycled paint). Establish more formal communications to directors and purchasing and operations personnel (also see Option 6a). 5) Outreach to California recycling manufacturers on how to sell products to state agencies. 6) Create PCRC/EPP purchasing requirements for local agencies. • Contribution to 75% - Supports multiple policy drivers. Also ties to regulations regarding the increased collection of materials in the state (commercial recycling, paint, carpet). To promote the reuse and recycling of additional materials, consideration should be given to current industry standards, specifications (e.g. LEED), and PCRC technologies as well as current markets for PCRC materials/products. Research could shed light on whether there is opportunity to better support local industry in the state.
Brief Evaluation • Legal/Statutory Authority – New legislation needed for enforcement, reform of categories, and provision of incentives. Existing authority sufficient for outreach and education. • Implementing Authority (ies) – CalRecycle and DGS. • Implementation: ○ Form of implementation – Need to discuss what enforcement mechanism might entail (e.g., penalties). Developing procedures and guidance for implementing new statutory provisions. For education and outreach, depends in part on Option 6a, and on developing/enhancing current efforts. ○ Information needs and barriers – Need to investigate ability (statutory and otherwise) to incentivize purchasing of products from California-based manufacturers, and of ability to assess penalties for non-compliance. ○ Technical needs and barriers –May require changes to SABRC database. ○ Resource needs and barriers – Existing CalRecycle staff can implement these changes. Whether DGS needs additional resources TBD.

6c – Interagency Agreements with Caltrans and Other Procuring Agencies For Testing TDPs (Tire-Derived Products)
Description • Substance – Establish interagency agreements (IAAs) to expedite the product approval process for TDPs. with Caltrans and other procuring agencies that have potential to use significant quantities of tire-derived products (TDPs). Obtaining testing to meet the requirements for Caltrans' product approval process has been a barrier to small TDP recycling manufacturers being able to sell their products to Caltrans. For products for which there is no established application, demonstration projects are needed. The IAAs would cover the cost of testing or demonstrations and could be put into place in a short timeframe with consultation from Caltrans (3-6 months). • Contribution to 75% - Expediting product approval could help to significantly increase purchase of TDPs by Caltrans and other agencies. It may also significantly stimulate market development of new and innovative TDPs, and thus increase diversion of waste tires. This is consistent with the policy drivers to increase economic opportunity, manufacturing, and jobs in California, preserve natural resources through decreased dependence on raw materials, and reduce costs to local governments by minimizing the impact of problematic waste materials.

Brief Evaluation
• Legal/Statutory Authority – CalRecycle currently has the authority to enter into interagency agreements.
• Implementing Authority (ies) – CalRecycle, Caltrans, DGS, and other procuring agencies.
• Implementation:
  ○ Form of implementation – Interagency agreements with Caltrans and other purchasing agencies
  ○ Information needs and barriers –Through the TBAP contractor (SAIC). TDPs would be identified and the product approval application would be completed. Then SAIC would coordinate with Caltrans to provide information for product testing and approval.
  ○ Technical needs and barriers – As noted above, the primary technical needs are testing and demonstration results.
  ○ Resource needs and barriers – Existing staff would need to be allocated to this task. Funding for the IAA through the Tire Program is feasible, at least through 2014 after which the tire fee will be reduced.

6d - Minimum Content Requirements
Description • Substance – To encourage the development of California markets for California recycled materials, policies must be in place to "pull" materials through the system. • Contribution to 75% - Utilization of the XX tons of materials that must be recycled to reach the 75% goal.

Brief Evaluation
• Legal/Statutory Authority –Current law sets minimum content for certain products categories purchased by state agencies. There are minimum content statutes for rigid plastics, newsprint and trash bags.
• Implementing Authority(ies) –CalRecycle
• Implementation:
  ○ Form of implementation –Expand existing minimum content laws. Incentivize the use of California recycled materials. Expand existing programs such as LEED and energy efficiency to acknowledge the use and production of recycled content products.
  ○ Information needs and barriers – None
  ○ Technical needs and barriers – Depending on the recyclable material and the end products, some research may be needed to examine options and feasibility.
  ○ Resource needs and barriers –Funds may be needed to develop markets and incentivize the use of recycled materials.

Suggestions: tie to energy efficiency, and/or LEED goals of the state? e.g. target current industries already making PCRC technological progress, and those that may already be in the state, such as drywall manufacturers; insulation mfrs; or make a connection with new Carpet and Paint regs, and increase demand for recycled content carpet; recycled latex paint.

