LOS ANGELES COUNTY
SOLID WASTE MANAGEMENT COMMITTEE/
INTEGRATED WASTE MANAGEMENT TASK FORCE
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DEAN D. EFSTATHIOU
CHAIRMAN

March 27, 2008

The Honorable Jared Huffman
State Capitol, Room 4139
Sacramento, CA 94249-0060

Dear Assembly Member Huffman:

ASSEMBLY BILL 2640 (INTRODUCED FEBRUARY 22, 2008)
ELIMINATING DIVERSION CREDIT FOR SOURCE SEPARATED GREENWASTE

The Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force (Task Force) **opposes** Assembly Bill 2640 (AB 2640), **unless amended** to address the comments listed below. AB 2640, if enacted, would eliminate diversion credit for greenwaste used as alternative daily cover (ADC), and make all greenwaste deposited in a landfill, including that used as ADC, subject to the State's current waste disposal fee of $1.40 per ton.

Pursuant to Chapter 3.67 of the Los Angeles County Code and the California Integrated Waste Management Act of 1989 (AB 939, as amended), the Task Force is responsible for coordinating the development of all major solid waste planning documents prepared for the County of Los Angeles and its 88 cities in Los Angeles County with a combined population in excess of ten million. Consistent with these responsibilities, and to ensure a coordinated and cost-effective and environmentally-sound solid waste management system in Los Angeles County, the Task Force also addresses issues impacting the system on a countywide basis. The Task Force membership includes representatives of the League of California Cities-Los Angeles County Division, the County of Los Angeles Board of Supervisors, the City of Los Angeles, the waste management industry, environmental groups, the public, and a number of other governmental agencies.

The use of greenwaste as ADC has numerous environmental and economic benefits, including: preventing the mining and wasting of clean soil that would have otherwise been used as daily cover; conserving landfill capacity, by avoiding an additional cover material

layer and the ability of greenwaste to compact and decompose over time; creating markets for the beneficial use of greenwaste; maintaining a local outlet for the beneficial use of greenwaste; and, strengthening the curbside collection infrastructure for greenwaste. These benefits are especially important in Los Angeles County since there is inadequate processing capacity for greenwaste and a limited market for compost made from greenwaste.

It is these significant benefits that led the Legislature to provide diversion credit to greenwaste used as ADC, making a distinction from greenwaste disposed in the landfill. Due to this diversion credit, and because of the benefits listed above, jurisdictions and private industry invested millions of dollars in expensive equipment and infrastructure to implement greenwaste collection and recycling programs which provide for the separate collection of greenwaste to be used as ADC. Jurisdictions in Southern California and other parts of the state now rely on this infrastructure to manage greenwaste material and meet the State's 50 percent waste reduction mandate.

Prior to its approval by the appropriate regulatory agencies, a series of field testing and demonstration activities were conducted to substantiate that greenwaste when used as ADC meets all performance and health and safety criteria established by the California Integrated Waste Management Board (CIWMB). The CIWMB has also found that over 12 million tons of compostable organics are being disposed in landfills annually, therefore there continues to be a large source of compostable organic waste available for composting despite the use of greenwaste as ADC.

The Task Force supports efforts to increase the beneficial use of greenwaste material, however we are opposed to any proposals that eliminate diversion credit for source separated greenwaste that is beneficially used, especially if additional options for managing that material have not yet been developed. For example, AB 2640 sets aside funding for "compostable organic waste management" while failing to recognize that it may not be feasible to shift greenwaste from ADC to composting facilities in metropolitan/urbanized areas like Los Angeles County. Scarce availability of land, stringent air quality regulations, and community resistance to such facilities makes the development of composting facilities an unlikely solid waste management option for the small fraction of greenwaste presently being used as ADC. Even if sufficient composting facilities were able to be developed elsewhere, greenwaste will still need to be transported over long distances to other counties or states, leading to higher trash rates and added traffic congestion and air pollution. Lastly, a recently completed lifecycle analysis by the County Sanitation Districts of Los Angeles County (copy enclosed) has shown that the use of greenwaste as ADC has three times the GHG emissions reduction potential when compared to composting. At present, the CIWMB is conducting a broader life cycle assessment of organic material management options due to be completed next year, which should serve to guide policies on organic materials management developed at the State level.

By eliminating diversion credit, AB 2640 would eliminate the environmental benefits greenwaste ADC provides, undermine a jurisdiction's ability to comply with the State's 50 percent waste reduction mandate, and increase costs for local jurisdictions and residents for the collection and processing of greenwaste materials. Ultimately, AB 2640 may erode support for curbside collection of greenwaste and jeopardize achievement of the State's 50 percent waste reduction mandate, subjecting local jurisdictions to fines of up to $10,000 per day.

More importantly, as landfill capacity decreases in urban areas throughout the State, it becomes even more imperative for the State to take a leadership role in developing other avenues for management of compostable organic waste, an issue that is not well addressed by this bill. A number of options exist for the productive use of organic waste, including greenwaste materials, such as processing through conversion technologies to produce renewable fuels and energy. Rather than eliminate diversion credit for greenwaste ADC, which may lead to an increase in the amount of greenwaste disposed at landfills, the Task Force supports developing a transition plan with incentives for developing more advanced alternative uses of greenwaste that are protective of the public's health and safety and have been proven to reduce air emissions and other environmental impacts, including greenhouse gas emissions.

Therefore, the Task Force **opposes** AB 2640 **unless amended**. We look forward to working with the Legislature on developing alternative management options for the currently landfilled non-ADC compostable organic waste that would be protective of the public's health and safety, the environment, and the economic wellbeing of our state. Should you have any questions, please contact Mr. Mike Mohajer of the Task Force at (909) 592-1147.

Sincerely,

Margaret Clark

Margaret Clark, Vice-Chair
Los Angeles County Solid Waste Management Committee/
Integrated Waste Management Task Force and
Council Member, City of Rosemead

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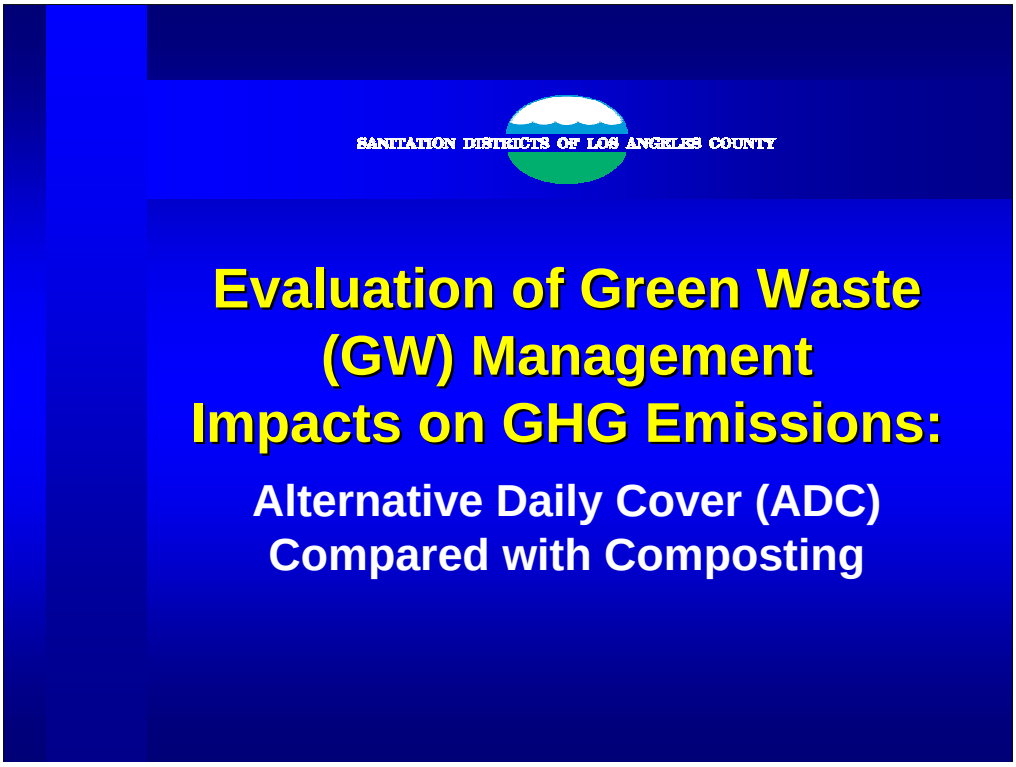
Enc.

