



## Hauler Monitoring for AB 939 Compliance

Reaching the 50 percent waste diversion man-date of AB 939 has been a challenge, if not an impossibility, for many California cities and counties. For many jurisdictions the one goal of preparing a Source Reduction and Recycling Element (SRRE) was to meet the requirement under AB 939. Inadequate funding and insufficient staff complicate the implementation of the programs included in the SRRE's. Some jurisdictions have fully implemented their SRREs, they have still failed to reach 50 percent diversion. To further complicate the situation, the California Integrated Waste Management Board (CIWMB) formula for diversion rate calculation has often resulted in a jurisdiction reporting a negative diversion rate that suggests that the tonnage disposed is greater than the tonnage generated. This is just not possible.

Compliance with the 50 percent mandate is now not only a regulatory issue for jurisdictions, but a financial issue as the CIWMB has begun to implement fines. Just recently, the CIWMB levied a \$70,000 non-compliance fine against a city in Southern California. And there will be more to come.

A major factor impacting diversion rates for many jurisdictions is the problem of "bad numbers."

Misallocation of disposal tonnages, lack of scales, underestimated self-haul tonnages, and other factors have left jurisdictions with a poor basis for calculating diversion rates. This article provides an overview of solutions to overcoming these challenges.

The first step in the process is to "get good numbers." The current state methodology for calculating diversion rates is to subtract the tons disposed from the tons generated. Tons generated is based on the original waste generation study (base year) tonnage with adjustments for population growth, Consumer Price Index, and taxable sales. Without an accurate base year tonnage number, actual diversion rates will not be realized. The best method to resolve this problem is to conduct a new waste generation study, and establish a new base year.

However, simply establishing an accurate base year is not sufficient to meet AB 939 requirements. Jurisdictions must also have programs to support and sustain that diversion rate. In fact, when the CIWMB conducts their biennial review, if the programs do not support the diversion rate reported, the rate will be challenged. For some jurisdictions, simply establishing a new base year has left them



## An American Garbage Timeline

**1657** New Amsterdam (now Manhattan) passes a law against casting waste in the streets. **1690** The Rittenhouse mill, America's first paper mill, opens in Philadelphia making paper from recycled cotton and linen as well as used paper. **ca. 1710** Colonists in Virginia commonly bury their trash. Holes are filled with building debris, broken glass or

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ceramic objects, oyster shells, and animal bones. They also throw away hundreds of suits of armor that were sent to protect colonists from the arrows of native inhabitants. **1792** Benjamin Franklin uses slaves to carry Philadelphia's waste downstream.

**1810** Peter Durand patents the "tin can." **1834** Charleston, West Virginia, enacts a law protecting vultures from hunters. The birds help eat the city's garbage. **1860s** American newspapers are now printed on paper made from wood pulp fibers rather than rags. **1860s** Residents of Washington, D.C., dump garbage and slop into alleys and streets, pigs roam freely, slaughterhouses spew nauseating fumes, and rats and cockroaches infest most dwellings including the White House. **1866** New York City's Metropolitan Board of Health declares war on garbage, forbidding the "throwing of dead animals, garbage or ashes into the streets."

### Nineteenth Century

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**1868** Brothers I.S. and John Hyatt successfully manufacture "celluloid," the first commercial synthetic plastic. It replaces wood, ivory, metal and linen in such items as combs, billiard balls, eyeglass frames, and shirt collars. **1872**

New York City stops dumping its garbage from a platform built out over the East River. **1879** "Thither were brought the dead dogs and cats, the kitchen garbage and the like, and duly dumped. This festering, rotten mess was picked over by rag pickers and wallowed over by pigs, pigs and humans contesting for a living from it, and as the heaps increased, the odors increased also, and the mass lay corrupting under a tropical sun, dispersing the pestilential fumes where the winds carried them." Minister describing the New Orleans dump to the American Public Health Association. **1879** Frank Woolworth opens the first five and dime store in Utica, New York. He pioneers the idea of displaying goods on open counters so customers can see and feel merchandise (a practice that later makes larger, theft proof packaging necessary). **1880s** Many Americans still believe that diseases such as typhoid fever are caused by "miasma" or gases coming from garbage and sewers. **1880** New York City scavengers remove 15,000 horse carcasses from the streets. **1885** The nation's first garbage incinerator is built on Governor's Island, New York. **1885 - 1908** 180 garbage incinerators are built in the United States. **1889** "Appropriate places for [refuse] are becoming scarcer year by year, and the question as to some other method of disposal...must soon confront us. Already the inhabitants in proximity to the public dumps are beginning to complain." Health Officer's report, Washington, D.C. **1892** Beer bottles now sport a metal cap to prevent spoilage.

