



CITY OF SACRAMENTO

DEPARTMENT OF PUBLIC WORKS

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February 21, 1985
FA:84195:MLH:revampre(12)

M. H. JOHNSON
Director

Budget and Finance Committee/
Transportation and Community Development Committee
Sacramento, California

Honorable Members in Session:

Subject: Implementation of a City-wide 90 Gallon Container Program

SUMMARY

The attached report discusses the process for mandating the implementation of 90 gallon uni-container refuse collection system. It includes total program costs, purchasing and attrition plans, and a proposed phasing schedule. Staff is requesting that the joint committees approve the implementation of this program by:

1. Recommending adoption of the attached resolution mandating City-wide 90 gallon container use as appropriate to the full City Council.
2. Directing staff to develop a final routing schedule and budget which would indicate how a 90 gallon container program would operate during 1985-86. This information is to be considered during the 1985-86 Proposed Budget process.

RECOMMENDATION

Based upon the attached report, staff would request that the joint committees recommend the following:


1. That the 90 gallon container program be mandated for all residential routes. In fiscal year 1985-86, the following criteria will be used:
 - a. Priority 1 - Current 90 gallon routes where participation is less than 100%.
 - b. Priority 2 - 65% Curbside routes where residents must currently containerize garden material because there are no curbs and gutters.

2. That staff be directed to incorporate the purchase of equipment and necessary routing changes for the institution of five new 90 gallon routes as a part of the 1985-86 Solid Waste Division appropriation request.
3. That the appropriation of necessary funding for this program be reviewed within the context of the 1985-86 Proposed Budget.
4. That staff be directed to monitor the success of voluntary garden refuse containerization and to report back on the economic feasibility of holding an election to mandate residential vegetal waste containerization.

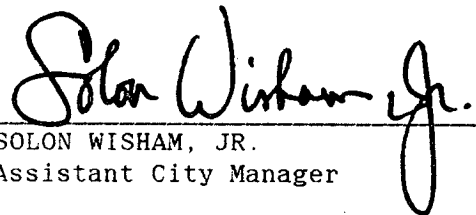
Respectfully submitted,


REGGIE YOUNG
Deputy Director of Public Works

Approved:


MELVIN JOHNSON
Director of Public Works

RECOMMENDATION APPROVED:



SOLON WISHAM, JR.
Assistant City Manager



CITY OF SACRAMENTO

February 21, 1985
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DEPARTMENT OF FINANCE

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Sacramento, California

Honorable Members in Session:

Subject: Implementation of a City-wide 90 Gallon Container Program

SUMMARY

The following report provides an overview of the process which would be used for mandating the implementation of 90 gallon uni-container refuse collection. It includes total program costs, purchasing and attrition plans, and a proposed phasing schedule. Staff is requesting that the joint committee recommend the approval of this program and the adoption of attached resolution mandating the same.

BACKGROUND

A. Service Requirements

The Solid Waste Division is responsible for collecting residential waste materials from 65,000 dwellings. Residential customers have a choice of three basic service options including:

- o In yard collection (typically called "backyard service")
- o Curbside collection (including disabled persons who may receive backyard service for a curbside fee)
- o 90 Gallon container collection

Each of these services requires separate collection of uncontainerized garden and vegetal material, except for the 10% of local customers who must containerize garden waste because there are no curbs or gutters in front of their residences. The number of collection options (i.e. backyard one can, backyard two cans together, backyard two cans apart, curbside one can, curbside two cans together, etc.) means that the Solid Waste Division's operational expenses are relatively high; this, coupled with the need to separately collect vegetal material, means that City of Sacramento refuse collection costs are higher than would they would be if productivity and cost effectiveness factors were the highest priorities.

B. Legal Requirements

Before any garden refuse collection system changes can be considered, the provisions of the 1977 initiative Measure "A" should be examined. This measure stated that:

"Yard and garden refuse deposit and collection shall be conducted consistent with Sections 19.401 et seq. of the Code of the City of Sacramento to the end that mandatory containerization of yard and garden refuse shall not be required in the City of Sacramento...That the ordinance enacted pursuant to Section 1 shall not be repealed or amended except by a vote of the majority of the electors of the City of Sacramento at any municipal election".