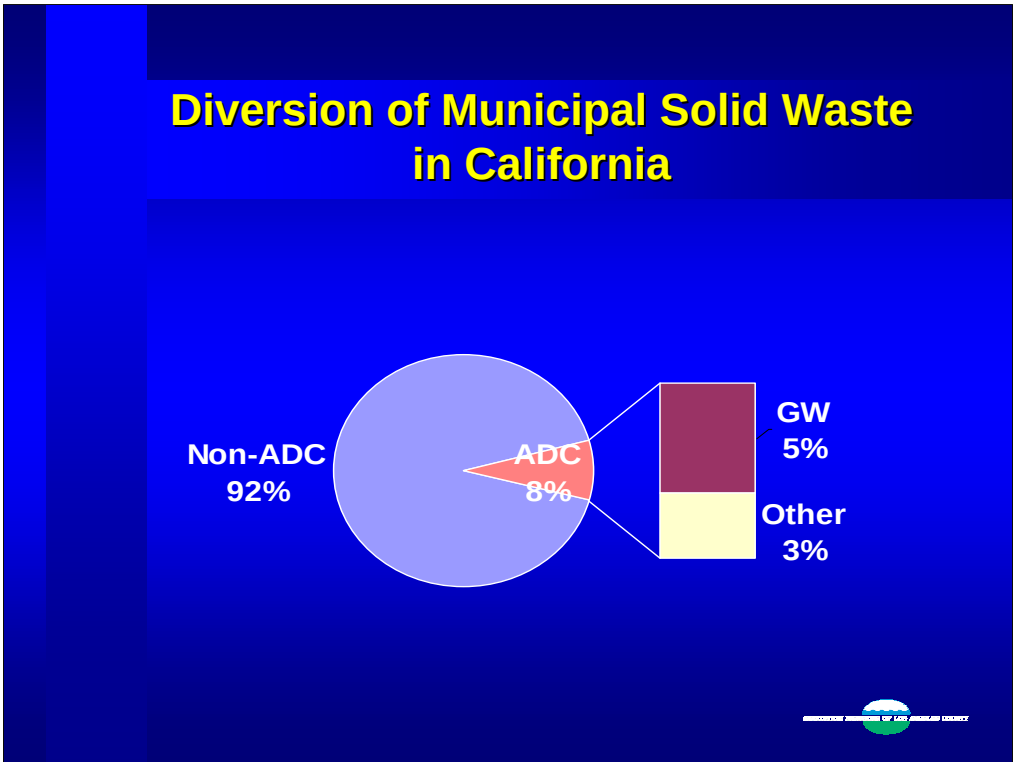
cc: Speaker of the Assembly Fabian Núñez
Each Member of the Los Angeles County Legislative Delegation
Each Member of the Assembly Natural Resources Committee
California Integrated Waste Management Board
California State Association of Counties
The League of California Cities
The League of California Cities, Los Angeles County Division
Each Member of the County of Los Angeles' Board of Supervisors
Each City Mayor in Los Angeles County
South Bay Cities Council of Governments
San Gabriel Valley Council of Governments
Gateway Cities Council of Governments
Southern California Association of Governments
Each Member of the Los Angeles County Integrated Waste Management Task Force
Each Member of the Los Angeles County Alternative Technology Advisory Subcommittee



•The use of green waste (GW) as alternative daily cover (ADC) is often portrayed as contributing to greenhouse gas emissions, and the composting of GW is often assumed to be an environmentally superior alternative because it reduces GHG emissions.

•This analysis verifies the benefits of composting but also shows that GW ADC is actually three times more beneficial in reducing GHG emissions when compared to the composting of GW.

•The conclusions are based on a life cycle analysis that included transportation and equipment handling emissions, as well as fossil fuel emissions avoided from a range of landfill gas management approaches.

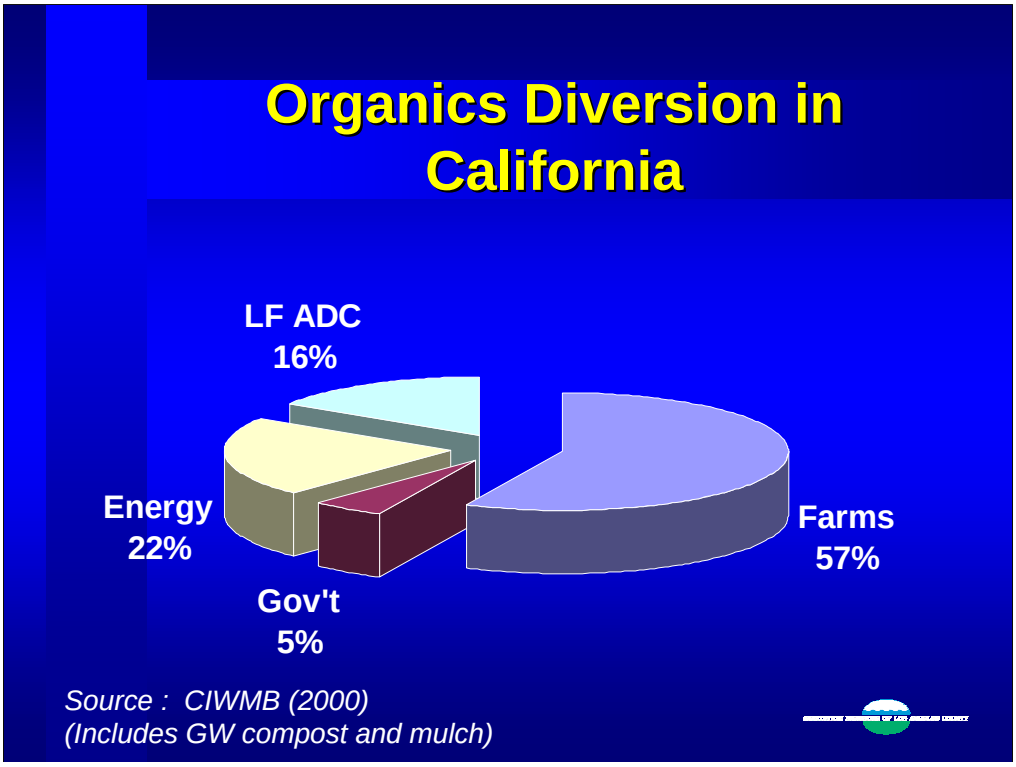


•Just over half of all California-generated municipal solid waste is diverted by various means.

