



THE CITY OF DAVIS PUBLIC WORKS DEPARTMENT RECYCLING PROGRAM HISTORY AND PROGRAM ELEMENTS

CITY RECYCLING PROGRAM HISTORY

Recycling in Davis began back in April of 1970, when a small group of environmentally concerned citizens began a newspaper drop-off recycling program. The group, later known as the Resource Awareness Committee of Davis, expanded the bi-monthly drop-off program to bottles and cans as well as newspapers.

A recycling center was opened at Aggie Villa in 1972 and the recycling committee incorporates into non-profit, Resource Awareness Committee of Davis.

Curbside recycling became available in Davis in 1974 with newspaper, then later that year, bottles and cans were added. A City ordinance was passed the same year that required separation of newspaper from other garbage. In 1976, Davis Waste Removal (DWR) became the City's franchise waste hauler, collecting garbage, recycling and yard materials.

DWR has offered drop-off recycling at their recycling center since they first started collecting recycling in the 1970s. At first the drop-off recycling center only accepted paper, cardboard, glass, plastic, metals and motor oil during certain hours, but it quickly expanded. In 1994 DWR's recycling center moved to its current location, 2727 2nd Street and began offering 24/7 drop-off recycling. In the fall of that same year, DWR began accepting empty aerosol and paint cans.

In 1989, the City adopted two groundbreaking ordinances and hired a recycling coordinator to implement them. One ordinance required recycling carts at apartments, the other required city departments to purchase recycled-content products.

The items accepted by DWR for curbside residential and commercial service has expanded over the years as well. In 1992, only clear or hazy colored plastics #1 and #2 were accepted for recycling. By 1994, colored #1 plastic was accepted and by 1998, colored #2 plastic was accepted as well.

In fall 2004, residential curbside service was upgraded from a manual to an automated pick up system. This change coincided with DWR's purchase of new fleet vehicles and was principally driven by high worker compensation costs.

Each customer was given a 95-gallon trash container and a 64-gallon split cart for recycling. These replaced all containers that residents used for these services. A smaller trash container was (and still is) available upon request. With this conversion, unlimited curbside pickup was changed to an automated system that required all trash and recycling to be contained in the carts.

The conversion took place in two phases. The new trash carts were delivered to residents in October 2004 and the recycling carts in November. The recycling carts have two compartments for convenient loading. Paper and cardboard goes in one side and containers go in the other side.

All trash and recyclables must be placed inside the carts. The default sizes are one 95 gallon garbage cart and one 64 gallon split-recycling cart. At a customer's request, different size trash containers are available (35 or 65 gallon) or/and additional trash carts are available for a fee. An additional split-recycling cart is available upon request at no extra charge.

Around the year 2000, the City Recycling Programs website, www.davisrecycling.org came online. The website is continually updated with new information about programs, waste reduction tips and hazardous waste. In 2007, the website was upgraded to include downloadable posters, fliers for businesses and apartments, a Recyclopeda with reuse and recycling options for over 150 items, and a news section with recent articles and columns that address recycling and waste in Davis.

In 2007 DWR began accepting rigid plastics (#3, #5, #6 and #7) for drop-off recycling at their recycling center. In 2010 when a stable market was established for the material, they updated their sorting line and in January, 2011 they began accepting all rigid plastics #1-#7 in recycling carts.

Various Awards that the City of Davis Recycling Program has received include:

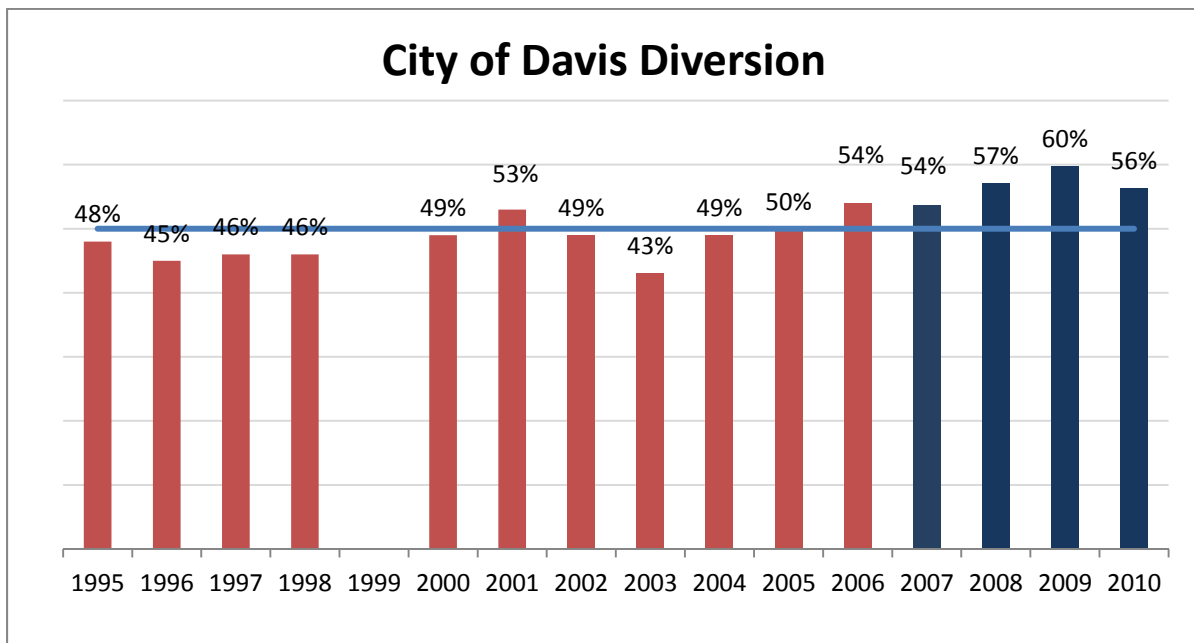
- 1986 Davis Recycling Program was awarded for the best curbside program in the country by National Recycling Coalition.
- 1991 Commendation from the US EPA
- 1991 Merit Award from the California Department of Conservation Division of Recycling
- 1992 National Recycling Coalition Public Education Award
- 2000—California Resource Recovery Association Recycling Award, honoring the City's recycling program for emphasizing waste prevention, reduction, reuse and buying recycled-content products.

