

US EPA ARCHIVE DOCUMENT

# National Unit-Based Pricing Survey Results

A survey sponsored by R. W. Beck, Inc. and  
the Solid Waste Association of North America

Prepared by  
Jonathan Burgiel  
Raymond Randall  
R. W. Beck, Inc.

## INTRODUCTION

Funding residential solid waste management services has recently come under increasing debate in the United States. Traditional methods of system funding such as flat per-household fees (where all households are charged the same rate regardless of the amount of waste collected) have been closely scrutinized. Several questions have been raised about flat-fee versus unit-based price systems: Are flat fee systems equitable? Do flat rate systems send the correct price signal to consumers, particularly when increased emphasis is being placed on waste reduction? How many communities are choosing alternative rate structures such as unit-based pricing (where residents are charged on the specific quantity of waste disposed) to improve equity and increase recycling in their respective communities?

Each year, R. W. Beck, Inc. performs a national survey of more than 800 U.S. communities to track emerging trends in solid waste management practices. The most recent update of this survey (1998 National Solid Waste Survey), sponsored this year in part by the Solid Waste Association of North America (SWANA), included specific questions relating to residential solid waste funding methods and how pervasive unit-based pricing (otherwise referred to as “pay-as-you-throw”) has become as a funding approach.

The following provides a brief overview of the methodology and results of R. W. Beck’s 1998 National Solid Waste Survey.

## APPROACH

The 1998 Solid Waste Survey contact list included the following subsets of municipalities:

- All cities in the U.S. with a population greater than 100,000 (221 cities, total population of 69.1 million);

- All counties in the U.S. with a population greater than 100,000 in unincorporated county areas (126 counties, 31.4 million population); and

- A statistically random sample of all other cities and counties with population under 100,000 (513 cities and counties, with population of 3.2 million).

Results of the random sample were applied to all communities with population less than 100,000 to draw conclusions about the extent to which unit-based pricing has been selected as the rate structure of choice by smaller U.S. communities.

The survey was performed by telephone during April and May of 1998.

For purposes of improving the statistical accuracy of the 1998 National Solid Waste Survey, communities in the state of Minnesota were not included in the survey sample population. By law, all communities in

Minnesota are required to utilize some form of a unit-based pricing fee structure for residential solid waste billing. Recognizing the complete saturation of unit-based pricing type rates in Minnesota, the 1998 National Solid Waste Survey's emphasis was placed on obtaining accurate data for the remaining 49 states. After tabulating the 1998 National Solid Waste Survey results for the 49 states, data for Minnesota was incorporated into these results to present a comprehensive picture of unit-based pricing saturation across the United States.

## **SUMMARY OF RESPONSES**

The following summarizes the survey response rate:

A total of 644 responses were obtained (75 percent).

Responses were obtained for: 293 of the 347 (84 percent) cities and counties with population over 100,000; and 351 of the 513 (68 percent) randomly sampled cities and counties.

## **SUMMARY OF RESULTS**

The following summarizes the results of the 1998 National Solid Waste Survey.

Of 293 respondents with populations greater than 100,000:

16 percent currently have some type of unit-based pricing structure in effect (Figure 1). Table 1 shows the various types of programs, the number of communities utilizing each program, and the population residing in these communities.

Approximately 58 communities with populations greater than 100,000 are utilizing a unit-based pricing program (Table 1). These communities represent approximately 15 percent of the 100.5 million people living in large communities nationwide, or approximately 14.7 million people (Figure 2).

Of the 351 respondents with populations less than 100,000:

5 percent currently have some type of unit-based pricing structure in effect. However, when Minnesota's statistics are added to these totals, the actual percentage of small communities with unit-based type rates increases to over 14 percent or 4,083 communities nationwide (Figure 1).

Table 2 presents the various types of programs, the number of communities utilizing each program, and the population residing in these smaller communities.

The 1998 Solid Waste Survey results also indicate that approximately 12.3 million people reside in these smaller communities served by unit-based solid waste programs (Figure 2).

Our survey results indicate that many U. S. communities have embraced the concept of unit-based solid waste rates. For a variety of reasons, we expect this trend to continue. It goes without saying that unit-based rates will come under increased consideration as more communities look for ways to equitably charge for solid waste services among customers as well as telegraph price signals that influence their recycling and disposal habits. Through annual updates of R. W. Beck's Annual Solid Waste Survey, we will continue to track this and other trends in solid waste management in the United States.