•Landfill ADC is a small, but important, contributor to diversion.

•GW is the major ADC component but others include auto shredder fluff and wastewater biosolids.

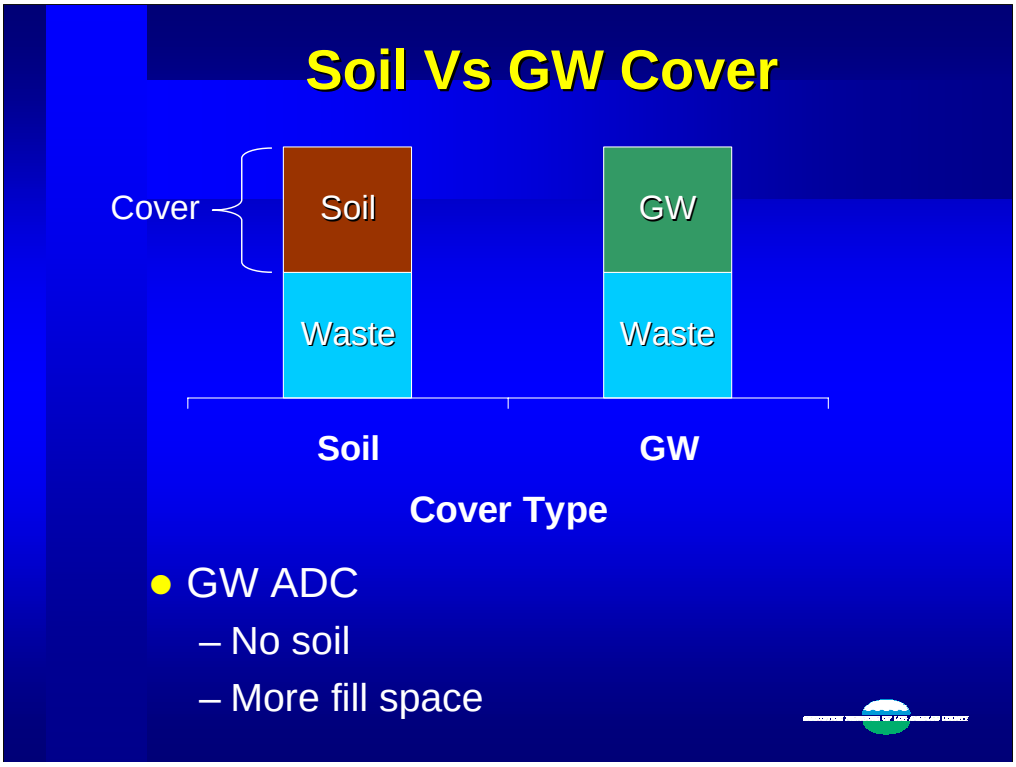
Sources: Derived from year 2006 data at http://www.ciwmb.ca.gov/LGCentral/DRS/Reports/Statewide/SWTotals.asp and http://www.ciwmb.ca.gov/LGCentral/Rates/Graphs/RateTable.htm



•A significant amount of organics is currently diverted in the state; ADC represents a relatively small portion of this diversion.

•Composting is a significant portion of the “Farms” category.

Source: http://www.ciwmb.ca.gov/organics/Measure/Marketplace.htm (accessed 2007, 2008)



•This slide demonstrates an important benefit of ADC.

•Prior to the use of GW ADC, larger amounts of cover soil had to be imported, consuming fossil fuels.

•GW ADC consumes much less fossil fuel than soil when used as a cover material.

•It also saves valuable landfill space because it displaces cover soil and it more efficiently compacts under the weight of the next lift of MSW.

•Although other ADC's are commercially available, their use is not always appropriate on a site-specific technical basis.

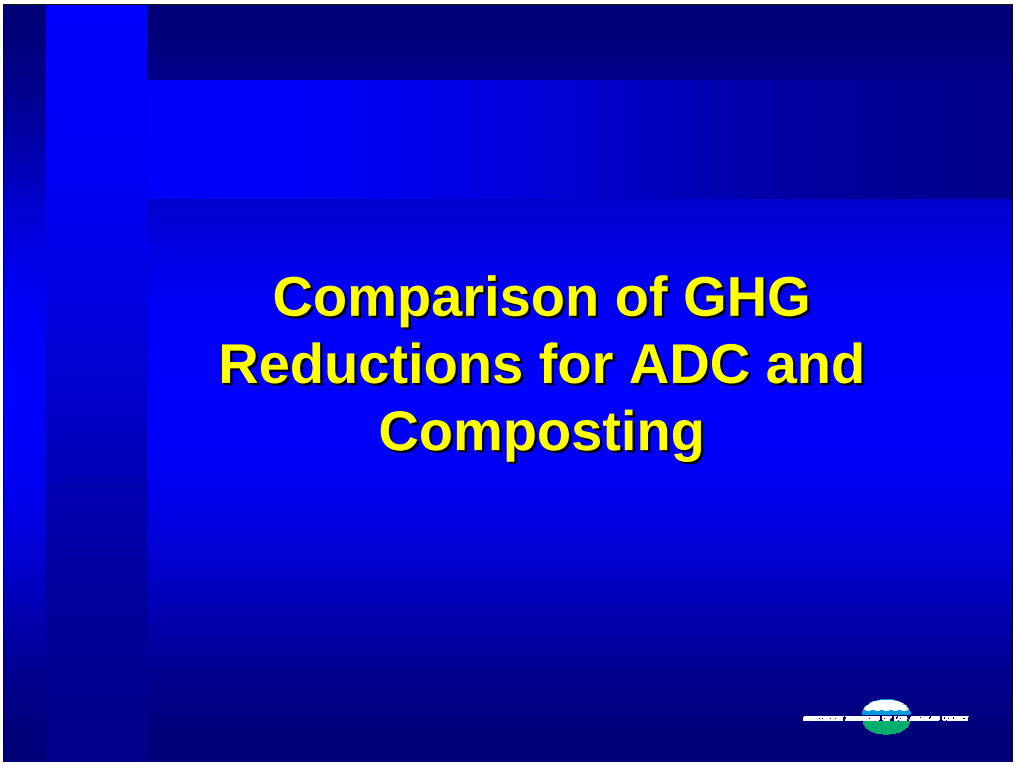
Green Waste Used as ADC

Green waste grinding.

Green waste placed as ADC.