## An American Garbage Timeline

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short of the 50 percent goal and for many jurisdictions, the programs that provided what we call the “low hanging fruit” have been implemented and have not attained the 50 percent diversion goal. The next step is to implement the more difficult, expensive and time-consuming programs—development of a “Plan of Correction”. Upon establishing a “Plan of Correction”, jurisdictions are then able to pursue Step 2—applying for SB 1066 relief.

SB 1066 provides for either an extension of time to meet the 50 percent diversion mandate or an alternative diversion requirement. Upon application, the CIWMB will consider whether or not the proposed “Plan” is likely to bring compliance. If it is not, the application will be rejected. It is extremely important to submit a “Plan” which includes effective programs that are likely to succeed. Establishing a hauler monitoring program is a good example of an effective component of a “Plan of Correction”.

Hauler monitoring is particularly essential for jurisdictions which have multiple haulers. Many jurisdictions, particularly in Southern California, have open commercial collection programs that may include as many as 30 to 50 haulers collecting within their city limits. A jurisdiction with 30 to 50 haulers may not know who they are, let alone have any degree of influence over their activities. Open systems do not allow a jurisdiction the control that an exclusive or limited franchise provides. When program implementation has failed to achieve the required diver-

sion numbers, the answer may be to establish a hauler monitoring program.

A hauler monitoring program begins with development of an ordinance that establishes a licensing system and minimum criteria that haulers must meet for the privilege of collecting solid waste and recyclables within a jurisdiction. The licensing requirements may include: providing performance bonds, copies of insurance certificates, preparing and submitting a “Recycling plan,” licensing and yearly inspection of collection vehicles, monthly or quarterly reporting and public education and outreach programs, among others. Such a program allows a jurisdiction to maintain direct control over diversion activities and keeps haulers accountable. Essentially, the haulers become partners with the jurisdiction in the effort to meet AB 939 goals.

An example of a very successful program is a Southern California jurisdiction that has adopted an ordinance that applies the mandates of AB 939 directly to the haulers themselves, requiring that each



of them demonstrate a 50 percent diversion rate for the waste stream that they service. Compliance of the haulers to the diversion mandate is monitored through strict reporting requirements. In addition, random audits are conducted to confirm that the disposal and diversion information reported is valid. The ordinance can also establish license revocation terms and proceedings. Such a program provides a jurisdiction the benefits of a franchise agreement allowing a much higher degree of control over diversion activity. Simply stated, if a hauler does not meet the ordinance requirements, they lose the right to collect solid waste in the jurisdiction. The city provides outreach and education materials for the haulers to use and requires that each hauler maintain an outreach program to encourage their accounts to practice recycling. Third party recycling is also accounted for and tracked through this program which is an added benefit. Haulers have the ability to receive diversion credit for documented recycling activity for materials collected by a third party rather than themselves and

to document source reduction activities up to the regulatory limit. The only alternative to this type of program for a jurisdiction to collect this data is to actually conduct a city-wide business waste audit program. In addition, haulers must collect the information on a quarterly basis and all information submitted is subject to random audit for verification.

A hauler monitoring program also provides a jurisdiction the ability to restrict diversion programs to only those that meet the statutory requirements of AB 939, e.g. limiting biomass and transformation, while providing the flexibility to meet the challenges of evolving solid waste laws.