6e - Sales Tax Breaks on Private Sector Purchase of RCPs/EPPs
Description • Substance – Provide sales tax reductions or exemptions on the purchase of recycled-content products (RCPs) and environmentally preferable products (EPPs) in order to increase the purchasing and use of selected products. • Contribution to 75% - Increased use of RCPs will result in increased diversion of the source materials from California landfills. Promoting environmentally preferable purchasing could result in reductions in packaging waste and increased recycled content in new products, and re-use content in re-manufactured products.

Brief Evaluation
• Legal/Statutory Authority – Under existing law, as provided by SB 71 (Ch. 10, Stats. 2010, effective 3/24/10), certain "projects" may be approved for a state and local sales and use tax exclusion by the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA). There may currently be some products that would be eligible for tax exemption under the existing mechanism but this would only apply to energy/transportation related products. More likely new legislation would be needed to broaden the scope of exemptions to include other products.
• Implementing Authority(ies) – Legislation requires 2/3 vote. As the administrator of sales and use taxes, BOE would be the collecting and enforcing entity.
• Implementation:
  o Form of implementation – Legislation to broaden the scope of sales tax reductions or exemptions to include additional products. Would require 2/3 majority vote.
  o Information needs and barriers – For potential legislation re: tax reductions, CalRecycle staff would need to project the amount of foregone tax revenues. The BOE would incur administrative costs attributable to programming, return revisions, and return processing. In addition, the BOE would incur costs to notify affected retailers, prepare a special publication and exemption certificate, audit claimed exemptions, and answer inquiries from the public and taxpayers.
  o Technical needs and barriers – CalRecycle would need research and analyze the extent of the impact of this legislation, determine the net revenue loss to the State General Fund, and determine which additional products could be targeted and who would make that determination. Specific allocations for existing sales tax would preclude full exemption.
  o Resource needs and barriers – Ultimate barrier will be the reduction by an equivalent amount of the tax suspension to the General Fund.

6f - Financial Incentives for Manufacturer Use of Recycled Materials
Description • Substance – Encourage and support manufacturer use of recycled materials through financial incentives for purchase of equipment and materials used in the manufacture of recycled-content products. These methods could include sales tax reductions, production credit (tax credit for producing products using recycled materials and/or a production payment; also see Option 7a), carbon emission credit, or a tax credit for equipment. SB 71 is a model that could be used for new legislation to provide authority for financial incentives for using recycled materials in a wider range of products. • Contribution to 75% - Increased use of recycled materials will increase jobs in recycling of these materials. Carbon emission credit for re-manufacturers will contribute support to the state's carbon trading program.

Brief Evaluation
• Legal/Statutory Authority – Under existing law, as provided by SB 71 (Ch. 10, Stats. 2010, effective 3/24/10), certain "projects" may be approved for a state and local sales and use tax* exclusion by the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA). However, additional legislation may be needed to allow for sales tax reductions for the purchase and use of recycled materials.
• Implementing Authority (ies) –Requires legislative action. Depending on type of financial incentive implemented, i.e., sales tax credit, production credit, carbon emission credit, etc., other agency oversight may be required such as Board of Equalization, Air Resources Board, and Franchise Tax Board.
• Implementation:
  ○ Form of implementation –Use SB 71 as a model to craft new legislation that provides financial incentives for purchase of a wider range of recycled-content products. For example, SB 71 allows CAEAFTA to authorize a sales and use tax exclusion for purchases of tangible personal property or equipment related to alternative transportation and renewable energy, and Public Resources Code (PRC) Section 26003 and Section 26011.8 include within the definition of "project", equipment used to manufacture products that produce energy from alternative sources such as solar, wind, and biomass.
  ○ Information needs and barriers – For potential legislation re: tax reductions, CalRecycle staff would need to project the amount of foregone tax revenues, and the number of new jobs created through the use of an increased amount of recycled materials.
  ○ Technical needs and barriers – For carbon-emission credit, CalRecycle and/or ARB staff would need to estimate the reduction in GHGs resulting from the increased use of recycled materials as a substitute for primary materials.
  ○ Resource needs and barriers –For sales tax reductions through CAEFTA, there is an existing annual cap of $100 million in exclusions awarded. The current California sales tax contains provisions designating portions of the tax to specific uses. The current recipients of these revenues will likely oppose any reduction in these allocations, in which case the overall impact of the tax reduction would be reduced for the eligible manufacturers.