UNDERSTANDING DIVERSION

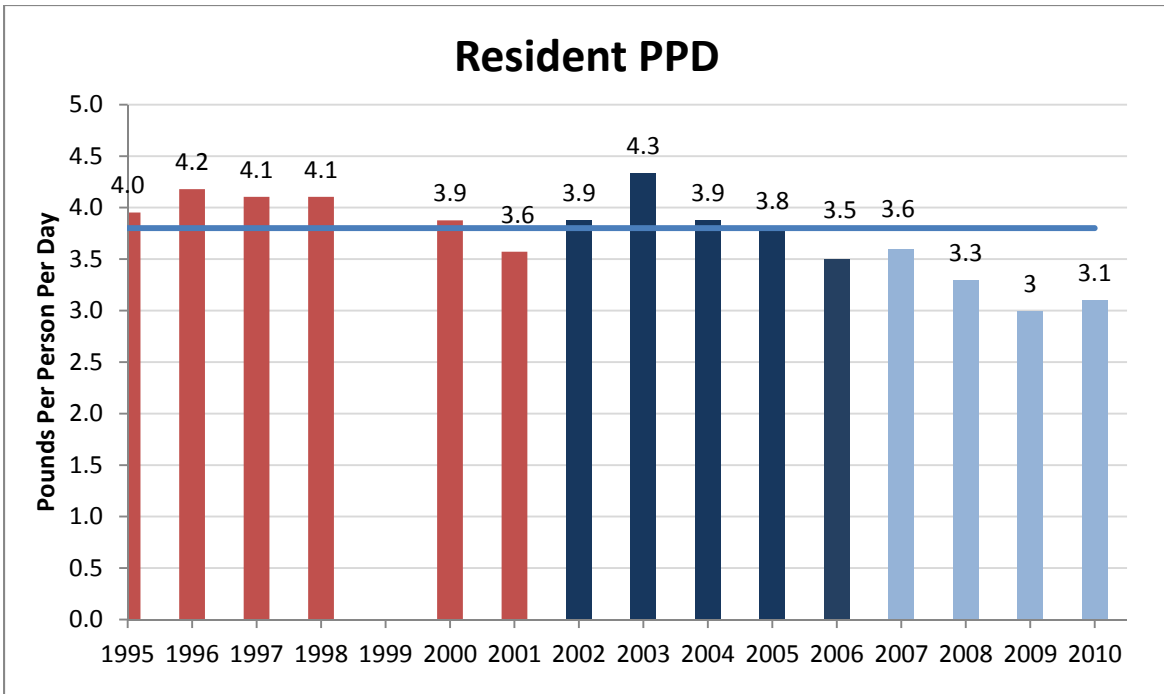
In 1989, the Integrated Waste Management Act (AB 939) was passed and it dramatically transformed the solid waste process statewide. The law mandated that all California jurisdictions divert 25% of the waste it produced from landfills by 1995 and 50% of the waste by 2000. The City of Davis easily met the 1995 goal, but meeting the 2000 goal was not as easy. California's waste reporting system at this time was based on estimates of population, employment and taxable sales, not on the amount of trash disposed. Due to a surging economy, high levels of business activity and construction, achieving a 50% diversion rate was more difficult. These diversion rates do *not* include the tons and tons of yard materials that are collected each week for composting by Davis Waste Removal—the State's calculations do not consider these materials "diverted" using their reporting calculations. Davis did meet the goal in 2001.

In 2007, SB 1016 was passed, changing the way the State measured waste diversion. The goal of the new per capita disposal measurement system was to make the AB 939 process of goal measurement simpler, timelier, and more accurate. SB 1016 changed to a disposal-based indicator—the per capita disposal rate—which uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities. The 50 percent diversion requirement is now measured in terms of per-capita disposal expressed as pounds per person per day. The focus is on program implementation, actual recycling, and other diversion programs instead of estimated numbers.

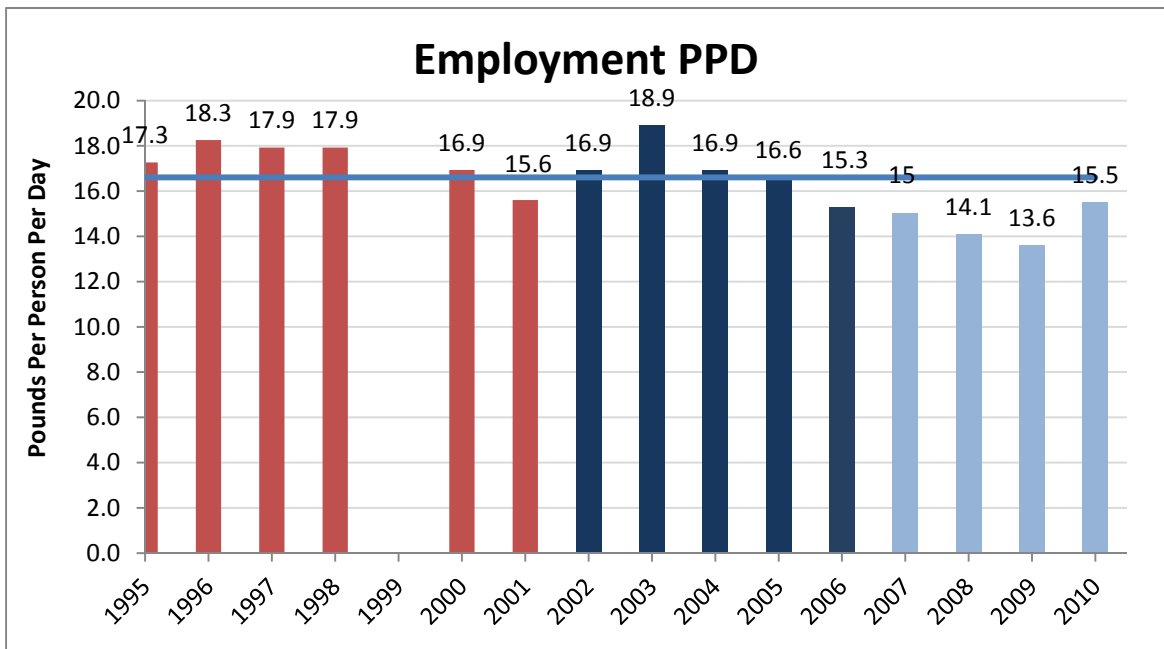
The charts below show the City of Davis' diversion rates, as calculated by CalRecycle.