TABLE 1

Unit-Based Pricing Method	Communities Greater than 100,000 Using Specified Method	
	Number of Communities	Approx. Population Served (Millions)
Customer Charge Based on:		
Number of bags	8	0.1
Number of cans	17	3.7
Size of cans or bags	30	9.1
Stickers or tags	8	2.5
Weight-based programs	7	0.9
Flat rate plus a variable component	6	1.4
Survey Sub-total <sup>1</sup>	56	14.1
Minnesota <sup>2</sup>	2	0.6
<b>Total</b>	<b>58</b>	<b>14.7</b>

1 May not add due to many communities utilizing multiple methods. Represents survey responses provided by large communities located in the 49 states excluding Minnesota. Minnesota requires all communities to utilize a unit-based pricing method, and therefore was not included as part of the survey.

2 Represents the total number of large communities located in the State of Minnesota.

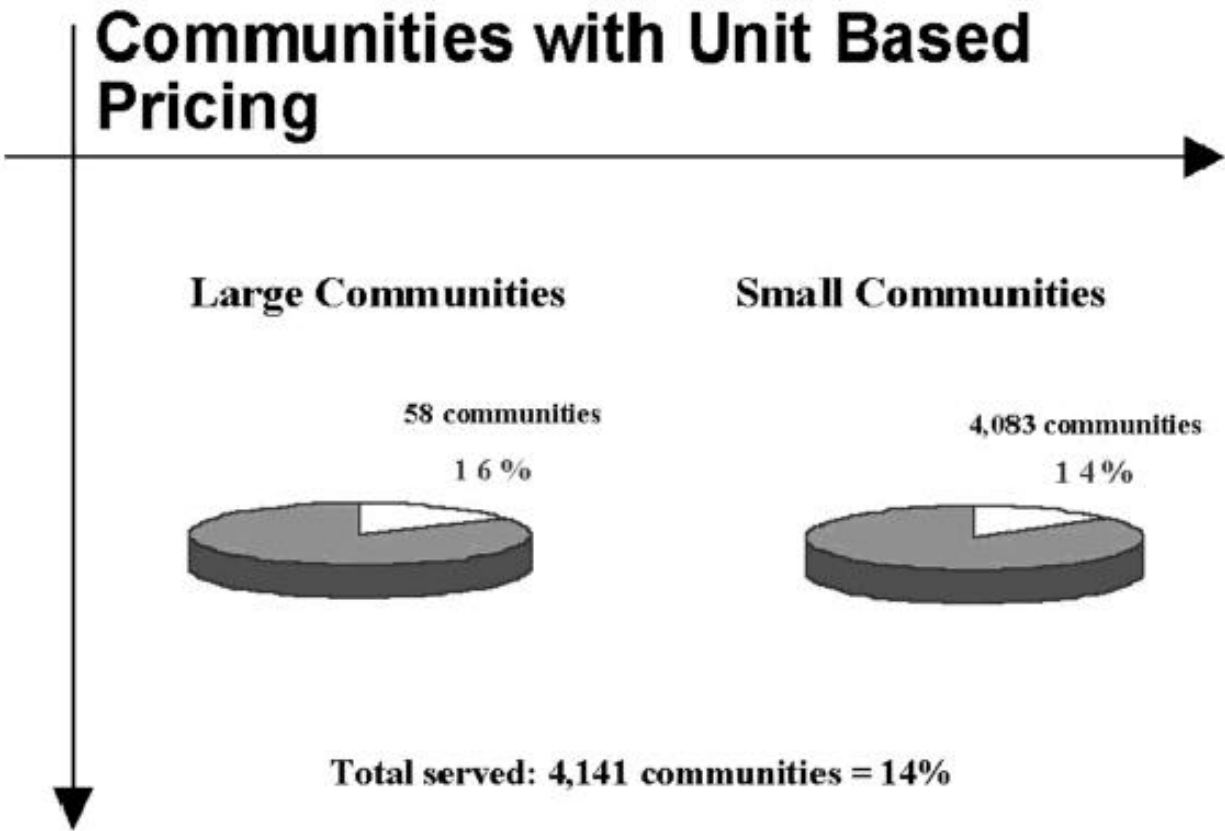
TABLE 2

Unit-based Pricing Method	Communities Less Than 100,000 Using Specified Method	
	Number of Communities	Approx. Population Served (Millions)
Customer Charge Based On:		
Number of bags	1,007	6.1
Number of cans	0	0.0
Size of cans or bags	0	0.0
Stickers or tags	336	2.0
Weight-based programs	84	0.5
Flat rate plus a variable component	336	2.0
Survey Sub-total <sup>1</sup>	1,343	8.3
Minnesota <sup>2</sup>	2,740	4.0
<b>Total</b>	<b>4,083</b>	<b>12.3</b>

1 May not add due to many communities utilizing multiple methods. Represents survey responses provided by small communities located in the 49 states excluding Minnesota. Minnesota requires all communities to utilize a unit-based pricing method, and therefore was not included as part of the survey.