Measure "A" prohibits **mandatory containerization of garden and vegetal waste** material without a majority vote of the people. However there is currently no law which restricts how **refuse collection** can be handled, leaving the City Council to decide if it is more beneficial to move toward an automated, lower-cost program. The Council also has the right to determine if it wishes to **continue to provide some level of Garden Refuse service**, or because of rising costs, eliminate this program.

Questions related to Garden Refuse service are not the only considerations which have to be factored into a 90 gallon program cost/benefit analysis. Any automated program will reduce the number of refuse collection workers needed by the Solid Waste Division. This means that the implementation of the 90 gallon program should be planned in such a way that the number of expanded routes will match the annual attrition rate. The "Financial Data" section contains charts which show capital equipment costs compared to employee salary savings over the next ten years.

ANALYSIS

Various cities throughout the State of California utilize the 90 gallon container program including Beverly Hills, Fresno, and Torrance. Locally, the County of Sacramento has been implementing this service over the last two years. Those customers who have used an automated system overwhelmingly prefer it to manual collection for several reasons: there are usually lower user costs associated with automated containerization, neighborhoods typically have a neater appearance due to container uniformity and there are fewer containers placed in front of any one residence. Staff notes the following additional supportive arguments for an automated system:

- o **The solid waste collection environment would be improved.** Since an automated system is a safer method of refuse collection, it will permit sanitation workers to work in the field until the normal retirement age. This is major reason why Local 39, the bargaining unit which represents the sanitation workers, is supportive of the implementation of an automated program.
- o **Collection productivity is increased.** With the institution of a mandated City-wide automated program, it would be possible for each operator to collect between 500 and 550 containers per day instead of the current 200. The expansion of the number of containers collected means that the Division can operate with 29 routes instead of the present 40.
- o **Truck fuel consumption would be reduced.** The proposed system would eliminate "idle time", where truck engines are left idling while employees work on the ground behind the equipment. Automated collection trucks would require only 10-12 seconds per stop as opposed to the 30-60 seconds needed for manual collection (This results from the fact that under the 90 gallon program, the truck would stop for a brief period at every house. Under the present system, the truck stops for a longer period of time at several strategic points along the street.).

These factors have to be weighted against some of the following disadvantages:

- o **There are high capital costs associated with the implementation of the 90 gallon program.** These costs are discussed further in the "Financial Data" section, however, it is appropriate to note here that "savings", under staff's proposal, begin to outweigh "costs" as early as the sixth year of the mandated program.
- o **Some customers may experience problems storing the 90 gallon containers.** Some residences have narrow gates through which garbage cans must be moved; others have garbage can storage facilities built into a boundary fence which typically can not accommodate a 90 gallon container. A second generation of narrower containers has been purchased, which for the most part, has eliminated past problems associated with moving 90 gallon cans through existing gates.
- o **Newspaper recycling is not practical with any automated system.** Since the operator has no need to leave the truck with the 90 gallon program, it is impractical to continue manual collection of newspapers

on 90 gallon routes. The savings from this program have totaled \$7,300 annually, an amount which is outweighed by the costs associated with this manual service. In an effort to address this concern, the Solid Waste Division is exploring the possibility of contracting with a third party for the collection of recyclable newsprint. The importance of newspaper recycling varies, since only a limited amount of paper is collected when the price of newsprint is high (Private individuals typically collect the newspapers before City crews arrive.).