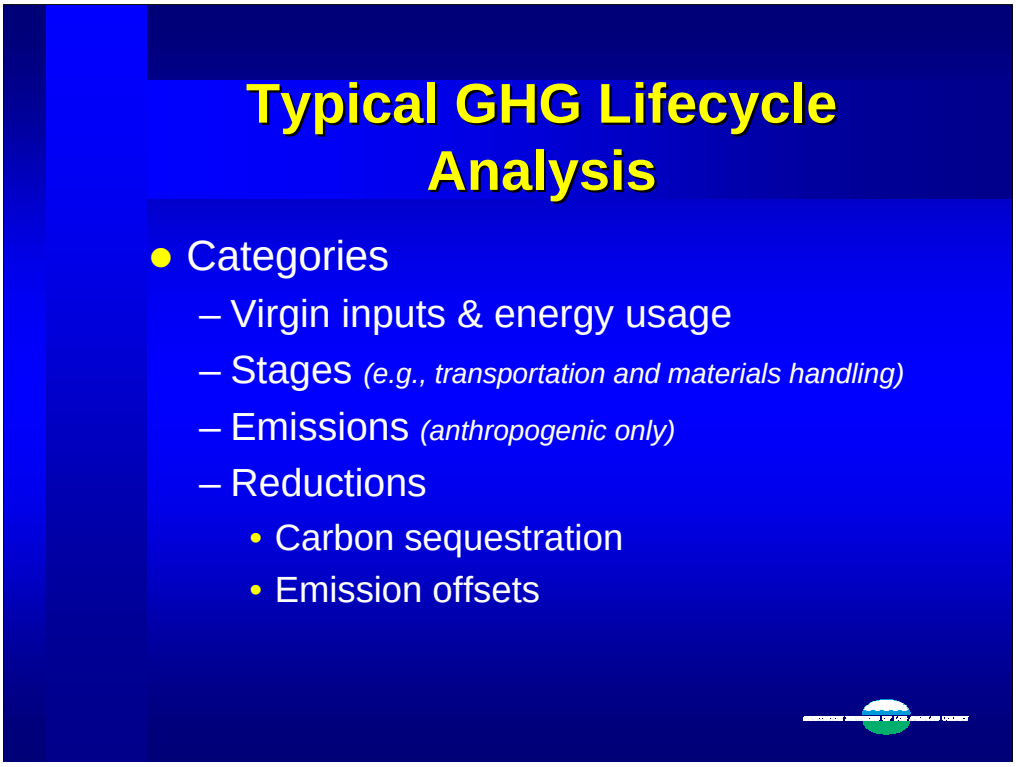
•Green waste is ground before use as ADC or off-site shipment to other users (e.g., composters).

•A landfill “scraper” scoops up the shredded GW then distributes it across the compacted municipal solid waste.



•This presentation compares GHG Emissions for ADC and composting.

•This comparison was made using a comprehensive GHG lifecycle analysis.

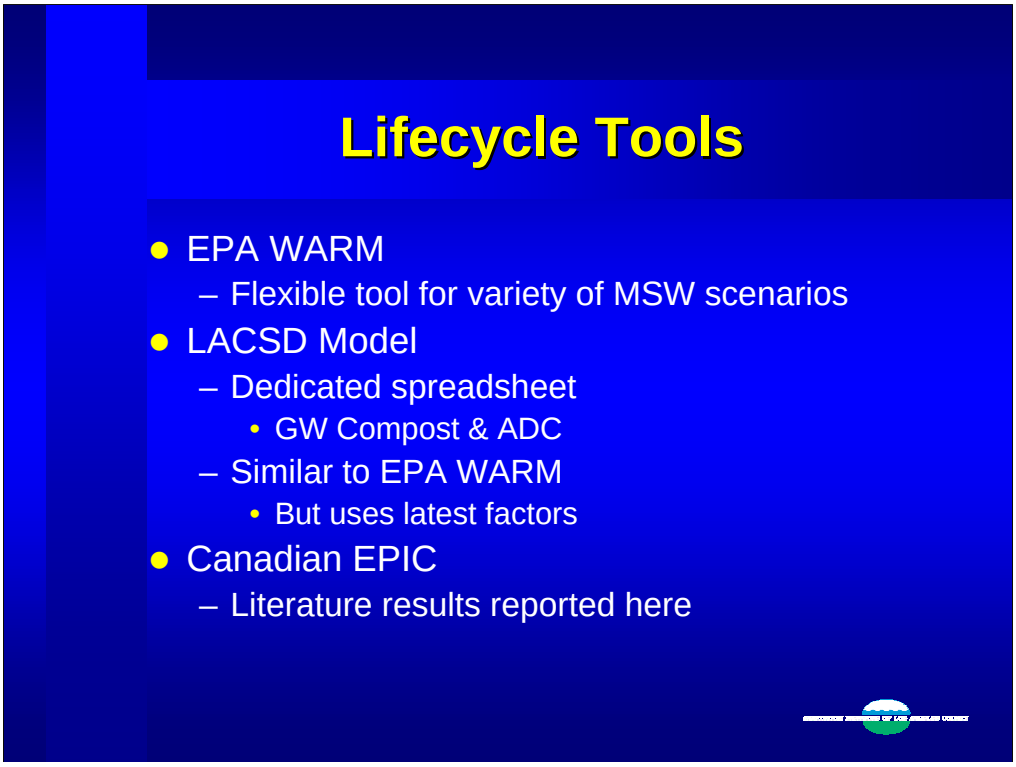


•The lifecycle analysis has four categories: input of virgin materials and energy, stages of activity such as transport and processing, emissions from the approach itself, and any emission reductions due to offsets (e.g., displacing fossil fuel use).

•An important concept in GHG lifecycle analyses is that carbon originating from natural sources may produce either biogenic or anthropogenic emissions. Carbon dioxide emissions are considered biogenic as these are part of the natural carbon cycle and so are excluded from the analysis. Methane emissions are considered anthropogenic as these are not commonly produced in the natural carbon cycle and so are included in the analysis.

•Methane is singled out because it has a greater global warming potential than carbon dioxide. A global warming potential of 23 by weight was used for methane in this analysis (i.e., 1 unit weight of methane has the same global warming potential as 23 times greater weight of carbon dioxide).

•Some forms of carbon may persist under various conditions in a stable form and so are removed from the natural carbon cycle. Such carbon is considered "sequestered". Examples of such carbon include soil lignin and peat.

