



COMMENTS – CALIFORNIA’S NEW GOAL: 75% RECYCLING

SHIFT FROM DIVERSION TO RECYCLING

The LTF is concerned with the general direction taken by CalRecycle in this plan. It is clear from the title and introductory portions of the plan that CalRecycle is proposing a fundamental shift. In fact, the opening pages speak of an “evolution of California’s solid waste stream management” and a “new paradigm for solid waste management in California.”

The LTF is concerned that the CalRecycle Plan’s focus on recycling is inconsistent with the scope of the report requested by the legislature in AB 341. Public Resources Code Section 41780.02 requires CalRecycle to provide “strategies to achieve the state’s policy goal that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020.” The LTF believes that the legislature called on CalRecycle to continue the work that has been done on diversion, not construct an entirely new definition of how we approach management of the waste stream.

The LTF does not support the overarching concept of the CalRecycle Plan, and instead would prefer that the report to the legislature focus on the task at hand – the policy goal of achieving 75% diversion through source reduction, recycling, and composting.

THOUGHTS FROM THE DIRECTOR / THE NUMBERS! WHAT DOES 75% RECYCLING MEAN?

On page 6 and again on page 7, first paragraph, the CalRecycle Plan explains that the shift from diversion to recycling is in reaction to “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.” This raises the question: should these practices be included in the definition of “diversion”?

1. Waste-derived materials as ADC, intermediate cover, tipping pads, and roads
Prescriptive cover (Resource Conservation Recovery Act subtitle D) is soil; therefore the impacts associated with using soil are the impacts against which alternatives should be compared. There are several disadvantages to soil; for example, it is expensive to haul, and hauling generates large amounts of green house gases. Soil also consumes large portions of a landfill’s airspace, meaning that the capacity is exhausted sooner, creating the need for more, and perhaps more remote, disposal facilities, resulting in related impacts. Soil can also confound advanced anaerobic composting techniques, by making it impossible to introduce moisture.

One alternative cover is tarpaulins. However, even when tarps are used, the sides often require soil or other form of material to prevent intrusion of wind, water, or animals into the wastes.

Should materials that are used first as cover, tipping pad, or road, in place of soil “count” as diversion, since they end up in the landfill? To answer that question, two pieces of information are critical: if diversion credit were unavailable, would the material still be used as cover, tipping pad, or road? If so, then it may be an economical cover compared to soil, and diversion credit may not be necessary. If it would not be used at the landfill, where would it go and what would the relative impacts be? For example, if sewage sludge is being used as cover, if it were to go elsewhere, how far would it be trucked? Would it have negative impacts on runoff?

The LTF suggests that diversion credit through use of ADC should not be rejected without appropriate study. As the push to divert more materials increases, tools to accomplish that diversion should be narrowed only with good reason. Existing ADC practices should be evaluated to see if modifications to the existing laws or regulations could promote better methods.

2. Waste tires and solid waste residuals used as fuel

Two questions are essential to an analysis of these practices. First, what are the alternative uses of the material and how do the impacts and benefits of the alternative uses compare with the relative impact/benefits of fuel? Second, what are the relative impacts of the waste fuel technology compared to gas-to-energy facilities, which are the standard in California? *The LTF suggests that diversion credit not be rejected without appropriate study.*

What are the consequences of this shift from “diversion” to “recycling”? According to the “Thoughts from the Director,” CalRecycle proposes to keep a focus on source reduction, as intended by the existing legislative framework. However, the word “recycling” does not include source reduction, whereas “diversion” does. Therefore the shift from “diversion” to “recycling” directs attention away from source reduction. To illustrate the problems that arise from a myopic focus on recycling, consider Company A, which generates 100 tons of solid waste per year, of which it recycles 75%. In contrast, Company B produces exactly the same number of widgets, using exactly the same source materials, consumes exactly the same amount of energy and water, but has modified its process to emphasize source reduction. Company B recycles 5 tons of waste and disposes of 20 tons of waste each year. Although Company B only has a 20% recycling rate, it is achieving far more for the environment than Company A.