FINANCIAL DATA

Attachment "A" identifies all of the various costs and/or savings which could be expected from a mandated 90 gallon container program over the next ten years. The assumptions which were considered in developing this analysis are listed on the second page. In addition to these, a phasing schedule was developed which considered the constraints posed by the equipment replacement system (The Solid Waste Division normally would absorb the replacement of five rearpackers with sideloader automated trucks each year. Therefore the number of proposed annual conversion routes was limited to five routes. Six trucks would be purchased each year including one spare vehicle.). The most pertinent cost factors from this attachment have been summarized on the table below:

TABLE 1
90 GALLON PROGRAM IMPACT

Year	<--- Program Costs --->		Program Savings	Net Costs ;
	Containers	Equipment		
84-85	\$ 289,738	\$ 16,927	(\$ 68,776)	\$ 237,889
85-86	1,063,985	59,439	(164,408)	959,016
86-87	1,223,863	63,654	(338,411)	949,106
87-88	1,383,843	68,141	(532,897)	919,087
88-89	1,552,319	72,915	(749,697)	875,538
89-90	1,729,659	77,991	(987,419)	820,231
90-91	839,638	(4,402)	(1,152,654)	(317,417)
91-92	864,827	(5,327)	(1,576,949)	(717,448)
92-93	890,772	(6,445)	(1,810,785)	(926,458)
93-94	917,495	(7,799)	(1,916,199)	(1,006,503)
	-----	-----	-----	-----
	\$10,756,140	\$ 335,095	(\$ 9,298,196)	\$1,793,040
	=====	=====	=====	=====

NOTE: Positive numbers reflect costs; negative numbers reflect savings.

As is obvious from Table 1, a mandated 90 gallon program begins to pay for itself beginning in 1990-91 (the sixth year of a mandated program), once all of the major capital equipment purchases have been completed. After that point, the savings from the operation almost double for each year thereafter. Prior to 1990, the City would achieve on-going salary savings from the reduction of one sanitation worker position per 90 gallon route (due to the switch to one-man routes) along with decreases in workers' compensation and direct injury costs. After 1990, similar economies would be achieved from a reduction in the total number of routes. The anticipated salary savings were limited to the Division's projection of how the 90 gallon phase-in would occur; to the extent that the actual attrition rate rises during this period, real savings would be greater than what is shown on Attachment "A".

The type of equipment purchases which are required for this program could not be debt-financed since their useful lives vary from each other and, in some cases, may not exceed one year. Therefore the capital costs associated with this program would have to be paid for in cash as a part of each year's Approved Solid Waste Division Budget. The Solid Waste rate model in Attachment "B-1" provides an initial indication of the fund balance deficits that would be created as a result of including 90 gallon container expenses. If a mandated program was instituted as of July 1985, a 28% rate adjustment would be needed to cover all anticipated 1985-86 costs (This increase is 8% over the 20% adjustment already presented to the Budget and Finance Committee during the Midyear Review hearing). Rate increases would be significantly less in subsequent years as employee salary savings exceed program costs as shown in Attachment "B-2".

RELATED POLICY ISSUES

A. Garden Refuse Program

Primary to any discussion of 90 gallon program savings is the question of consolidating garden refuse service with 90 gallon collection. As was mentioned earlier, currently only 10% of all City residents must containerize their garden refuse due to the fact that they have no curbs and gutters. In all other parts of the City, the Solid Waste Division must go in with a second truck and a mechanical lift tractor and pick up vegetal materials. While the Council has the power to mandate the 90 gallon program for all residential refuse customers, Measure "A" currently prohibits mandatory garden refuse containerization. The critical points which need to be reviewed in connection with this issue are:

1. Are the factors which initiated the garden refuse program still sufficiently relevant for the City to continue providing this service?
2. If the answer to the question above is yes, how should this service be continued: through contract services, voluntary containerization, or a vote of the people to mandate garden refuse containerization?

Since June 1984, the City has been operating the Vegetal Waste Facility which is partially dependent upon residential garden refuse. Staff has determined that the minor decrease in the availability of vegetal materials that would occur if all residents began to containerize their garden refuse would not impact the Vegetal Waste program for at least three to four years. Under the State of California contract, the City is required to deliver 75 tons of biomass material each day from the Vegetal Waste Facility. With daily collection currently at 200 tons, there should still be sufficient vegetal material available, even if a voluntary containerization program is begun.

If all vegetal material was containerized, there might be some decrease in Garden Refuse program expenses. Garden Refuse direct costs total approximately \$3.9 million annually; it would be reasonable to expect that 75% of these expenses would be eliminated if residential vegetal material containerization was mandatory. In addition, there are related workers' compensation and/or injury costs which would also be reduced or eliminated by any containerization effort the City was able to achieve.