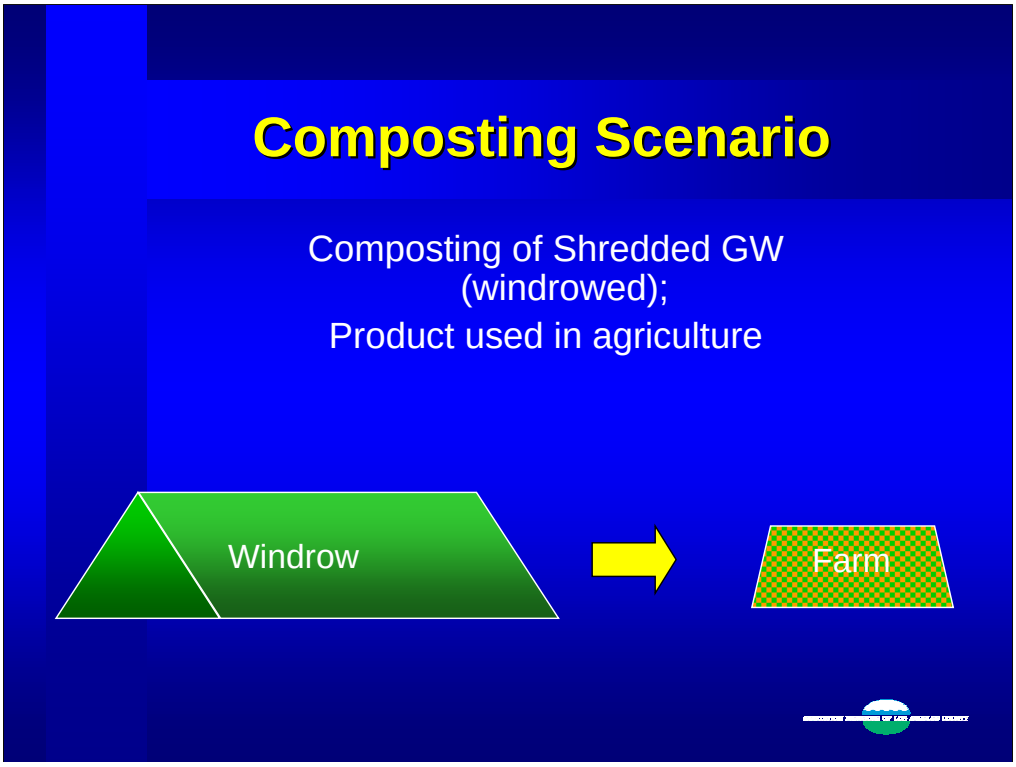


- Three different models were used in this analysis.

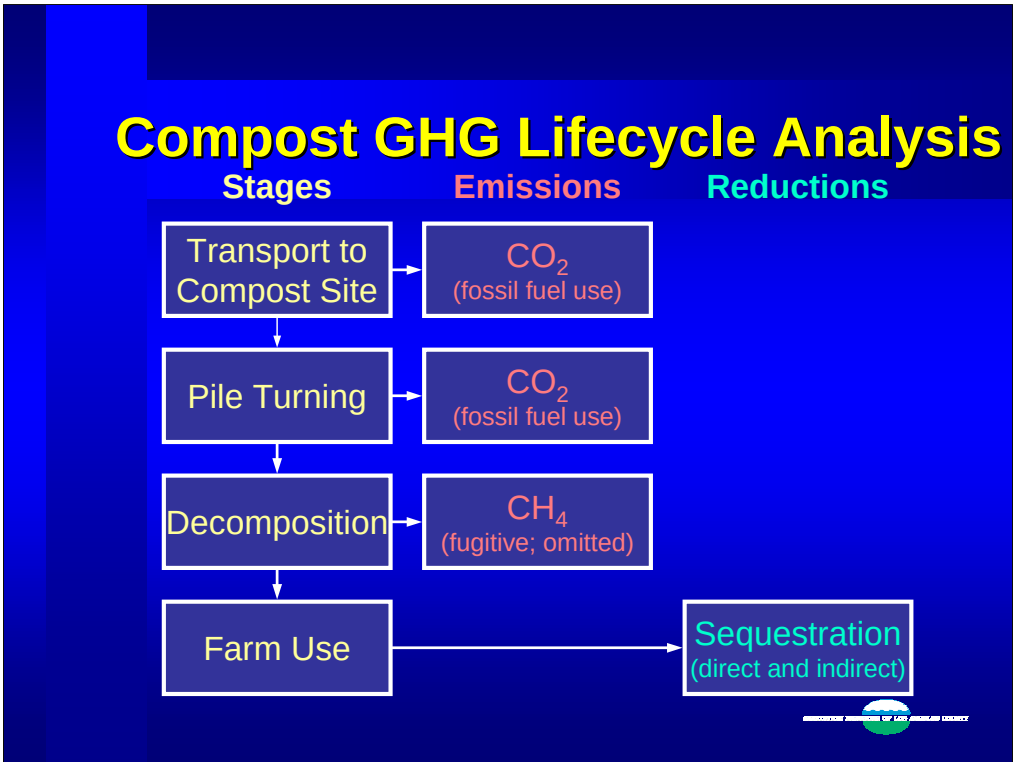
- The EPA WARM tool is a general purpose model useful for analyzing a variety of MSW management scenarios.

- The Los Angeles County Sanitation Districts (LACSD) model is a spreadsheet dedicated to analyzing GW composting and ADC applications.

- Literature results for the Canadian EPIC model for yard trimmings composting and landfilling are also included in this study as these are similar to the GW scenarios.



•The GW compost scenario evaluates composting of shredded green waste with the end product used in a farming applications.



•Fossil Fuel emissions from the shredding operation are excluded because both composting and ADC use involve shredding.

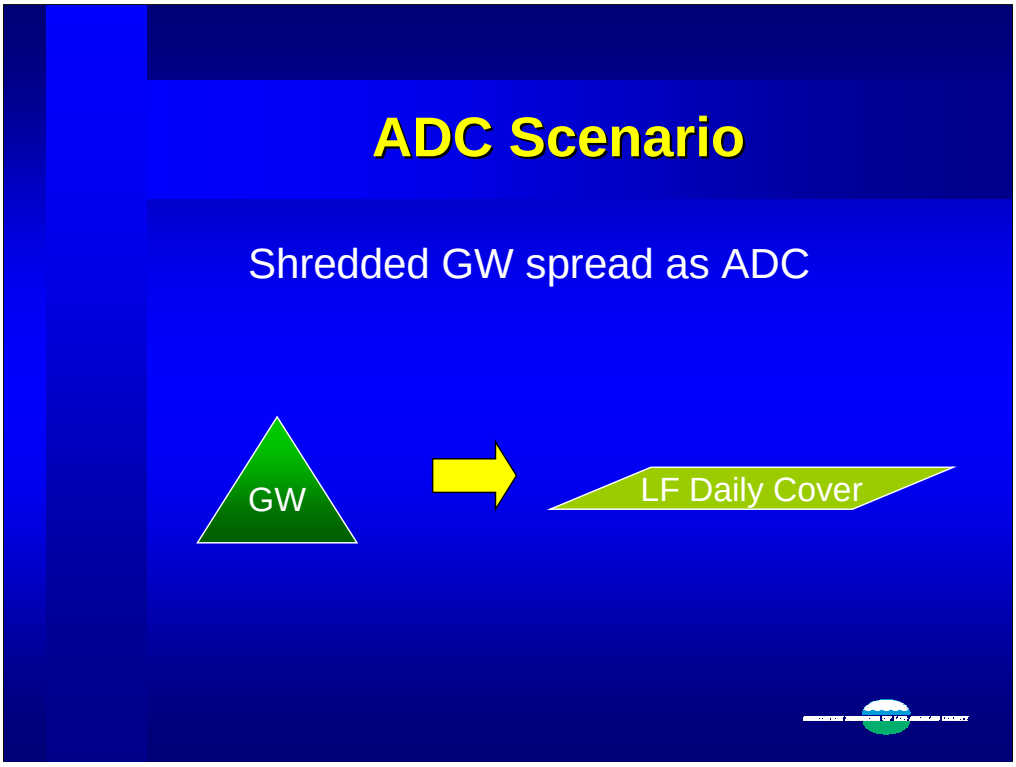
•TRANSPORT: Long distance GW transport to a compost facility consumes fossil fuels and generates GHG CO2 emissions.

•PILE TURNING: Compost pile turning consumes additional fossil fuel and generates GHG CO2 emissions.