The CalRecycle Plan emphasis on recycling may suggest to the public that it is preferable to buy more beverages in single-use containers rather than choosing tap water, filter tap water, brewed tea, homemade lemonade, or other less package-intensive alternative. Recent research supports this possibility. For example these article on research from U. C. Irvine:

http://www.plasticsnews.com/blog/2012/05/do_recycling_bins_prompt_more.html
<http://www.wasterecyclingnews.com/article/20120518/NEWS02/120519894/update-recycling-bins-may-prompt-additional-waste-researcher-says> *Therefore LTF suggests that the emphasis should not be changed from diversion to recycling.*

On Page 7, the CalRecycle Plan explains that a change in the numbers is needed because of the large, unrepresentative increase in waste generation between 2003 and 2006. This explanation of a radical change to the accounting method is unsatisfactory. The proposed change seems to call for a

minimum recycling rate of 8 pounds per person per day, which has the undesired consequence, described above, of undermining source reduction. The existing calculation method was developed with outside expertise and extensive stakeholder meetings. *Therefore, the LTF suggests that no changes be made to the calculation method without outside expertise and stakeholder input.*

The goal, as described on page 7, seems to be not so much to reduce waste generation, but to shift material from the trash bin to the recycling bin. What would change as a result of this shift?

1. Collection – As long the recycling service was comingled, single stream (versus separate collection for cardboard, food waste, etc.), then the total number of collection trucks on the road may not necessarily increase, although the type of truck may change. (There may be other drawbacks, however, as suggested in this critique of single stream: <http://www.wasterecyclingnews.com/article/20120425/NEWS02/304259990/study-single-stream-is-more-wasteful-expensive>.) For some jurisdictions, the cost of retooling trucks may not be consequential, since it would be at the expense of the service provider and ultimately the rate payer, but in jurisdictions where collection is paid for by the general fund, this could be a costly proposal.
2. Processing – As pointed out on page 10 of the CalRecycle Plan, there would be an increased demand for materials recovery facilities (MRFs). It is very likely the contamination rates in the blue bins would increase, and blue bins would accept many low value or negative value items. Thus MRFs would essentially be dirty MRFs, with low-paid workers producing low value materials many of which would have with limited or no local market. Residual rates could be 40% or more, making it unlikely the State would achieve the 75% diversion goal.
3. Impacts/Objections – The siting of MRFs would be subject to CEQA. CEQA requires a consideration of impacts, including greenhouse gas impacts, relative to an “existing condition” baseline. Even if the total number of trucks did not increase, the materials would have at least two destinations, instead of one. Because materials would be taken first to a MRF, and then by transfer trailer to a recycling or disposal destination, total traffic would in most cases increase. Trip distances of materials going to Asia for recycling compared to destination at local disposal facilities may not compare favorably. If specific details of the impacts that occur at Asian recycling facilities are not available, CEQA may require a “worst case scenario” analysis. Energy demand of MRFs and transportation systems would be compared to the energy demand (or production) at landfills. Comparisons of carbon sequestration, compost emissions, etc. would be analyzed. If sufficient offsets from savings of virgin materials or other sources could not be found, it would be difficult to make finding of overriding significance for impacts that may be identified. Thus because of CEQA environmental considerations and public perception, local government may be reluctant to site the necessary facilities. Thus, local conditions/environmental considerations may discourage this approach. *The LTF recommends that the viability of this approach be studied prior to implementing any changes.*

Chart 4 on page 11 of the CalRecycle Plan shows a correlation between recycling and the preservation of landfill capacity. However, recycling is not the only means to preserving landfill capacity. For example, the last few years since 2008 demonstrate that given economic pressures,

people will “source reduce” their waste. This occurred even when the market for recyclable materials crashed. Another indicator of the effectiveness of economic pressures is illustrated by the fact that many landfills saw a steep decline in the disposal of heavy construction and demolition debris (C&D) when scales were installed and pricing changed from volume-based to weight-based. Compaction rates also affect landfill capacity, as does the approach type of cover, and the character of the waste stream. *Preserving landfill capacity is an appropriate goal, but the LTF recommends that it be addressed in a more comprehensive manner.*