7. Other Materials

7a - Tires Incentive Payments, EPR, or More Market Demand
Description • Substance - Three variations: 1) Incentive payment program for the recycling of waste tires and procurement of waste tire products (RAC, TDA, TDPs), using direct monetary payments to specified entities for designated activities. 2) Extended producer responsibility (EPR) program in which industry is tasked with funding and operating end-of-life management programs and achieving specified diversion or other goals (also see Option 4a); might also include payment programs through producer responsibility organizations. 3) Focus instead on programs/activities that increase market demand. Timeline: Implementation of an incentive payment program would depend on the scope of the initiative, any changes to existing tire grant and loan programs, and availability of staff and funding resources through those potential changes. Implementation of EPR program would depend on timing of legislation. Implementation of other market demand-related actions would be relatively short in comparison. • Contributions to 75% - More than 40 million waste tires/year are generated in CA. While the overall diversion rate is approximately 80%, a significant portion of that is due to exports overseas and tire derived fuel (TDF). Under either an incentive program or EPR, the goal would be increased processing of CA waste tires into tire-derived products made in CA. Policy Drivers: Preservation of natural resources through decreased dependence on raw materials. Increased economic opportunity, manufacturing, and jobs in California. Reduction of GHG emissions within state and globally.

Brief Evaluation
• Legal/Statutory Authority – PRC 42872 (a) for incentives; authority needed for EPR approach.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation –Both options would require new regulations. Other tools such as databases, stakeholder guidance, auditing would need to also be implemented.
  ○ Information needs and barriers –The amount of the incentive or EPR fee necessary to reach program goals and the types of entities that would qualify would need to be determined. Other tire market development programs would need to be assessed to determine if they should continue.
  ○ Technical needs and barriers – Tracking systems, e.g., database development and maintenance, payment claim documentation procedures, auditing procedures, accounting system, etc..
  ○ Resource needs and barriers –Stable funding source for payment program, which may be problematic with tire fee reduction from $1.75 to $0.75). Staff to oversee, monitor and manage either program; fewer staff needed for EPR than payment program.

7b - Plastics
Description • Substance –The ubiquitous nature of plastic has pushed its production, product manufacture, recycling and disposal into fore front of contentious policy debates. From grocery sack bans and litter; to polystyrene and marine debris, ; 'earth friendly' plastics and labeling laws; all these issues are being discussed with most solutions being elusive. Finding a path forward to the management of plastic in California is one of the keys to a more sustainable climate for the production and recycling of this resource. • Contribution to 75% - Source reduction and recycling of much of the almost of 4 tons of plastic disposed and the thousands of pounds that are littered in California annually.

Brief Evaluation
• Legal/Statutory Authority –There are varied plastics statutes in various codes.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation –Various options from product bans, advance disposal fees, labeling enforcement, and many others. Dependent of the specific issue and plastic.
  ○ Information needs and barriers – Unknown
  ○ Technical needs and barriers - Unknown
  ○ Resource needs and barriers –Unknown

7c - E-Waste
Description • Substance – Electronic waste in California is currently managed under two primary systems: 1) General disposal prohibition with the ability to handle and recycle e-waste under Universal Waste rules; and 2) a payment system to fund the management of video displays, typically the most costly aspect. Once diverted and recovered, a certain portion of e-waste may still lack sufficient value to cover processing costs. Potential options to address this include: 1) using the innate value of the current overall e-waste stream to support comprehensive diversion; 2) adding new device categories to the existing payment system; or 3) implementing an EPR (see Option 4a also) model either for all e-waste or as a hybrid with the current payment system. • Contribution to 75% - Due to its generally hazardous nature, e-waste is banned from municipal landfill disposal. While e-waste comprises only a small fraction of the disposed waste stream (< 0.5%), the potential for environmental impact is substantial. Also compelling is the resource value that could be derived from this material if properly diverted. Since its inception in 2005, the covered electronic waste (CEW) recycling program has, on average, annually recovered over 160 million pounds of obsolete TVs and monitors. A similar quantity of miscellaneous e-waste is also recovered through California's e-waste recycling infrastructure. In-state processing of CEW and other e-waste may generate certain residuals that lack ready markets, possibly re-contributing to the overall waste stream.