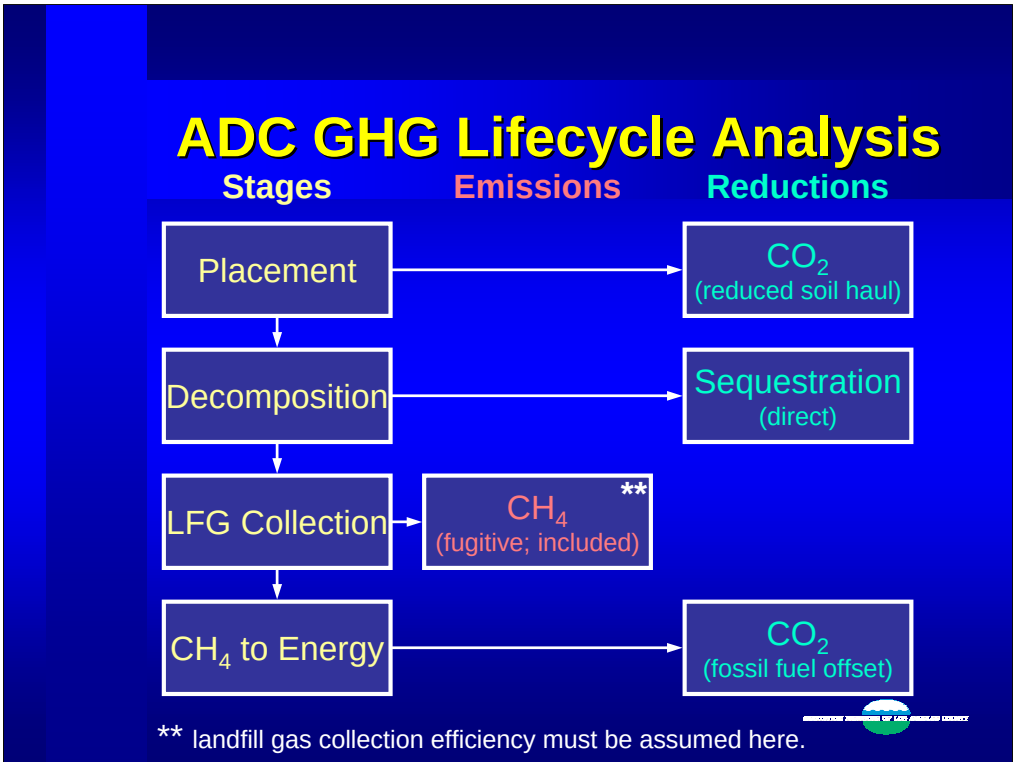
•DECOMPOSITION: Composting can produce fugitive methane emissions at a rate similar to an efficiently operated landfill gas control system. These emissions are NOT included in the analysis as the data are limited.

•FARM USE: Use of compost in farming produces a small amount of direct and a larger amount of indirect carbon sequestration. Carbon normally accumulates ("sequesters") in soils due to the presence of non-degradable organics (e.g., "lignins"). In this manner, when applied to land, compost directly produces a small amount of sequestered carbon. More importantly, composting indirectly sequesters carbon by fostering improved growth of farmed products.

•Both direct and indirect sequestration was considered in this study.



•The GW ADC lifecycle scenario addresses its placement as a daily cover and subsequent contribution to landfill gases.

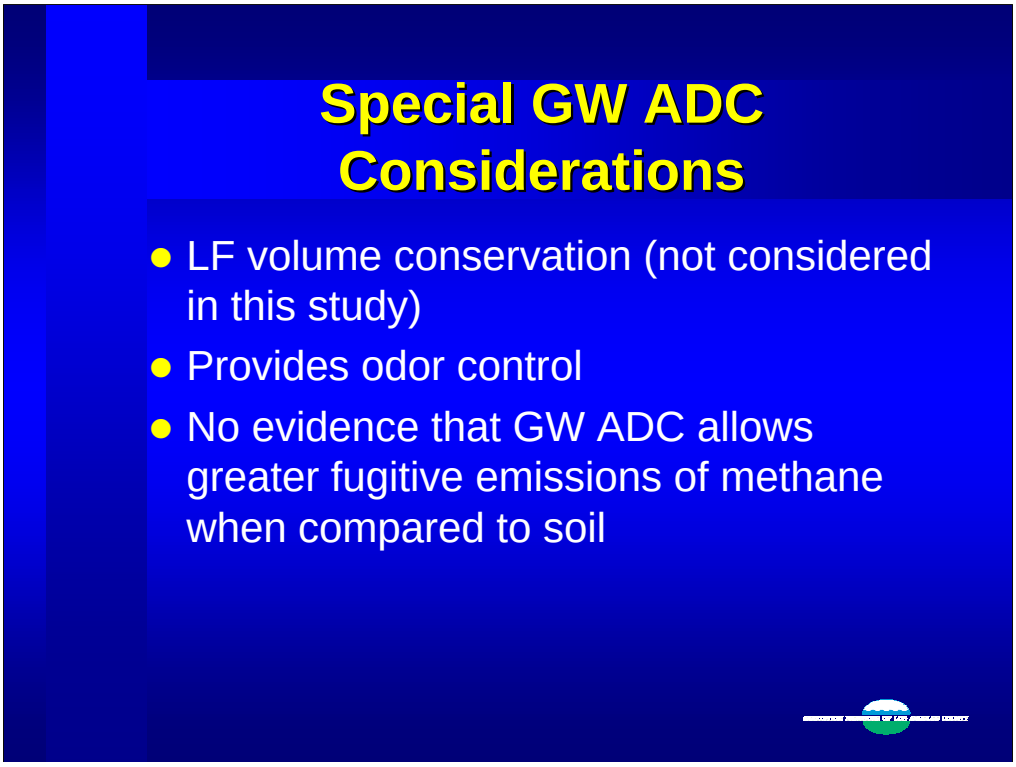


•PLACEMENT: GW ADC placement as a daily cover reduces fossil fuel use when compared with soil as cover and so reduces carbon dioxide emissions.

•DECOMPOSITION: GW directly sequesters large amount of carbon during the decomposition process. Carbon sequestration (in other words, carbon storage) of the GW in a landfill is quantitatively larger than for composting because the conditions within a landfill are not favorable for the decomposition of many types of GW. Noted "garbologist" Dr. William Rathje has long noted the resistance of landfill organics to decomposition. However, this study used conservative assumptions that minimize the calculated sequestration.

•LFG COLLECTION: Virtually all GW ADC in California is used at landfills that are equipped with landfill gas collection systems. Recent research has shown that these systems are highly effective, collecting nearly all gases. However, a wide range of conservative collection efficiency estimates representative of California landfills were made for this analysis. The importance of this assumption will be discussed later in this presentation.