INCREASE RECYCLING INFRASTRUCTURE

The order of focus areas in the CalRecycle Plan seems inconsistent with the policy drivers listed on page 12 of the Plan. *The LTF recommends reorganizing the order of the issues to put product stewardship, lifecycle analysis, and market development first.*

On page 13, in the Funding for Infrastructure section, the first focus area, the very first issue identified by the CalRecycle Plan is the need for more money for CalRecycle so that CalRecycle can provide financial incentives for recycling facilities. The second sentence identifies potential source of funds, starting with increasing landfill fees to subsidize recycling infrastructure. However, as pointed out in the Plan on page 57, focus area 8, this self-defeating proposition carries its own incentive to continue to rely on landfills. If recycling is truly to replace disposal, it must be self-sustaining. Furthermore, it is unclear how the proposed fees would be allocated, and if they would accomplish any of the “drivers” listed on page 12. Given that drivers include preserving local control and reducing cost to local government, this approach seems counterproductive. *The LTF recommends identifying funding sources that can be provided automatically to private recyclers and local government, without placing Sacramento in between those that are diverting the materials and the funds.*

On page 14 in the Regulatory Oversight section, the Plan points out that reporting and oversight at solid waste facilities (other than landfills) is lacking. This existing deficit makes it difficult to know how effective these facilities are at diverting waste. While reporting is needed, facilities should not be overburdened with reporting, nor prohibited from making rapid changes based on market conditions, technology innovations, throughput composition, or other factors. Oversight should avoid duplicative or meaningless measurements that impose unnecessary burdens on operators. *The LTF is in agreement that this issue needs consideration, and recommends that the costs of oversight be borne by the facility, based on factors such as throughput and diversion rate, and should not be shifted to local government or to disposal operations.*

On page 21 in the Streamline Planning Documents section, one of the streamlining recommendations is to change the measurements made under SB1016 to countywide measurements. Unless the potential for fines of \$10,000 per day is repealed, this proposal is unworkable. It would make one jurisdiction responsible for the actions of another jurisdiction over which it has no control. *Therefore, the LTF recommends against this approach.*

Another streamlining recommendation on page 21 would allow state agencies to keep revenue from the sale of recyclable materials. The role of state agencies in providing leadership should be called out as a separate focus area. One way to improve the role of state agencies as leaders in waste diversion would be to impose the same type of financial penalty against state facilities that

fail to meet the 50% waste reduction target as is what is imposed against the host local government for the same failure. The fines should go to the host jurisdiction. *The LTF recommends that, to support the 75% target, penalties against a state agency should accrue for failing to divert 75%.*

ORGANICS

This section begins by calling for repeal of the law allowing the use of ADC. However, as explained above, credit for ADC should only be removed after appropriate study.

Page 24 calls for increased organic waste diversion. Clarity is needed with regard to the definition of organic waste. Such clarity could help define what materials are being targeted for removal from the waste stream, so that potential uses and markets could be evaluated. It is unlikely that diversion rates will increase until this issue is resolved. The LTF recommends that target organic materials be specified, and methods of diversion evaluated for feasibility.

Page 25 calls for funding for incentives. Again CalRecycle is proposing to obtain the funding from landfills, and to filter the money through Sacramento. As explained above, the LTF recommends against this approach.

Page 27 calls for regulatory changes. In a March 20, 2012 letter to CalEPA agencies, the SWANA LTF also suggested regulatory reform, although some of this reform could be accomplished without changes to the regulatory structure. The letter explains that composting “offers a technically viable and environmentally beneficial alternative to managing compostable organic solid waste. However, composting operations must be economically viable. To preserve the composting option, every effort should be made to support existing composting operations and to remove barriers to siting new facilities provided they are environmentally sound and meet all appropriate laws and regulations. To this end, below are regulatory changes that we believe are support the growth of composting capacity in California, which in turn is necessary to assist the achievement of the statewide goal of diverting 75% of solid waste from disposal.