Brief Evaluation
• Legal/Statutory Authority – Electronic Waste Recycling Act (PRC 42460 et seq, HSC 25214.9 et seq); Cell Phone Recycling Act (PRC 42490 et seq). Statutory changes would be needed to expand or transition from the current model (i.e., for any of the 3 options described above).
• Implementing Authority(ies) – CalRecycle, DTSC, BOE (fee collector)
• Implementation:
  ○ Form of implementation – If legislation enacted, then subsequent regulations would be needed. Depending on nature of legislation, existing regulations might be revised, or new ones might be needed if an EPR approach is to be implemented.
  ○ Information needs and barriers – Economic data, marketplace fluctuations, and impacts to existing infrastructure / industry require better understanding. Multi-jurisdictional involvement needed to assess current state of managing e-waste and feasibility of alternative approaches.
  ○ Technical needs and barriers – Fundamental hazardous waste regulatory considerations. Cross-border / export, and state vs. Federal jurisdiction considerations. Fiduciary responsibilities (fraud) a continuing concern, depending on program model(s).
  ○ CalRecycle resource needs and barriers – Current model consumes existing allocations; improved data management could extend capabilities, however expansion could require additional resources. Potential Proposition 26 considerations. Transition from program administration to an EPR approach, or incorporation of additional regulatory oversight, will additional programmatic skills and resources.

7d – Construction & Demolition Funds for Retrofitting Equipment To Meet AQ Standards
Description • Substance – Construction and demolition material (C&D), including woody debris and lumber, comprises nearly 29% of the disposed waste stream. As AQMDs reclassify existing mobile crushers and grinders as stationary sources, funding is needed to help processors remain in compliance. Two potential mechanisms could be utilized: 1) a grant program funded via, for example, a tipping fee on ADC placed at CA landfills or 2) a loan program that is either an expanded RMDZ program or that utilizes other funding. • Contribution to 75% - Providing funding to ensure compliance for existing infrastructure will help to ensure that a significant amount of woody material currently being diverted is not landfilled instead.

Brief Evaluation
• Legal/Statutory Authority –Depends upon funding mechanism. A tipping fee placed upon ADC would require a statutory change, while and expansion of the RMDZ loan criteria may only require regulatory change. Grants would be utilized for "above, beyond, and early compliance" and loans for other needs.
• Implementing Authority(ies) –CalRecycle
• Implementation:
  ○ Form of implementation –See above regarding ADC grants and RMDZ loans. Nearly 16% of material used as ADC is C&D. CalRecycle could seek to add a tip fee based upon the use of ADC to fund equipment compliance grants. In 2010, 3.5 million tons of ADC was reported to have been applied in CA. Based on this, a fee of $0.50/ ton would generate $1.75 million to fund equipment upgrade grants. Funding could be prioritized to those air districts in which losing capacity would have the greatest impact on existing diversion.
  ○ Information needs and barriers – Data would need to be collected to identify the number of facilities that would be impacted and analyzed to determine priority for funding.
  ○ Technical needs and barriers – None
  ○ Resource needs and barriers – Depending on funding allocation and number of grants/loans, existing CalRecycle grant and loan staff could administer a new program, but not necessarily if other new grant/payment programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues.

7e – Construction & Demolition Expand CALGreen For Deconstruction and Add Enforcement
Description • Substance – CALGreen, which is administered by the Building Standards Commission (BSC) and enforced at the jurisdiction level (e.g., by building department or other local enforcement authorities), currently requires 50% waste diversion on new construction and some renovation projects. CALGreen could be a vehicle for increasing C&D diversion through: 1) Expanding CALGreen to include aspects of deconstruction, such as collection of reusable building materials that would otherwise have limited diversion options, and 2) using the existing AB 939 review process to ensure that jurisdictions are enforcing the mandatory provisions. • Contribution to 75% - C&D materials account for nearly 29% of the disposed waste stream, and expansion and increased enforcement of CALGreen would help divert a significant portion of that material.