City of Davis' diversion rate from 1995-2006, as provided by the California Department of Resources, Recycling and Recovery (CalRecycle). Data post 2006 is calculated from Davis' residential per capita disposal target set by CalRecycle.



Pounds of waste generated per person, per day in Davis. Data from 1995-2006 was calculated from the per capita disposal target set for Davis by CalRecycle in 2007. Data from 2007-2010 is provided by CalRecycle.



Pounds of waste generated per employee, per day in Davis. Data from 1995-2006 was calculated from the per capita disposal target set for Davis by CalRecycle in 2007. Data from 2007-2010 is provided by CalRecycle.

ELEMENTS OF THE CITY RECYCLING PROGRAM

BULKY ITEM DROP-OFF EVENTS

The Bulky Items Drop-Off Days, held by the City of Davis and DWR, allows Davis residents the opportunity to drop-off large bulky items at a central collection point for free. The event is held at DWR, 2727 2nd Street in April. The event used to run Thursday-Saturday. In 2008, it was shortened to Friday - Saturday.

Bulky Items Drop-off Day is available for Davis residents only. ID is checked at drop-off and commercial haulers and business materials are not accepted.

At this event, residents are invited to bring old refrigerators and freezers, large appliances, mattresses, furniture, sinks, bathtubs, toilets, scrap wood, scrap metal, and other bulky items for free disposal. Materials that are brought to the Bulky Items Drop-off are separated out and much is recycled. Since 2008, electronics and rigid plastics are accepted and recycled as well.

During the event, DWR separates out good and salvageable material to a scavenging area for reuse. These items are available for individuals to take at no charge. The amount of material taken from the scavenging area is difficult to quantify, but the scavenging area is viewed by both DWR and the City as a successful way to keep good, usable items out of the landfill.

Prior to 1995, Davis residents with curbside trash and recycling service placed large, bulky items at the curb on a specified pick-up day in April for collection by DWR crews. This program was expensive for the City to operate and was very wasteful; most of the collected items ended up in the landfill, including material that could have been recycled or reused. This program also suffered very low participation levels, with less than 15% of eligible Davis residents actually participating.

In 1995, the City and Davis Waste Removal restructured the Bulky Item program and held its first-ever Bulky Item Drop-Off event. The new format promoted waste reduction through recycling and expanded the program to many more residents. Previously, those in multi-family dwellings could not participate.

Staff estimated that in its first year of operation 800 cars showed up at the event and over 75% of the material brought to the Bulky Items Drop-off event was recycled or reused. The next year, the participation doubled, with 1676 vehicles dropping off material.

COMPOSTING CLASSES

In the spring and fall, the City Recycling Program staff teaches free backyard composting classes. The classes are held at a variety of locations, including the compost demonstration area at the Community Gardens on 5th Street, the Public Works Department, the Senior Center and Community Chambers at City Hall. Davis residents in single family homes can receive a compost bin after attending the class. In 2007, a section on worm composting was added to the class and the response was so positive that the City Recycling Program started offering worms to

residents who took the class so they could get their worm bins started. To find out when the next class is offered or to sign up for class, call the Public Works Department at 757-5686.