There is already some impetus from residential customers to voluntarily containerize their garden refuse in cases where the 90 gallon program is in effect. The overall neater appearance created as a result of the institution of the 90 gallon program has spurred some residents to "encourage" their neighbors to eliminate garden refuse piles and to place all vegetal material in the 90 gallon can. It may be possible for the City to publicize voluntary efforts toward containerization and to monitor the impact that this is having on reducing the need for a separate Garden Refuse operation. Once a given percentage of voluntary effort is achieved citywide (for example, 65%), it may be realistic to consider holding an election to reconsider the Charter implications of Measure "A" with the expectation that satisfied 90 gallon customers would be willing to support mandated containerization of all residential vegetal materials. Should the voters approve the mandatory containerization of residential garden refuse, vegetal materials would no longer be separately collected in most areas of the City, with the possible exception of the fall leaf season.

B. 90 Gallon Container Program -Implementation Phase

During fiscal year 1984-85, one new 90 gallon container route was added to the Solid Waste Division, for a total of four 90 gallon routes. As a result of pent-up customer demand, all of the new containers were committed by November 1984. The Solid Waste Division feels that it would not be difficult to place 12,500 containers (or a total of five new routes) if a systemized allocation plan was adopted by the Council. They have proposed a heuristic routing process for implementing a mandated 90 gallon program, using the following criteria:

Priority 1 (Infill) - Within the existing 90 gallon program, there are a number of geographical areas where neighborhood participation is not 100%. For routing purposes, the most practical way to proceed would be to "fill-in" these locations during the first year of a mandatory 90 gallon program. The cans would be allocated to each of the geographical areas as follows:

Location	Number of Cans to be Distributed
River Park	703
East Sacramento	765
Glenbrook	581
Freeport	122
Meadowview	279
Natomas	146
Natomas North	88
North Sacramento	180
Woodlake	244
Valley Hi	933

TOTAL	4,041

Priority 2 (No Curbs/Gutters) - As was previously indicated, persons with no curbs and/or gutters in front of their homes already must containerize their vegetal material. Routes containing any of these streets would also receive containers during the first year of a mandatory 90 gallon program, in the following manner:

Route*/Day	Number of Cans to be Distributed
9 - Friday	406
30 - Monday	506
35 - Monday	451
35 - Tuesday	593
35 - Wednesday	555
35 - Friday	497
36 - Monday	617
38 - Tuesday	537
39 - Monday	453
39 - Tuesday	579
39 - Wednesday	362
42 - Wednesday	327
48 - Tuesday	338
48 - Wednesday	450

TOTAL	6,671

* These routes were selected because they contain some streets without curbs and gutters.

Priority 3 (All Others) - All other residential accounts would be converted on a route-by-route basis, where the number of persons with curbside accounts exceeded 65%. It is the Solid Waste Division's intention to begin this conversion on the City's perimeters, moving in toward the downtown. The downtown district (defined as the area bounded by E to R Streets and Front to 29th Streets), would be the last to convert to a 90 gallon program due to the difficulty of getting sideloader trucks to the curb. As the program progresses, staff will be exploring how this particular conversion can most easily be accomplished and presenting follow-up reports specifically geared to the needs of the downtown.

CONCLUSION

Even without containerization of garden refuse, the City of Sacramento would achieve significant costs savings by moving toward a mandatory 90 gallon container program for most of its residential routes, exclusive of the downtown area. The proposed program could include voluntary containerization of vegetal material in the 90 gallon container. This program would be implemented over a five year period and annually the City Council could approve the conversion for various residential areas using the following criteria:

Fiscal Year 1985-86

- o Priority 1 - Current 90 gallon routes where participation is less than 100%. All non-participants would be required to participate in the 90 gallon program.
- o Priority 2 - 65% Curbside routes where residents must currently containerize garden material because there are no curbs and gutters.