Brief Evaluation
• Legal/Statutory Authority –BSC has sufficient authority to incorporate this concept in CALGreen, and increased enforcement may need to be addressed through CalRecycle's authority in PRC 41850.
• Implementing Authority(ies) – BSC, local jurisdictions, and CalRecycle
• Implementation:
  ○ Form of implementation – 1) Expansion of CALGreen to encourage inclusion of aspects of deconstruction where economically and functionally feasible would require BSC to adopt regulations during its code adoption cycle. CalRecycle would assist in developing the regulations and then by providing technical assistance to jurisdictions re: implementation, including assistance to jurisdictions to provide incentives, such as, streamlined permitting, and other market development efforts for deconstruction materials. 2) Enforcement of CALGreen can vary depending on local priorities. While neither the BSC nor CalRecycle have authority to require jurisdictions to enforce CALGreen, an expansion of CalRecycle's authority to consider a jurisdiction's efforts in implementation of CALGreen, as a C&D program, when considering compliance with AB 939 could realize increased enforcement of CALGreen.
  ○ Information needs and barriers – None
  ○ Technical needs and barriers –Insufficient deconstruction markets and infrastructure.
  ○ Resource needs and barriers – Local jurisdictions not enforcing CALGreen may need to add resources. Existing CalRecycle staff can incorporate this provision into program report process.

7f – Fiber Bans on Cardboard Going Into Landfills
Description • Substance – Cardboard is still one of the largest components of the waste stream despite being one of the more recyclable commodities. • Contribution to 75% -

Brief Evaluation
• Legal/Statutory Authority –
• Implementing Authority(ies) –
• Implementation:
  ○ Form of implementation –
  ○ Information needs and barriers –
  ○ Technical needs and barriers -
  ○ Resource needs and barriers –

7g - Fiber/Resin Grants/Payments for Mid-Scale Manufacturing & Source Reduction
Description • Substance – Similar to CalRecycle's Plastic Market Development Payments (PMDPs), institute grant opportunities and incentive payments for CA plastic and paper manufacturers to help increase supply and quality of postconsumer fiber and non-CRV plastic resins. Payments could also be made to companies that demonstrate significant reductions in virgin or total amount of materials used in products. A funding source (e.g., from increased tipping fee or Cap and Trade funds) is needed. • Contribution to 75% - CA reclaimers could potentially bale significant amounts of materials that currently are landfilled because they do not have high enough value to sort separately. Paper represented over 17% (6.9 million tons) of total disposed waste in CA in 2008 and almost 21% of the commercial sector. Plastics comprised nearly 10% (almost 4 million tons) of total disposed waste.

Brief Evaluation
• Legal/Statutory Authority –Would require new legislation and subsequent rulemaking.
• Implementing Authority – CalRecycle.
• Implementation:
  ○ Form of implementation – Grants and incentive payments would require establishment of eligibility, scoring criteria, review process, timeline, and oversight (including audits). A source of funding and State fund would also need to be established. Incentives/grants could provide funding to manufacturers who demonstrate reductions in the per-unit amount of resin or fiber used to make their products, to help companies purchase equipment that improves plastic/paper processing with reclaimed feedstock and simultaneously lower GHG emissions or demonstrate other improvements (such as enhanced water treatment), and/or to target industries who implement *focused source reduction programs,* such as grocery stores that avoid or reduce cardboard use.
  ○ Information needs and barriers – Paper and non-CRV plastic reclaimers located in the State would need to be identified and consulted to assist CalRecycle staff in determining the most prevalent technical and market challenges they face in order to develop effective grants and incentives. Grants tracking and monitoring would expand.
  ○ Technical needs and barriers – Setting the appropriate grant and incentive payment levels would require economic analysis and input from stakeholders. Expanded data collection could require IT assistance. May need to develop methodology for calculating baseline use of paper/fiber to determine appropriate payment levels for increased use of recovered fiber/resin and for source reduction efforts. Also may need to develop system for measuring air emissions of paper/plastic manufacturing facilities if GHG reductions are used as eligibility for funds.
  ○ CalRecycle resource needs and barriers – Additional fiscal, enforcement, IT and grant management staff would be required. Depending on funding level and number of payment recipients/grantees, existing CalRecycle grant staff could administer a new program, but not necessarily if other new grant/payment programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues.

7h – Used Oil Lifecycle Assessment Follow-ups
Description • Substance – The current Used Oil Life Cycle Assessment (LCA) project will determine policy changes needed, if any, to increase collection and responsible management of used oil. This will be accomplished through the collection and analysis of environmental and economic data, along with stakeholder recommendations. • Contribution to 75% - Collection and management of used oil is a costly and time-intensive process for local governments, particularly when it is being mishandled or disposed illegally. Identifying and implementing strategies to increase collection and responsible management of used oil will allow local government to focus their scare resources (personnel and financial) on other waste streams which will contribute to the 75% goal. Further, by increasing the amount of used oil recovered for reuse or recycling, we are reducing our dependence on virgin oil production.