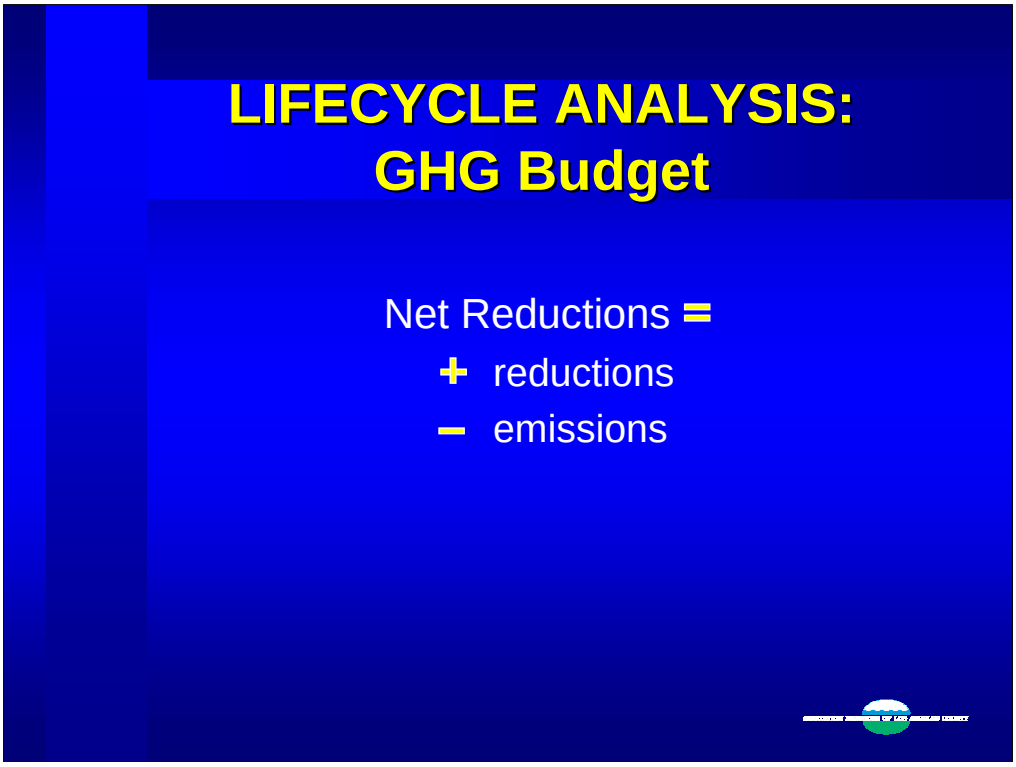
•CH4 TO ENERGY: Many landfills generate energy with the collected methane. This offsets the need for fossil fuels.



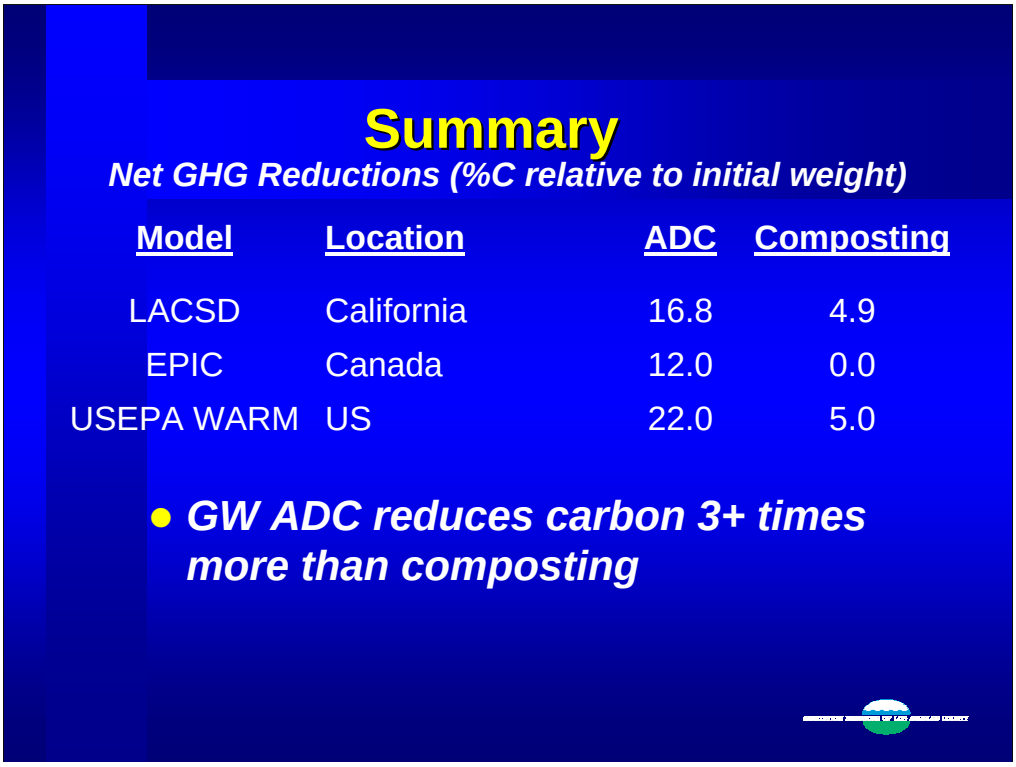
•Although not considered as an assumption in the lifecycle analysis, GW ADC usage can conserve landfill volume.

•It should also be noted that other ADC's may not control odors as well as GW or be otherwise restricted based on site-specific conditions.

•In general, freshly placed waste does not generate methane and studies of GW ADC have not indicated any greater surface emissions when compared to soil. At the Sanitation Districts landfills, the South Coast Air Quality Management District requires routine monitoring of all landfill surfaces, including GW ADC, using the most stringent standards in the nation. This monitoring has not detected surface emissions due to the use of GW ADC.



•The results of a GHG lifecycle analysis can be expressed as a simple budget, the difference between reduction and emissions.

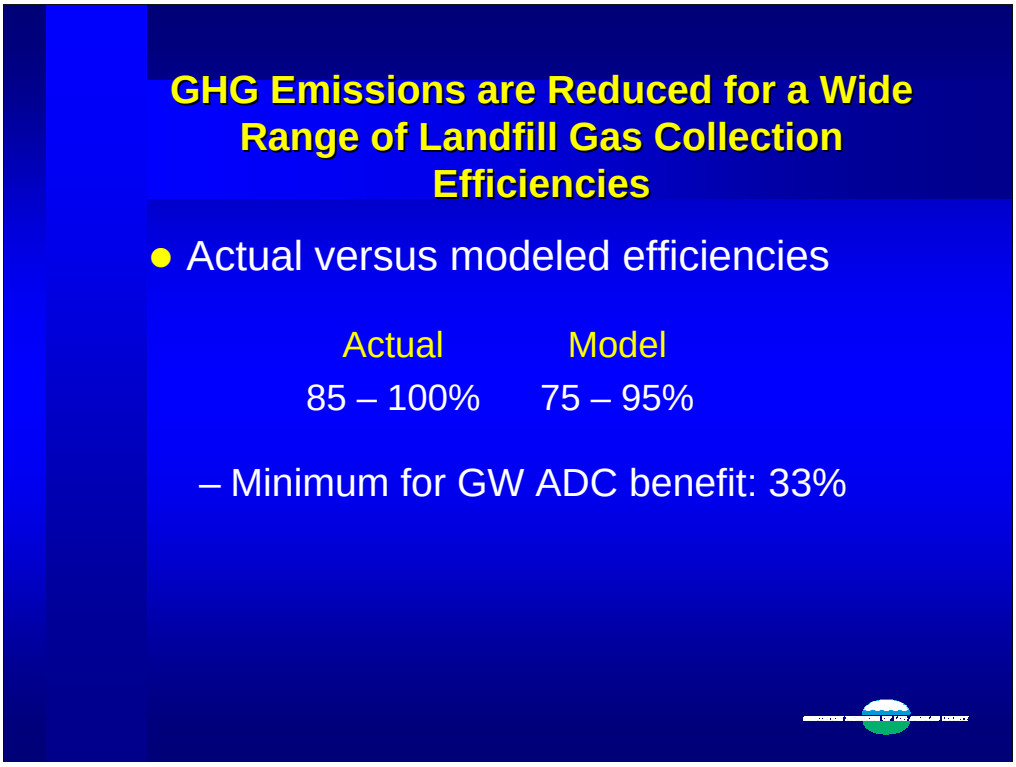


•With the use of all available lifecycle models, ADC is shown to reduce GHG emissions more than GW composting.