Future Fiscal Years

- o Priority 3 - All other 65% Curbside routes. In this category, the program would begin in areas on the outside perimeter of the City and work in towards the older downtown areas.

RECOMMENDATION

Based upon the information provided, staff would recommend that the joint Budget and Finance and Transportation and Community Development Committees approve the following for City Council action:

1. Adoption of the attached resolution mandating a residential 90 gallon container program. In fiscal year 1985-86, the following criteria will be used:

- a. Priority 1 - Current 90 gallon routes where participation is less than 100%.
 - b. Priority 2 - 65% Curbside routes where residents must currently containerize garden material because there are no curbs and gutters.
2. That staff be directed to incorporate the purchase of equipment and necessary routing changes for the institution of five new 90 gallon routes as a part of the Solid Waste Division's 1985-86 appropriation request.
 3. That the appropriation of necessary funding for this program be reviewed within the context of the 1985-86 Proposed Budget.
 4. That staff be directed to monitor the success of voluntary garden refuse containerization and to report back on the economic feasibility of holding an election to mandate residential vegetal waste containerization.

Respectfully submitted,

Monika Hudson

MONIKA HUDSON
Senior Management Analyst

CONCUR:

Melvin Johnson

MELVIN JOHNSON
Director of Public Works

RECOMMENDATION APPROVED:

Solon Wisham Jr.

SOLON WISHAM, JR.
Assistant City Manager

RESOLUTION NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL ON DATE OF

RESOLUTION ADOPTING A MANDATORY 90 GALLON CONTAINER PROGRAM FOR ALL RESIDENTIAL ROUTES

WHEREAS, the use of 90 gallon uni-containers provides a feasible and economic method for collecting residential municipal solid waste; and

WHEREAS, the City's Solid Waste Division has determined that it would be possible to fully implement a 90 gallon container program within the City of Sacramento over the next five years; and

WHEREAS, the City Council has reviewed the policy implications of this change and wish to initiate a mandatory program in order to achieve maximum savings.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SACRAMENTO:

1. A mandatory 90 gallon container program for all residential customers is hereby established. In fiscal year 1985-86, the following criteria will be used to determine the placement of the first containers:
 - a. Priority 1 - Current 90 gallon routes where participation is less than 100%.
 - b. Priority 2 - 65% Curbside routes where residents must currently containerize garden material because there are no curbs and gutters.
2. Staff is hereby directed to incorporate the purchase of equipment and necessary routing changes for the institution of five new 90 gallon routes as a part of the Solid Waste Division's 1985-86 appropriation request.
3. The appropriation of necessary program funding shall be reviewed within the context of the 1985-86 Proposed Budget.
4. Staff is hereby directed to monitor the success of voluntary garden refuse containerization and to report back on the economic feasibility of holding an election to mandate residential vegetal waste containerization.

MAYOR

ATTEST:

CITY CLERK

ATTACHMENT "A"