Implementation of a hauler monitoring program may be the solution for jurisdictions suffering from diversion rates which currently fall short of the mandated 50 percent. Hauler monitoring programs are effective tools in bridging the gap between compliance and non-compliance. ❖

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**1893** “The means resorted to by a large number of citizens to get rid of their garbage and avoid paying for its collection would be very amusing were it not such a menace to public health. Some burn it, while others wrap it up in paper and carry it on their way to work and drop it when unobserved, or throw it into vacant lots or into the river.” Boston Sanitary Committee **1895** King C. Gillette, a traveling salesman, invents a razor with disposable blades. **1896** New York

### Nineteenth Century Cont.

City requires residents to separate household waste — food waste in one tin, ash in another, and dry trash in bag or bundle — and assigns 40 policemen to enforce the new edict. **1896** Chicago’s City Council records its concern for the death rate in the 19th Ward, which has eight miles of unpaved roads that can’t be swept, roads “polluted to the last degree with trampled garbage, excreta, and other vegetable and animal refuse of the vilest description.” **1898** Colonel George Waring, New York’s Street Cleaning Commissioner, organizes the country’s first rubbish sorting plant for recycling. **1899** The federal Rivers and Harbors Act restricts dumping in navigable rivers, to keep them open for shipping. **19th c.** Visitors describe New York City as a “nasal disaster, where some streets smell like bad eggs dissolved in ammonia.” **19th c.** Pigs loose in city streets throughout the country eat garbage and leave their own wastes behind.

**ca. 1900** Greater acceptance of the germ theory of disease begins to shift the job of garbage removal from health departments to public works departments. Health officers, it is felt, should spend their time battling infectious diseases, not cleaning up “public nuisances” such as garbage. **1900** There are over 3 million horses working in American cities, each producing over 20 pounds of manure and gallons of urine every day, most of which is left on streets. **1900** Hills Brothers Coffee in San Francisco puts the first vacuum packed coffee on the market. **Early 1900s** Small and medium sized towns build piggeries, where swine are fed fresh or cooked garbage. One expert estimates that 75 pigs can eat one ton of refuse per day. **Early 1900s** American cities begin to estimate and record collected wastes. According to one estimate, each American produces annually: 80 - 100 pounds of food waste; 50 - 100 pounds of rubbish; 300 - 1,200 pounds of wood or coal ash — up to 1,400 pounds per person. In Manhattan, Brooklyn, and the Bronx, each citizen produces annually: 141 pounds of wet garbage, 1,443 pounds of ash, and 88 pounds of dry rubbish — a total of 1,672 pounds. **1902** A survey of 161 cities by the Massachusetts Institute of Technology finds that 79% of them provide regular collection of refuse. **1903** Corrugated paperboard containers are now used commercially. **1904** The nation’s first aluminum recycling plants open in Chicago and Cleveland. **1904** Postmaster General Henry Clay Payne authorizes permit mail. This means that with a single fee, 2,000 or more pieces of third or fourth

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class mail can be posted without stamps. This opens the door for direct mail advertising and mass solicitations. **1904** Montgomery Ward mails out 3 million catalogues weighing four pounds each. **1905** New York City begins using a garbage incinerator to generate electricity to light the Williamsburg Bridge. **1907** An unexpectedly thick run of toilet paper is converted to become the first paper towels. **1908** Paper cups replace tin cups at water vending machines on trains and in public buildings. **1909** “Kraft” paper pulp first made in the United States, a process developed in Germany in 1883. **By 1909** 102 of 180 incinerators built since 1885 are abandoned or dismantled. Many had been inadequately built or run. Also, America’s abundant land and widely spaced population made dumping garbage cheaper and more practical. **ca. 1910 - 1917** Juvenile sanitation leagues become popular in cities throughout the country. **ca. 1910** City beautification programs become more and more popular. Many cities have juvenile sanitation leagues whose members promise to help keep streets and neighborhoods clean. Sanitation workers wear white uniforms, reminiscent of other public workers such as doctors and nurses.

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**1914** W.K. Kellogg invents a wax paper wrapper for Corn Flakes boxes. **1915**

The National Clean Up and Paint Up Bureau sponsors 5,000 local clean up campaigns. **1916** Major cities estimate that of the 1,000 to 1,750 pounds of waste generated by each person per year, 80% is coal and wood ash. **1916** Waxed paper is commonly used to wrap bread. **1916** A major shortage of paper pulp during World War I leads Secretary of Commerce William C. Redfield to ask the public to save old paper and rags to make new paper. **1916** Dr. Thomas Jasperson obtains a patent for making paper from de inked wastepaper. **1917** Shortages of raw materials during World War I prompt the federal government to start the Waste Reclamation Service, part of the War Industries Board. Its motto is “Don’t Waste Waste — Save It.” Every article of waste is considered valuable for industry. Please look for our early 2004 edition as we explore the garbage timeline through the decades of the twentieth century into the new millennium.

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