- While compost facilities that are not co-located with landfills must have proper stormwater controls, duplication should not be required for co-located facilities
- Base groundwater protection requirements on verifiable threats to groundwater that can be substantiated via field analysis, data, or other technical information
- CalRecycle and the Air Resources Board, in concert with local APCDs/AQMDs, should coordinate on a strategy for the regulation of volatile organic compounds and greenhouse gas emissions from compost operations
- CalRecycle, Department of Food and Agriculture (CDFA), Air Resources Board (CARB), and Water Board should use consistent regulatory definitions for terms, including, but not limited to ‘organic waste,’ ‘compostable organic waste,’ ‘agricultural waste,’ ‘food waste,’ ‘composting operation,’ ‘compostable products,’ and ‘biomass’
- CalRecycle and CDFA should help develop markets for compost. For example, they should promote the use of compost in agriculture and by state departments such as CalTrans and CalFire

- CalRecycle, CDFA, CARB, and the Water Board should provide coordinated outreach and education on composting issues to their regulatory staff and to stakeholders

The issue of regulatory changes and interagency cooperation should be a focus area unto itself. In general, regulations should be more consistent among state agencies. However, some interagency coordination may be accomplished without legislative or regulatory change. For example, many environmental impact reports fail to address solid waste management at all. Those that do address solid waste often only address disposal capacity, whereas disposal is only one aspect of solid waste management. Transportation, processing, public education, etc. are also essential components. CalRecycle could coordinate with OPR on the development of guidance on impact identification, and on formulation of appropriate mitigation measures. *The LTF recommends that CalRecycle coordinate with other state agencies to ensure that the impacts of waste generation are appropriately and consistently considered by all state and local government agencies.*

Another regulatory concept that is included in the SWANA LTF White Paper is the concept of volumetric rate structure. Paying by weight has been shown to be an effective approach to incentivizing waste reduction. Some local governments have local legal or political barriers to this approach that could be resolved with State legislation. *The LTF recommends that CalRecycle investigate legislative action that could facilitate volumetric rate structures where they do not currently exist.*

INCREASE COMMERCIAL RECYCLING

This focus area is too limited. The view of potential sectors for improved consideration of waste reduction should be as broad as possible, and should include not only the commercial sector, but also development and even urban form. For example, if a city were to take as proactive an approach to solid waste management as did Roosevelt Island (see, for example, <http://www.treehugger.com/corporate-responsibility/should-we-replace-garbage-trucks-with-vacuum-tubes.html>), CalRecycle should be in a position to provide appropriate acknowledgement.

Page 32 addresses awards for businesses; however, again the discussion is too narrow. Awards should be provided not only to existing businesses, but also to developments that are structured to minimize waste. Awards should consider a broad range of life-cycle factors, such as durability, hazardous materials reduction, energy consumption, greenhouse gas generation, etc. *The LTF recommends considering life-cycle analysis of all major planning, development, and resource-consuming activities.*

ESTABLISH EXTENDED PRODUCER RESPONSIBILITY

The CalRecycle Plan narrows the description of the benefits of EPR primarily to packaging, whereas EPR involves other components, including toxicity, durability, end-of-life management. A more appropriate organization would be to provide a discussion of EPR as a sub-issue of source reduction. *The LTF recommends a stronger emphasis on extended producer responsibility, and a broader consideration of what this focus entails.*

REFORM BEVERAGE CONTAINER PROGRAM

The LTF supports the proposed reforms because the current program is underfunded and the reforms will assist with meaningful diversion.

INCREASE PROCUREMENT/DEMAND

The LTF believes that this focus area is vital. Without better domestic markets, the 75% diversion goal cannot be met. Within this focus area, the CalRecycle Plan appropriately addresses state agency procurement first, and includes a recommendation for an enforcement mechanism. Secondly it addresses development of incentives for incorporation of post-consumer content. *The LTF recommends making this a high priority and including additional activities to promote markets.*

OTHER MATERIALS

This focus area addresses mechanisms for reducing tires, plastics, e-waste, construction and demolition materials (C&D), fiber, resin, and used oil in the waste stream. The LTF supports many of the proposed activities. For example, polystyrene is exceptionally expensive to recycle. Another material for consideration is “compostable picnicware,” much of which is not actually compostable.

