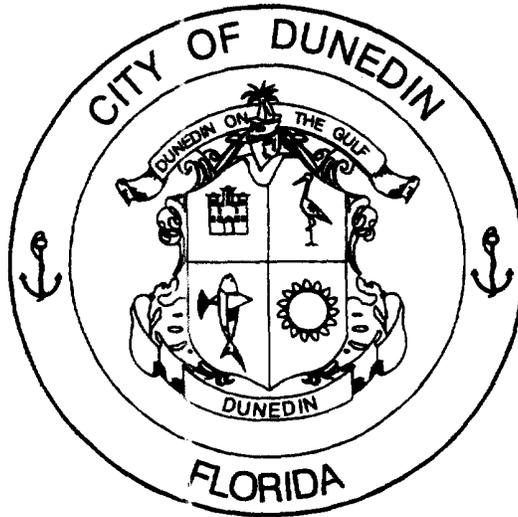


FINAL REPORT



CITY OF DUNEDIN WATER SAVER KIT RETROFIT PROGRAM

**IN COOPERATION WITH THE
PINELLAS - ANCLOTE RIVER BASIN BOARD
OF THE SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT**

APRIL 1995

CITY OF DUNEDIN

WATER SAVER KIT RETROFIT PROGRAM

Background

on March 22, 1993 the City of **Dunedin** started a cooperative effort with Pinellas-Anclote River Basin Board to provide the residents of the City of **Dunedin** with water saving retrofit devices.

The project was to make **available** to the residents of **Dunedin**, water saving retrofit **devices** with minimum impact on the Water Management District and City **budgets**. This made the depot method of distribution the likely choice. The depot method worked advantageously in several ways

1. Residents that were interested in the project would obtain the kit and **install it**. Quarterly report **#1** and Quarterly report **#2** both showed a 93% installation rate (see Exhibit 1 page 3 and Exhibit 2 page 2).
2. The kits could be assembled with only the items that were required for each **resident**, thereby eliminating any extra devices that the resident might discard while ensuring adequate numbers of **devices** as were required (see Exhibit 1 page 1).
3. Preliminary information **necessary** for the data collection portion of the project was collected when the resident obtained the water **saving** retrofit devices (see attachments **#1** and **#7** in Exhibit 1).

The depot method worked well **w.ith** minor exceptions:

1. Some residents were unable to come to the **"depot"** to obtain their water saving retrofit devices. In these instances, the Water Division staff would deliver the kits to the houses. This service was only used in extreme situations and was not used extensively.
2. Some residents were unable to install the devices. This problem was resolved with **the** help of the Pinellas Opportunity Counsel - Chore Program. The resident would contact this **program** and a **"handyman"** would install the devices without charge (see Exhibit 1 **page** 2).

Advertising

Until the March 1, 1994, billing the City's Utility bills had the wording "TO OBTAIN YOUR **FREE WATER SAVER KIT CALL 738-1840**" (see attachment #3 in Exhibit 1).

several newspaper article appeared in the St. Petersburg Times and the **Suncoast** News (a local paper). Successive advertisements resulted in smaller and smaller responses from the residents. On December 3, 1994, the **Suncoast** News placed an article titled "**Last chance to get water-saving devices**". This article notified the residents that the program was coming to a close (see Exhibit 7).

Kathy Foley, Water Resource **Analyst** for Southwest Florida Water Management District, provided signs (see Exhibit 8) that were placed at several locations around **Dunedin** with heavy residential contact, like the library, **senior** center, municipal services, etc.

Due to other circumstances **which** required a mailed notice to its customers, the City sent two flyers and a post card to all residents of the City of **Dunedin**. The two flyers resulted in an increase in resident response (see Exhibits 4 and 5). However, the post card notices (see Exhibit 9) that were mailed on January 23, **February 8, & February 22, 1995**, resulted in a dramatic increase in resident response (see Exhibit 10). This response resulted in a significant impact on City personnel in the assembling and distribution of the water **saving** kits.

Comments and Returns

Exhibit 11 is a listing of the **comments** made on the form that was completed by the resident upon receiving their water saver kit. Exhibit 12 is a listing of the reasons given if devices were returned or if additional devices were needed. This is a continuation of the listing reported in attachment #6 of Exhibit 1.

Commercial and Multi-family

Non-residential accounts are listed in Exhibit 13.

The Study

To gather the consumption **data** it was necessary to obtain the customer's City of **Dunedin** Utility Billing account number. The City's billing process is broken down into four (4) bi-monthly cycles. These cycles are shown on the map in Exhibit 14.