ANALYSIS OF 90 GALLON CONTAINER PROGRAM COSTS AND SAVINGS
90GAL
2/20/85

Year	1	2	3	4	5	6	7	8	9	10	TOTAL
	84-85	85-86	86-87	87-88	88-89	89-90	90-91	91-92	92-93	93-94	10 YEAR COST
CURRENT PROGRAM											
Containers Currently in Service: Number	7,500										
Total Residential Routes which Potential	29										
90 Gallon Routes: Existing	3	4	9	14	19	24	29	29	29	29	
Proposed	1	5	5	5	5	5	0	0	0	0	
90 Gal % at Yr's End	13.79%	31.03%	48.28%	65.52%	82.76%	100.00%	100.00%	100.00%	100.00%	100.00%	
% Routes Remaining	86.21%	68.97%	51.72%	34.48%	17.24%	.00%	.00%	.00%	.00%	.00%	
PROPOSED PROGRAM - CONTAINERS											
Container Costs	\$65	\$65	\$67	\$69	\$71	\$73	\$75	\$78	\$80	\$82	
New Containers Installed: Number	2,500	12,500	12,500	12,500	12,500	12,500	0	0	0	0	65,000
Cost	\$162,500	\$812,500	\$836,875	\$861,981	\$887,861	\$914,476	\$0	\$0	\$0	\$0	\$4,476,173
Vandalized Containers Replaced: Number	100	224	348	472	595	719	718	718	718	718	5,329
Cost	\$6,500	\$14,560	\$23,283	\$23,981	\$24,700	\$25,441	\$26,205	\$26,991	\$27,801	\$28,635	\$228,096
Routine Replacement Schedule: Number	1,858	3,645	5,433	7,220	9,008	10,795	10,795	10,795	10,795	10,795	81,138
Cost	\$120,738	\$236,925	\$363,706	\$497,880	\$639,778	\$789,741	\$813,434	\$837,837	\$862,972	\$888,861	\$6,051,871
PROPOSED PROGRAM - EQUIPMENT											
Capita: Costs											
Number of Sideload Packers Purchased	1	6	6	6	6	6	0	0	0	0	31
Cost of Rearload Packers	\$53,000	\$63,500	\$68,580	\$74,066	\$79,992	\$86,391	\$93,302	\$100,767	\$108,828	\$117,534	\$845,960
Cost of Sideload Packers	\$70,000	\$73,500	\$79,380	\$85,730	\$92,589	\$99,996	\$107,996	\$116,635	\$125,966	\$135,043	\$987,636
Total Cost - Rearloader	\$53,000	\$381,000	\$411,480	\$444,398	\$479,950	\$518,346	\$0	\$0	\$0	\$0	\$2,288,175
Total Cost - Sideload	\$70,000	\$441,000	\$476,280	\$514,382	\$555,533	\$599,976	\$0	\$0	\$0	\$0	\$2,657,171
Added Costs - Sideload vs Rearload	\$17,000	\$60,000	\$64,800	\$69,984	\$75,583	\$81,629	\$0	\$0	\$0	\$0	\$368,996
Operating Costs											
Minimum Miles Operated Per Month	347	347	347	347	347	347	382	420	462	508	3,853
Cost/mile - Rearloader	\$3.18	\$3.50	\$3.85	\$4.23	\$4.66	\$5.12	\$5.63	\$6.20	\$6.82	\$7.50	
Cost/mile - Sideload	\$2.97	\$3.27	\$3.59	\$3.95	\$4.35	\$4.78	\$5.26	\$5.79	\$6.37	\$7.00	
Total Cost - Rearload	\$1,103	\$8,497	\$17,357	\$27,905	\$40,389	\$55,091	\$66,660	\$80,659	\$97,597	\$118,093	\$513,353
Total Cost - Sideload	\$1,031	\$7,936	\$16,211	\$26,063	\$37,722	\$51,453	\$62,258	\$75,332	\$91,152	\$110,294	\$479,452
Added Costs - Sideload vs Rearload	(\$73)	(\$561)	(\$1,146)	(\$1,843)	(\$2,667)	(\$3,638)	(\$4,402)	(\$5,327)	(\$6,445)	(\$7,799)	(\$33,901)
Containers	\$289,738	\$1,063,985	\$1,223,863	\$1,383,863	\$1,552,319	\$1,729,659	\$839,638	\$864,827	\$890,772	\$917,495	\$10,756,140
Equipment	\$16,927	\$59,439	\$63,654	\$68,141	\$72,915	\$77,991	(\$4,402)	(\$5,327)	(\$6,445)	(\$7,799)	\$335,095
TOTAL (90 Gal Added Costs)	\$306,665	\$1,123,424	\$1,287,517	\$1,451,984	\$1,625,235	\$1,807,650	\$835,236	\$859,501	\$884,327	\$909,697	\$11,091,235

PERSONNEL SAVINGS

SALARY

Annual Salary (San Worker I @ "E" Step)	(\$28,785)	(\$30,512)	(\$32,363)	(\$34,283)	(\$36,340)	(\$38,521)	(\$40,832)	(\$43,282)	(\$45,879)	(\$48,632)	
Number of New Attritioned Positions	1	5	5	5	5	5	8	3	0	0	
Percent of Year Affective	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	
Actual Savings (Current year + Previous Year's Savings)	(\$14,393)	(\$106,792)	(\$274,914)	(\$462,826)	(\$672,297)	(\$905,239)	(\$1,061,634)	(\$1,471,588)	(\$1,697,520)	(\$1,799,371)	(\$8,466,574)