Brief Evaluation
• Legal/Statutory Authority – PRC 48601 – 48691 (SB 546).
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Will depend on recommendations in report due to Legislature in January 2014; may require statutory, regulatory, and/or administrative changes. One example of the kind of recommendation possible is a change to the re-refined oil manufacturing incentive payment structure.
  ○ Information needs and barriers – In order to effectively complete the Used Oil LCA, accurate primary data must be collected. These data (both environmental and economic) will allow the analyses to more precisely predict the outcomes of various policy changes. To date, the project is experiencing some problems in gathering the needed primary data.
  ○ Technical needs and barriers – None currently.
  ○ CalRecycle resource needs and barriers – None needed to complete required LCA and Report to Legislature. Subsequent resource needs to be determined based on report recommendations and legislative actions. Additional staff training may be needed in order to continue use of contractor-created models produced during the course of the LCA project.

8. Governance/Funding

8a - New Models for Funding Waste/Materials Management
Description • Substance – The existing statutory mechanism for funding state waste programs from a disposal-based tonnage fee is unsustainable. As CalRecycle is successful in reducing landfill disposal, down 21% since 2001 in annual tonnage, the funding level has remained fixed, but eroded in real terms by an additional 28%. The combined impact of these two trends in the past 10 years has reduced the equivalent funding level by 55%. New programs that may require state support or oversight will be doomed as equivalent-value revenues continue to diminish. • Contribution to 75% - Several possibilities: a) Expanded stable funding may allow for fiscal support for preferred programs/facilities; b) partial reliance on disposal tip fees, particularly larger fees, may create a disincentive to disposal; c) stable funding will allow for consistent regulatory assistance/oversight that stakeholders can count on.

Brief Evaluation
• Legal/Statutory Authority – The CIWM Act of 1989 requires each operator of a disposal facility in the state to pay a quarterly fee to the State Board of Equalization, as specified, for all waste disposed of at each disposal site. AB 1220 (Eastin - 1993) set the tipping fee at $1.34/ton, with provisions to increase this, to a maximum of $1.40. This maximum level took effect in July 2001. The 2011 equivalent CPI-adjusted value would be $1.78/ton.
• Implementing Authority (ies) – Legislature to act; new model will determine method and responsibility of collection. The fees collected are paid to the State Board of Equalization.
• Implementation:
  ○ Form of implementation –Enactment of legislation once developed by CalRecycle.
  ○ Information needs and barriers – CalRecycle could research and analyze the various models employed in other states and countries for solid waste programs. The current fee of $1.40 per ton is so low as to offer little disincentive to landfilling. In the past, attempts to raise the tipping fee have been defeated (e.g., AB 1610, Nunez).
  ○ Technical needs and barriers – Funding models will be analysed to determine quantity of revenue generated. Other components of the 75% plan may ultimately determine whether revenue is adequate to implement plan. Current forecasts for statewide disposal (subject to the fee) indicate increases of less than 1% per year (actually, in the range of 0.5%/year).
  ○ Resource needs and barriers – Models will determine resources needed to collect revenue. Ultimate barrier to moving to a new revenue generation model will likely be the Legislature and the political setting.

8b - Other Code-Level Ideas
Description • Substance - • Contribution to 75% -

Brief Evaluation
• Legal/Statutory Authority –
• Implementing Authority(ies) –
• Implementation:
  ○ Form of implementation –
  ○ Information needs and barriers –
  ○ Technical needs and barriers -
  ○ Resource needs and barriers –

8c - Authority For Waste and Bottle Bill Functions Such As Enforcement, Data Gathering, Monitoring, Etc.

