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**TO:** Waste Management Authority Board

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**SUBJECT:** Industry trends: Circular Economy and Consumption Based Emissions Inventory

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## **SUMMARY**

StopWaste staff has been tracking recent developments in the business and government sectors that emphasize a more systemic approach to materials management and waste reduction. These concepts can be applied to our programs to achieve deeper waste reduction in the future. At the July 27 Waste Management Authority meeting, staff will present information on increasingly accepted concepts including the circular economy and consumption-based greenhouse gas (GHG) emissions inventories, with the purpose of providing background for the programmatic prioritization the Board will undertake in the fall.

## **DISCUSSION**

Recent trends indicate a readiness in the market and industry for innovative solutions that focus on strategies higher on the materials management hierarchy, such as product redesign, reduce, reuse, and repair. These strategies increase the economic utility and productivity of each unit of material consumed by society and foster systems of circularity beyond recycling.

### Circular Economy

The concept of “Circular Economy” is gaining momentum with wide support from the business community and government agencies. In a circular economy, materials are cycled indefinitely throughout our economy at their highest value and utility, resulting in very little waste produced. The goal is to decouple economic growth from resource constraints and unlock the potential of capturing value from materials that are considered “waste” in the current linear economy. Circular economy principles lead to innovative business practices that result in waste and GHG emissions reductions and local economic benefits. The recent entrance of the Ellen MacArthur Foundation into the U.S. earlier this year (through their Circular Economy 100 USA initiative) signals a focused

attention on these concepts in the U.S., and StopWaste is following their progress closely. The Foundation has produced resources to help government agencies foster a circular economy.

#### Consumption Based GHG Emissions Inventories

To date, GHG emissions inventories have focused on activities that occur within a community's geographic boundary and omitted the emissions related to goods consumed by the community but produced elsewhere. Governments increasingly recognize that this unintentionally promotes outsourcing of production and jobs and hides a significant portion of a community's global emissions footprint. A "Consumption-based Emissions Inventory" (CBEI) attributes all emissions related to goods and services to the end user or consumer. CBEIs more fully reflect the GHG benefits of waste reduction, particularly waste prevention, and allow consumers to make informed consumption decisions. CBEIs have been conducted at national and local scales. The Bay Area Air Quality Management District recently commissioned UC Berkeley to develop a CBEI for every jurisdiction in the Bay Area. The findings highlight the significance of upstream emissions related to food, goods, and housing construction which are not captured in traditional inventories.

#### Leveraging Trends

Concepts like the circular economy and consumption-based emissions signify the evolution of waste management strategies that take a more systematic look at materials cycles and how to influence change. StopWaste staff will update the Board on these trends so that they can be considered during the upcoming strategic planning process.

#### **RECOMMENDATION**

This item is for information only.