The form completed by the resident (see attachment **#1** in Exhibit 1) provided information used in **determining** the suitability of the residence for study purposes.

Residences that irrigate with potable water from their house meter were eliminated from the study because this would not give a clear picture of the decrease of domestic water consumption during the 36 month study. Residents that had other sources of irrigation water (wells, lakes, reclaimed water, or separate irrigation water meters) were extremely **valuable** for study purposes.

Residents in the study had to **be** contacted to insure that the water saving devices had been installed.

In order to be included in the 18 month study group, water saver kits had to be picked up and installed before July 30, 1993. This was necessary due to the bi-monthly billing period the City utilizes.

Data Collection

As of March 31, 1995, the City of **Dunedin** has distributed a total of 8,928 kits.

2,748 kits to single family residential properties consisted of:

- 5,151 shower heads
- 5,457 toilet tummys
- 8,864 sink aerators

6,180 units (kits) to master-metered multi-family residential or commercial properties consisted of:

- 8,230 shower heads
- 8,757 toilet tummys
- 14,421 sink aerators

The response can be broken **down** into percentages by area (billing cycle) :

Cycle **1A** response was 20.9%. This area has 3,044 accounts and 638 obtained water saver kits (**60%** single family residential and 36 multi-family/commercial).

Cycle 1B response was 24.4%. This area has 2,716 accounts and 665 obtained water saver kits (624 single family residential and 41 multi-family/commercial).

Cycle 2A response was 23.4%. This area has 3,156 accounts and 740 obtained water saver kits (725 single family residential and 15 multi-family/commercial).

Cycle 2B response was 26.2%. This area has 3,132 accounts and 823 obtained water saver kits (797 single family residential and 26 multi-family/commercial).

Forty accounts are unclassified. The count on multi-family/commercial accounts is the number of accounts not units (kits).

Summary / Conclusions

The data collected by the City's MIS department is summarized below (See Exhibit 15). See Exhibit 16 for the data received from MIS:

Cycle 1A - The average residential bi-monthly consumption before the water saver kits were installed was 9,210 gallons. The average bi-monthly consumption after the water saver kits were installed was 7,860 gallons. The result was a decreased average water consumption of 1,350 gallons per residential account for a two month period. **This is a 14.6 percent decrease in consumption per billing or for a two month period.**

Cycle 1B - The average residential bi-monthly consumption before the water saver kits were installed was 8,560 gallons. The average bi-monthly consumption after the water saver kits were installed was 7,570 gallons. The result was a decreased average water consumption of 990 gallons per residential account for a two month period. **This is an 11.5 percent decrease in consumption per billing or for a two month period.**

Cycle 2A - The average residential bi-monthly consumption before the water saver kits were installed was 8,650 gallons. The average bi-monthly consumption after the water saver kits were installed was 7,610 gallons. The result was a decreased average water consumption of 1,040 gallons per residential account for a two month period. **This is an 12.0 percent decrease in consumption per billing or for a two month period.**

Cycle 2B - The average residential bi-monthly consumption before the water saver kits were installed was 11,150 gallons. The average bi-monthly consumption after the water saver kits were installed was 8,430 gallons. The result was a decreased average water consumption of 2,710 gallons per residential

account for a two month period. **This is an 24.3 percent decrease in consumption per billing or for a two month period.**

Commercial/Multi-family - The average commercial/multi-family property's bi-monthly consumption before the water saver kits were installed was **313,190** gallons. The average bi-monthly consumption after the water saver kits were installed **was** 297,150 gallons. The result was a decreased average water consumption of 16,040 gallons per account for a two month period. **This is an 5.1 percent decrease in consumption per billing or for a two month period.**

The above. figures indicate **that** the overall residential average savings is 15.6%. The City-wide (residential & commercial) average savings is 13.5%. The savings is reflected in the City's annual accountability report to the District. This report show's the City's functional population of 35,607 has reduced consumption from 117.5 in 1993 to 109.75 gallons per capita per day in 1994.

Public utilities no longer have the leisure of viewing water conservation practices as a convenience; instead, these measures have become essential to guarantee the quantity and quality of water needed by densely populated regions. Through cooperation of the District, motivation of the City Council and ingenuity of our citizens, we have been able to successfully activate and operate the program in this report and other water conserving programs like: Water Use Restrictions (**once** per week in Dunedin), use of Reclaimed Water, the Inverted Rate Structure for Water (discourages consumption and encourages conservation), and a Bi-monthly Water Conservation Table on the back of utility bills (see Exhibit 17), customers can compare their use to desirable use based on the number of people in the **household**.