2 Represents the total number of large communities located in the State of Minnesota.

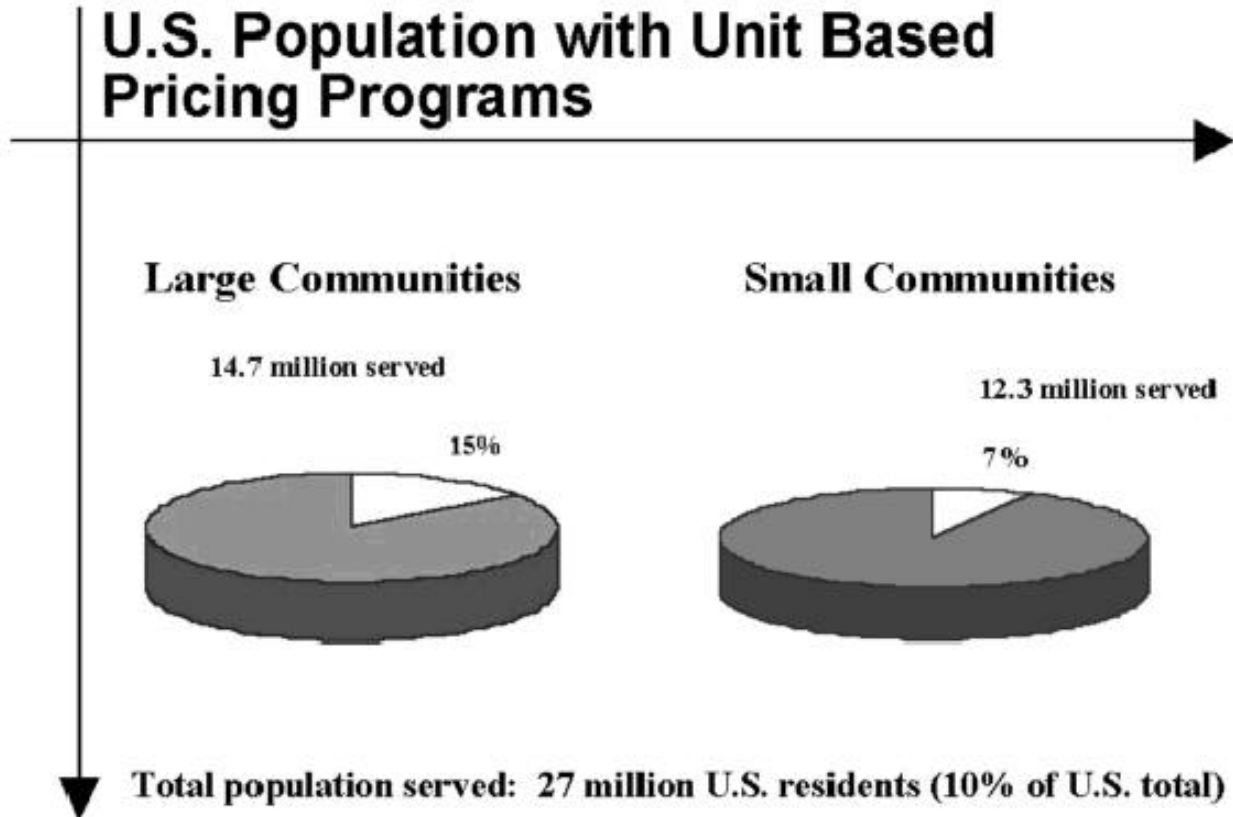
FIGURE 1



Note: Based on a total of 347 large and 29,392 smaller communities.  
Source: R. W. Beck 1998 Solid Waste Survey®

FIGURE 2

## U.S. Population with Unit Based Pricing Programs



**Total population served: 27 million U.S. residents (10% of U.S. total)**

Note: Total U.S. population = 267.5 million

Source: R. W. Beck 1998 Solid Waste Survey<sup>®</sup>