Description
• Substance -
  ○ State Agencies: create enforcement for AB75 state agency waste reduction program (alternatively, self-certification and no CalRecycle review)
  ○ DRS enforcement
• Contribution to 75% - Ensure diversion is occurring as required and reported

Brief Evaluation
• Legal/Statutory Authority – None currently, new statutory authority needed
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Compliance orders and penalties
  ○ Information needs and barriers – May want to develop list of examples of non-compliance to help gain new authority
  ○ Technical needs and barriers – (need to ask KIS)
  ○ Resource needs and barriers – (need to ask KIS)

9. Source Reduction

9a - Organics Food Programs, Backyard Composting, Vermicomposting
Description • Substance – Grant program focused on reducing generation of food waste. Waste from food loss occurs at many levels of the food system: farm and post-harvest, processing and wholesaling, retail, and foodservice and consumer levels. This food loss significantly impacts the state's wastestream and the lost embedded energy in food contributes to increased GHG emissions. Simultaneously, many Californians are in need of a secure and consistent food source. Increased processing and management efficiencies coupled with a more robust infrastructure are needed to decrease upfront food loss and increase the capture rates of edible food to both alleviate hunger and malnutrition and reduce GHG-rich waste disposal. • Contribution to 75% - Food material comprises ~ 16 percent of the annual disposal in California which equates to 265 pounds of food disposal per person per year. Minimizing food loss and redirecting edible food could result in significant disposal reductions. Increasing backyard composting and vermicomposting programs (as ways to handle food waste) would reduce disposal of the compostable organics wastestream (~20% of statewide disposal).

Brief Evaluation
• Legal/Statutory Authority – Depends on funding source. Legislation needed for IWMA tipping fee increase to provide funding for grants. Budgetary language needed for provision of Cap & Trade funds.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Grant program, with accompanying development of grant criteria and application, payment tracking, etc. Grants could be used to develop model food recovery programs or to promote/develop food management efficiencies and decrease food loss throughout the food system. Grants could also be used to develop model backyard composting and vermicomposting programs tied to other cross-media programs promoting water, landscape, and energy efficiencies. Likely will not require new regulations.
  ○ Information needs and barriers –Additional information would be needed to identify the number of potentially eligible grant applicants.
  ○ Technical needs and barriers - None
  ○ Resource needs and barriers – Depending on funding allocation and number of grants, existing grant staff could administer a new grant/payment program, but not necessarily if other new grant programs are implemented as a result of the 75% effort, and pending resolution of staff classification and supervisory reporting issues.

9b – Greener Products Through Product Certifications/Eco Labels
Description • Substance – Establish a process for California environmental agencies, in consultation with the Department of General Services (DGS), to evaluate and if appropriate approve product-related environmental certifications, standards, and/or eco-labels for use in California. Require DGS to reference the approved certifications/standards/eco-labels in state contracts when there are competitive markets for these products. Require DGS to facilitate their purchase on state contracts and educate buyers about them. (Also see Options 6a and 6b) • Contribution to 75% - Supports numerous policy drivers. This option aims to provide new policy incentives to motivate manufacturers to design and sell products that meet environmental criteria, close the loop for recycled materials, and make environmentally preferable products easier to find and purchase.

Brief Evaluation
• Legal/Statutory Authority – Requires statutory authority in Public Resources Code and/or Public Contracting Code.
• Implementing Authority (ies) –This would involve typical entities that work on product-specific standards, i.e., environmental/natural resource agencies and it also should involve DGS. It could build off the example of how EPEAT became an adopted purchasing standard for computers (initiated through language in the Electronic Waste Recycling Act of 2003 (SB 20 and SB 50), but also including clearer direction to DGS.
• Implementation:
  ○ Form of implementation – Legislation is needed to define participants, the lead agency, due dates, key criteria that must be met, and a manageable scope in terms of products covered. The legislation also would need to establish and require an inter-agency workgroup to evaluate and approve environmental standards/certifications/eco-labels for products. The lead agency might need to develop regulations.
  ○ Information needs and barriers – The scope of product labels and certification is very large so there is a need to narrow the scope in some manner. For example, to certain product types of greatest concern to CalRecycle and/or other workgroup members or by type of certification system (e.g., only evaluating those meeting certain criteria).
  ○ Technical needs and barriers - Expertise exists in state agencies to evaluate existing environmental certifications/standards/eco-labels.
  ○ Resource needs and barriers – Participating workgroup agencies would need to assign staff with appropriate expertise.

9c – Zero Waste Promotion of Local Zero Waste Activities
Description • Substance – The goal of Zero Waste encompasses designing and managing products and processes to eliminate the volume and toxicity of waste. This option would promote local and private sector zero waste activities. • Contribution to 75% - The more that communities and businesses are successful in moving towards a zero waste goal (e.g., on practical basis by achieving at least 90% diversion from landfills and incinerators), then the overall statewide 75% goal will be more readily achievable. Ancillary benefits could include greenhouse gas emission reductions, etc.