•The LACSD model indicates a more than three fold reduction in GHG emissions for ADC as compared to composting.

•The USEPA WARM model indicates a more than four fold reduction in GHG emissions for ADC however it uses less current factors as compared to the LACSD model.

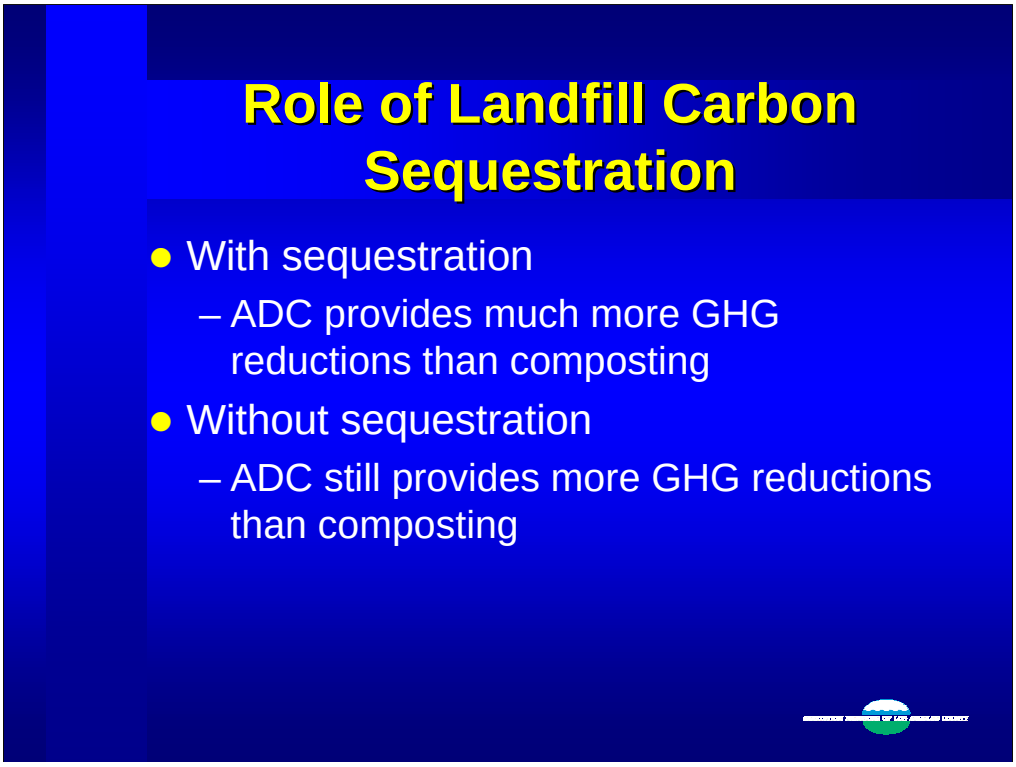
•The Canadian study using the EPIC model indicates similar GHG reductions for yard trimmings.



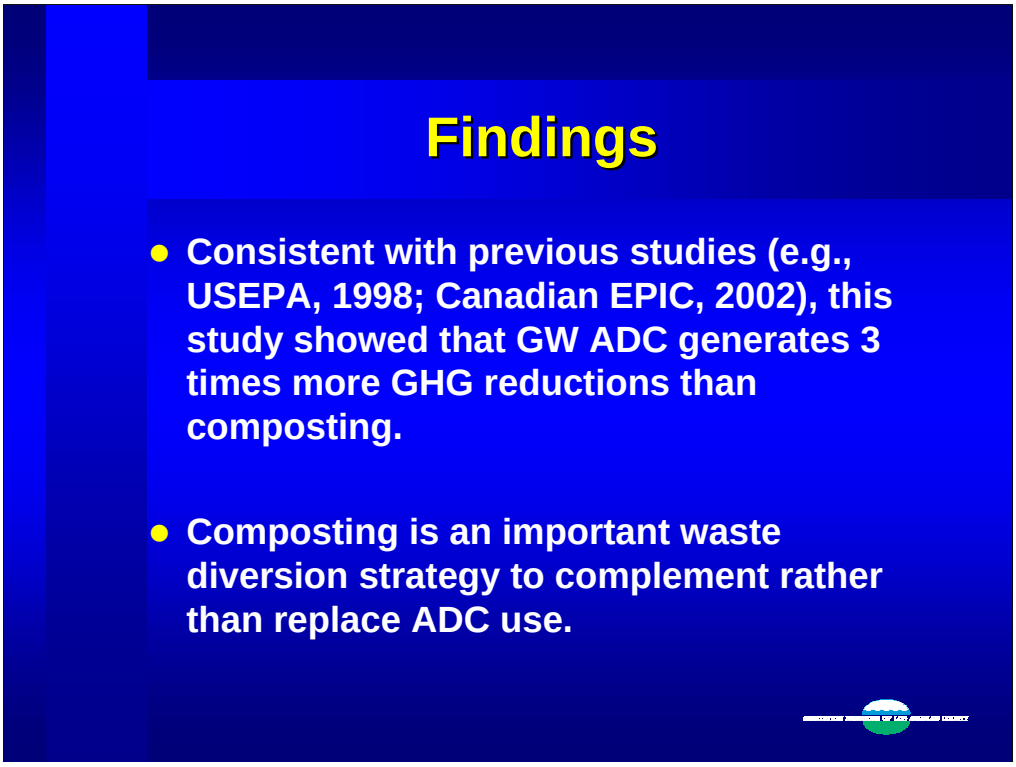
•Modeled LFG collection efficiencies were conservative relative to that actually measured at California LF's (75-95% modeled vs 85 to 100% measured; see Huitric et al (2007)).

•The modeling shows that there continues to be a GHG reduction using GW as ADC until gas collection efficiency drops to 33%, far below EPA's very conservative default 75% collection efficiency.

Reference: Huitric, R., Kong,D., Scales,L., Maguin,S., and Sullivan,P. (2007), "Field comparison of landfill gas collection efficiency measurements", Solid Waste Association of North America (SWANA) 30th Annual Landfill Gas Symposium, Monterey, CA.



•The modeling showed that although LF carbon sequestration is important, even in the absence of any sequestration, LF ADC still provides significant GHG reductions, more so than composting.



•It shows that ADC generates 3 times plus the GHG reductions attributed to compost.

•Nonetheless, composting is an important waste diversion strategy that complements, rather than replaces, ADC use.