On page 51, in the discussion of e-waste in section 7c, and in the discussion of cardboard in section 7f, the CalRecycle Plan proposes an expansion of the ban on e-waste disposal and a cardboard ban, respectively. Landfill bans should be based on threat to the environment, not as a mechanism for recycling and EPR. *The LTF recommends that landfill bans should only be implemented when an appropriately funded alternative method of handling the material has been put in place.* In the case of cardboard, since this is a relatively high value item, a more appropriate focus for increased diversion of this material may be public education.

On page 52, in the discussion of C&D in section 7d, a landfill surcharge is proposed. As previously pointed out, funds that are directed to Sacramento often do not make it back to the jurisdiction of origin. Some landfills, including the City of San Diego’s Miramar Landfill, already impose surcharges for construction and demolition debris entering the landfill. Such local approaches should not be compromised. *The LTF recognizes that a surcharge on specific materials can aid diversion, but the revenues associated with such a surcharge should not be directed to Sacramento.*

GOVERNANCE/FUNDING

The CalRecycle Plan asserts that the existing \$1.40 tipping fee is so low as to provide no disincentive for the disposal of recyclable, compostable, or reusable materials. However, although increasing landfill fees may promote recycling, it may also promote illegal dumping and littering, which has environmental impacts, public health and safety threats, and imposes costs on local government. Additionally, landfills pay more fees and are more highly regulated than any other waste management facility. Permitting and expansion of landfills is already difficult and expensive to the point of impossibility.

For other waste management approaches to be successful in the long term, as land disposal is phased out, they must have a more appropriate and reliable funding source for necessary oversight. Furthermore, in some cases increased landfill fees would come directly from local government general funds, leaving less revenue for essential waste management programs and other civic services. *The LTF recommends against further disproportionate reliance on landfills for funding.*

SOURCE REDUCTION

Although in theory source reduction is the top of the waste management hierarchy, the CalRecycle Plan addresses this focus area ninth. Source reduction should be addressed first, and EPR should be discussed next or even within this focus area. *The LTF recommends that this focus area be moved to earlier in the analysis. Additionally, source reduction should be a consideration within all focus areas.*

THE OTHER 25%

On page 61, the CalRecycle Plan identifies no technical barriers to zero waste. However, technical barriers are, of course, the reason California still produces millions of tons of waste each year. As pointed out on page 13, without appropriate tools, including use of new energy technologies, zero waste will continue to be elusive. *The LTF recommends keeping the tools available to accomplish waste reduction as broad as possible.*

Different technologies and practices are appropriate in different locations based on a case-by-case analysis that considers factors such as trip distances, energy factors, greenhouse gas, and other life-cycle factors. One of the biggest challenges, and yet one of the most important tools for effective materials management, is providing effective life-cycle analysis. It is important that materials be used for their highest and best purpose, but determining the best use for a particular material in the waste stream at a particular location can be difficult. For example, when considering the benefits of recycling, the avoided impacts associated with producing the final product from virgin materials must be considered on the benefits side of the equation. These avoided impacts are benefits of recycling. However, the impacts associated with separation and recovery, transportation, remanufacture, etc. of the material must also be put into the equation.

As seen above, the overall equation identifying the benefits and impacts of recycling is complex. Once it is understood for a specific situation, it must be then compared with other options, including anaerobic digestion, landfilling, and various types of energy production. Similar equations for evaluating the alternatives must be developed and compared. *The LTF recommends that a guidance document for assessing the benefits and impacts associated with different technologies in specific situations be developed.*

There are several factors that need to be considered in evaluating different technologies. For example, when considering energy recovery, the avoided impacts associated with alternative forms of energy production need to be considered. *The LTF recommends that in the absence of a thorough case specific analysis, artificial costs and barriers to using materials as fuels should not be imposed.*

Energy production and distribution is an especially complex topic. Traditional fuels require environmentally harmful extraction, refining, and transportation. Typically, in California, corporate energy providers prefer a grid of powerlines connecting other states and even Mexico with the users in the United States. Energy is commonly produced at large, remote sites, and in other states and countries, then moved across the wires to urban areas. This approach results in costly environmental impacts at the site of energy production and along the utility lines. Significant percentages of energy are lost along the power lines during transport. The large facilities and the lines themselves are subject to accidental failure and may become targets for terrorists. This

complex system contrasts with alternatives that fall under the heading, “local distributed power.” Local distributed power includes, for example, solar, tidal power, and solid waste and solid waste-derived fuels. Thus, from an energy planning perspective, local distributed power from solid waste has several benefits that should be factored in when evaluating waste management options.