In addition to the spring and fall classes, the City of Davis has offered a year-round compost correspondence course to Davis residents in single-family homes since 1996. To enroll, a resident calls the Public Works Department (757-5686) to request a compost packet mailed to their home. Once they receive the packet, they read the materials inside, fill out the enclosed quiz and return the quiz to the Public Works Department. A city staff-person will contact the resident to let them know that their quiz was received and that their free compost bin is available for pick-up.

YARD MATERIALS COLLECTION

DWR has collected yard materials for composting as early as 1990. In 1990, DWR collected 4,632 tons of yard material. This increased to over 9000 tons in 1995. The yard materials are sent to a processor and turned into finished compost.

At first, grass clippings were supposed to be bagged and placed in the street for collection. In the fall of 2000, the policy changed and residents were asked to place their grass clippings loose in the street without bags.

In April 2007, City Council approved the development and implementation of a containerization pilot program. The pilot was designed to address the inherent conflict between on-street green waste collection and bicyclists. The project would convert, for most of the year, the procedure for collecting yard material (green waste) from loose piles in the street to an automated cart system using 96 gallon carts. The pilot was proposed to include a handful of arterial and collector streets.

Development of the specific containerization pilot details involved multiple Bicycle Advisory (BAC) and Natural Resources (NRC) commissions meetings. There was a large public turnout at these meetings that opposed the pilot. Common themes expressed by residents at the meetings included: the described pilot was not practical, insufficient storage room for carts, carts too cumbersome, and no real bike safety issue documented. Some alternatives were also offered. There were some commenters who supported the pilot and related incidents with bike crashes and brush.

The BAC's response to the expressed opposition was continued support of the pilot. The NRC moved not to continue support based on the fact that the city's storm water management plan was approved and thus the environmental issue within their purview is no longer a factor. They did support continued review for alternatives to address the bicycle safety issue.

As a result of public comment, BAC's clarification and the availability of potential alternatives, staff recommended to City Council that the plan for the pilot containerization program be discontinued. . In January 2008, Davis City Council voted to discontinue the pilot containerization project. Bicycle safety is still a concern and staff continues to work with the

BAC to move forward in developing alternatives such as enhanced enforcement, double striping, improved street lighting and additional monitoring.

MULTI-FAMILY RECYCLING

In the fall of 2006, the City began a pilot program where 750 apartment units in Davis were given their own recycle bins. These iBINs (in-apartment recycling bins) made it easier for residents to collect and transport recycling to the recycling carts in their community's trash enclosure. Surveys showed that apartment properties that participated in the iBIN Recycling Pilot Program collected more recycling than other apartments.

In the fall of 2007, the City of Davis Public Works Department Recycling Program was awarded over \$95,000 in grants from the California Department of Conservation to expand the pilot start program to all apartments in Davis. Thus, the iBIN Recycling Program began.

The grants allowed the purchase of 11,000 iBIN recycling containers that were given to apartment managers to be placed in each apartment unit throughout the city. Educational literature about recycling, waste reduction and proper disposal of hazardous waste was distributed along with the iBINs. Posters promoting the programs slogan, "Have you been recycling? iBIN Recycling!" were also given out to apartments to encourage their residents to recycle.

The iBIN Recycling Program was entirely covered by grant funding, so there was no cost for apartment managers to participate. All that the City Recycling Program requested was that apartment managers add the iBINs to their check-out list so residents would leave them behind when they move-out.

The iBIN Recycling Program began in the spring of 2008. The iBINs were delivered to apartment properties beginning in April.

The City recycling program gained some national attention when some of the iBINs from the iBIN Recycling Program were shown at the 2008 National Waste Age Expo in Chicago.

The iBIN Recycling Program has received high praise because it has a built-in sustainability element. Since apartment managers are asked to add the iBINs to the check-out list as an item their residents are responsible for, if the iBIN is lost, damaged or stolen, the manager can charge their residents for a replacement and buy a new iBIN at either Davis Ace Hardware or Hibbert Lumber. This way, year after year, there will always be an iBIN in apartments in Davis.