Brief Evaluation
• Legal/Statutory Authority – None needed? Could be done under general authority associated with PRC 40051, i.e., promotion of source reduction, recycling, etc.
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation – Promotion of and guidance on zero waste activities, which could include: developing new information for CalRecycle website, assessing definition of zero waste, conducting or participating in workshops on zero waste "best practices" for communities and businesses, linking with existing recognition and certification programs, and providing other general support.
  ○ Information needs and barriers – Information/case studies on best practices. Also see other options that incorporate practices typically linked with zero waste, such as EPP (Options 6a and 6b), EPR (Options 4a and 4b), funding and siting of California infrastructure (Options 1a, 1b, 1c), etc.
  ○ Technical needs and barriers - None?
  ○ Resource needs and barriers – Actual outreach, promotion, workshops can probably can be absorbed by existing LAMD and OPA staff. Research to document best practices may require staffing or contract funding.

10. The Other 25%

10a – Define Post-Recycled Residuals
Description • Substance –Define post-recycled residuals used for energy recovery as those materials that have less than a total specified amount of designated recyclable/compostable materials, unless the recovery facility operator can prove there is no feasible market for any remaining recyclables above a specified minimum standard. Standards could apply either to the MRF supplying feedstock materials or to the energy facility receiving the feedstock. (Note: standard could apply to other end uses besides energy recovery.) • Contribution to 75% - Increasing the amount of designated recyclable and/or compostable material recovered from post-recycled residuals could result in 0.X more tons recycled each year.

Brief Evaluation
• Legal/Statutory Authority – PRC 40502 and 41821.5 (b)
• Implementing Authority(ies) – CalRecycle
• Implementation:
  ○ Form of implementation –Regulatory changes would be required in 14 CCR 17400 *et seq*. Implementation could be either in the form of a certification of quality for the facility with incentives for performance or as a requirement with auditing and/or enforcement. Certification or measurement of performance could be done by CalRecycle staff, an industry standards group or a third party certifying authority. Additionally, if this were done on a voluntary basis by facilities that want to qualify, then regulations might not be needed and this could be implemented sooner.
  ○ Information needs and barriers –Research needed to determine a feasible minimum technical standard for recovery and a related standard measurement method. Barriers include lack of a requirement that relevant recycled materials handlers provide pertinent data to CalRecycle to allow measurement and a lack of ongoing data on material marketing conditions to help judge exceptions to the standard. Past efforts to gather recycling performance data from MRF operators on a voluntary basis have not worked so a mandate to report data is necessary.
  ○ Technical needs and barriers –Need to understand waste processing and recyclables recovery technology sufficiently to develop a technically possible and economically feasible technical standard for recovery and a related standard measurement method.
  ○ CalRecycle resource needs and barriers – Existing staff could handle workload for developing standards and regulations. Facility certification, residuals measurement, facility reporting and enforcement would require additional CalRecycle staff. Data management of the compliance results may be possible through an upgrade of the existing FacIT database.

10b - Define Beneficial Use Policy for Other 25%
Description • Substance – Establish a statewide, consistent, cross-media procedure for evaluating and allowing proposals for the beneficial use of solid waste, including for waste-to-energy. Examples include use of combustion ash in road base and land application of green material. • Contribution to 75% - After every effort is made to recycle solid waste, there could continue to be up to 25% of the waste stream left. A beneficial reuse procedure will help to redirect solid waste away from landfill disposal.

Brief Evaluation
• Legal/Statutory Authority – PRC 40502
• Implementing Authority(ies) – State and Regional Solid Waste Regulating Agencies
• Implementation:
  ○ Develop a technology-neutral, feedstock-based performance standard for feedstock used for waste-to-energy
  ○ Form of implementation – A cross-media workgroup would research and then develop procedures for state and regional agencies to use when evaluating and allowing solid waste beneficial reuse projects.
  ○ Information needs and barriers – Collect and collate any existing procedures, collect data on past practices.
  ○ Technical needs and barriers – Alignment of existing authority and responsibilities of agencies with a statewide procedure.
  ○ Resource needs and barriers – Data collection and maintenance, resources needed to populate and maintain the workgroup.
  ○ Consider New Level in Hierarchy For Post-Recycled Residuals