Current language in the state code addressing solid waste-based energy production creates confusion as to how facilities are regulated. The definitions for “transformation,” “conversion technology,” “waste-to-energy,” etc. are inconsistent from one part of the state code to another. *The LTF recommends the development of consistent language and definitions.*

CONCLUSION

In reviewing the CalRecycle Plan, the LTF has identified several areas that should be modified.

1. **LANGUAGE** – To be consistent with policy drivers such as “preserving natural resources,” the word diversion should not be replaced with recycling. It is not clear to waste professionals, let alone lay people, that “recycling” includes source reduction, extended producer responsibility, composting, low temperature anaerobic digestion, or higher temperature processes. If there is concern about the use of ADC or other forms of diversion, these technologies and practices should be evaluated. If study shows that a particular technology or practice is inappropriate, it should be restricted or eliminated based on the results of the study.
2. **PRIORITIES** – To be consistent with policy drivers such as “maximizing source reduction” and “implementing product stewardship,” the focus areas should be reorganized to put key topics first.
3. **TARGETS** – “Per resident disposal” should not be used because it does not reflect a jurisdiction’s actual results. Similarly, there should be no specific weight of recycling as a goal. Setting such a goal could disincentivize vital resource conservation practices.
4. **PRESERVATION OF LANDFILL CAPACITY** – Preservation of landfill capacity could be added as a goal, with a full suite of appropriate measures targeting this goal, including possible measures such as: increased diversion, co-location of diversion facilities, use of ADC, increased compaction, increased moisture content to speed decomposition, etc.
5. **FUNDING** – Increased diversion will require funding; however, revenues should not go first to Sacramento. Instead, mechanisms should be identified to provide funding directly to those that are accomplishing diversion. Furthermore, funding requirements of all aspects of waste management should not be borne by landfills. Landfills already bear disproportionate fees and oversight. Additionally, as proper disposal becomes more expensive, littering and dumping problems are exacerbated. Thus funding mechanisms that increase disposal costs run counter to the policy driver of “reducing costs to local governments.”
6. **OVERSIGHT OF SOLID WASTE FACILITIES** – The LTF is in agreement that this issue needs consideration, and recommends that the costs of oversight be borne by the facility, based on factors such as throughput and diversion rate, and should not be shifted to local government or to disposal operations.

7. STREAMLINING – To be consistent with the policy driver of “preserving local control,” compliance with diversion requirements should not be measured on a countywide basis unless the jurisdictions involved support this approach.
8. STATE AGENCY RECYCLING – Because AB 341 establishes 75% diversion as a statewide goal, state government facilities should take the lead. The target for waste diversion from state facilities should be 75%, and penalties should be imposed against state agencies that fail to meet the goal. The penalties should be paid to the host jurisdiction that is responsible for waste reduction.
9. REGULATORY CHANGES – The LTF recommends that CalRecycle:
 - a. Develop a consistent definition of organic waste to be used by all state agencies.
 - b. Remove legislative and regulatory obstacles prohibiting and/or hindering the development of technologies and management techniques needed to divert waste.
 - c. Investigate ways to clarify energy production language and remove obstacles to local, distributed energy production.
 - d. Coordinate with other state agencies to ensure that the impacts of waste generation are consistently considered by all state and local government agencies.
 - e. Investigate legislative action that could facilitate volumetric rate structures where they currently do not exist.
10. AWARDS – Recognition should be provided to development and businesses and all activities that promote preservation of natural resources in a broader sense, not just by recycling and procurement.
11. LANDFILL BANS – To avoid illegal dumping, which imposes costs on local government and results in deterioration of the environment, landfill bans should be based on actual threat to the environment, not as a mechanism for EPR, and should be used only when a suitable alternative method of handling the material is in place.
12. LIFE CYCLE ANALYSIS – The LTF recommends that a guidance document for assessing the benefits and impacts associated with different management techniques and technologies in specific situations be developed.