As per usual outreach, every year the City Recycling Program gives all apartments properties recycling fliers to give out to their residents after turnover time (end of August).

HOUSEHOLD BATTERY DROP-OFF

In order to make proper disposal of household batteries easier, and to protect the environment from the mercury, cadmium and other dangerous chemicals found in batteries, the jurisdictions

in Yolo County started a battery collection program in 1998. Convenient locations were chosen at retail and public buildings to make it easier for residents to properly dispose of their household batteries. In February 2006, the California Department of Toxic Substances Control imposed a landfill ban on all household batteries. Under the ruling, household batteries cannot be thrown away in the trash.

Residents of Yolo County can drop-off batteries at sites located in Davis, Winters, Woodland, West Sacramento and in unincorporated Yolo County. Each jurisdiction oversees the battery drop-off sites that are located in their authority.

In Davis, residents can drop off alkaline, lithium and rechargeable batteries at the Davis Senior Center (646 A Street), CVS Pharmacies (1550 E. Covell Blvd. and 1741 W. Covell Blvd.), Rite Aid Stores (655 Russell Blvd. and Cowell Blvd.), Hibbert Lumber (5th & G Sts.) and Davis Ace Hardware (3rd & G Sts.).

HOUSEHOLD HAZARDOUS WASTE DROP-OFF EVENTS

When Yolo County opened a collection facility in 1993, household hazardous waste (HHW) days were held bi-monthly at the Yolo County Central Landfill (YCCL) from 9am-2pm. Prior to that, Davis held several HHW days every year. These new monthly drop-off days were free to all Yolo County residents. HHW drop-off events are funded from tipping fees at the landfill. Each ton of garbage that is disposed at the landfill is charged a set amount. Part of that charge goes to pay for the HHW collection program.

In 2007, the HHW events switched from being held one Saturday every other month to Friday and Saturday of every month (a jump from 6 events per year to 24 events per year). This made disposal of HHW much easier for Yolo County residents and greatly increased the number of participants at each event. In October 2010, the County started offering HHW drop-off events every Friday and Saturday from 7:30 am to 3:30 pm.

APARTMENT MOVE-OUT WASTE REDUCTION PROGRAM

The Apartment Move-Out Waste Reduction Program (AMOWRP) is a partnership between the City of Davis (Public Works Department) Recycling Program and property managers at apartment properties in Davis to reduce the amount of good, usable material that typically ends up in the landfill during the yearly August move-out.

The AMOWRP Program began in 1998. The first several years of the program involved a small number of apartment properties. City staff and community volunteers collected reusable and recyclable materials from these apartments in order to reduce waste.

Since 2006, Recycling Program staff has invited all apartment managers from properties with 50 or more units to participate. Program staff then supplies the participating managers with fliers for residents, and posters advertising the program. During the AMOWRP, Recycling Program staff set out cones and signs and use caution tape to mark off areas next to the dumpsters at each apartment property. These areas become the donation stations. During the AMOWRP, residents

can bring reusable items to the donations stations (clothes, furniture, household goods, home décor etc.). Local non-profits, residents moving in, current residents, and apartment staff are free to take whatever they want from the donations stations. The donations stations become a swapping area.

In 2008, properties participating in the AMOWRP saw a 40% reduction in waste, and those numbers have stayed consistently low ever since.

THE DAVIS ENTERPRISE ENVIRONMENTAL COLUMN

The Davis Recycling Program has a monthly column in The Davis Enterprise to update citizens on local topics of environmental concern and to increase awareness of upcoming programs. The column dates back to 1995, but was stopped for a time around 2003. The column was reinstated in November 2006 and has been regularly occurring since then. Columns since 2006 are archived at www.davisrecycling.org on the news page.

THE GREEN RECYCLER

The Green Recycler is an e-newsletter created by the City Recycling Program. The Newsletter, which began in early 2007, addresses current issues in waste management that may affect local businesses. It also offers environmental tips and different ways for a business to be “green”. Issues are archived at www.davisrecycling.org on the news page.