WORKERS' COMPENSATION

Lost Days Costs per Person	(\$1,007)	(\$1,067)	(\$1,131)	(\$1,199)	(\$1,271)	(\$1,348)	(\$1,428)	(\$1,514)	(\$1,605)	(\$1,701)	
Lost Days Savings (w/attrition)	(\$504)	(\$3,736)	(\$9,617)	(\$16,191)	(\$23,519)	(\$28,299)	(\$37,140)	(\$51,481)	(\$59,385)	(\$62,948)	(\$292,821)
Injury Claims Savings	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$53,880)	(\$538,800)
Total Workers' Comp Savings	(\$54,384)	(\$57,616)	(\$63,497)	(\$70,071)	(\$77,399)	(\$82,179)	(\$91,020)	(\$105,361)	(\$113,265)	(\$116,828)	(\$831,621)
TOTAL (90 Gall Program Savings)	(\$68,776)	(\$164,408)	(\$338,411)	(\$532,897)	(\$749,697)	(\$987,419)	(\$1,152,654)	(\$1,576,945)	(\$1,810,785)	(\$1,916,199)	(\$9,298,196)
NET 90 GALLON PROGRAM COSTS	\$237,889	\$959,016	\$949,106	\$919,087	\$875,538	\$820,231	(\$317,417)	(\$717,448)	(\$926,458)	(\$1,006,503)	\$1,793,040

Positive numbers represent added costs for the 90 gallon program;
Negative numbers represent 90 gallon container program savings.

ASSUMPTIONS

1. Container costs will begin to increase 3% annually beginning in 1986-87.
2. Vandalized containers would be replaced at an annual rate of 1%.
3. All new containers would be replaced over 7 years.
4. Equipment capital costs were increased 8% while operating costs were increased 10%; mileage was held constant until 1989-90 when it was increased 10% annually. All figures supplied by Fleet Management were based upon 1984-85 data.
5. 86-89 salary attrition figures are based on switch from 2 to 1 person routes; 90-92 figures reflect the reduction in the total number of Waste Removal routes from 40 to 29. Sanitation Worker salary/lost day costs were increased 6% annually; attrition losses would net to only 6 months savings annually for all positions.
6. Workers' Comp injury claims savings were held constant and were derived from the percentage of 1983-84 claims associated with "loading injuries" (42%) compared with projected 1984 costs; only loading injuries would be eliminated as a result of the 90 gallon program.
7. Newspaper recycling savings of \$7,300 annually would be lost.

WRHIS90 12/27/84 RCL REVISED: 2/20/85	ACTUAL	BUDGET	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
SOLID WASTE FINANCIAL HISTORY & PROJECTIONS	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Average Increase in All Solid Waste Rates			.00%	.00%	.00%	.00%	.00%
Monthly Curbside Rate: 1 can		\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
Monthly Backyard Rate: 1 can		\$10.75	\$10.75	\$10.75	\$10.75	\$10.75	\$10.75
Monthly 90 Gallon Rate		\$4.55	\$4.55	\$4.55	\$4.55	\$4.55	\$4.55
Operating Revenues:							
User Fees and Charges (MEMO ITEM ONLY)	\$11,358,000	\$11,825,000					
-Backyard		4,284,116	3,295,309	2,502,128	1,743,233	1,017,176	452,542
-Curbside		2,704,230	2,402,877	2,069,713	1,702,277	1,298,014	960,541
-90 Gallon		371,450	1,125,605	1,750,991	2,376,270	3,001,704	3,502,088
-All Other		4,485,204	4,530,056	4,575,357	4,621,110	4,667,321	4,713,994
Lien Collections	576,000	674,000	238,500	227,077	217,964	208,858	199,684
Vegetal Waste			52,000	52,000	52,000	52,000	52,000
Sidewalk Maintenance	34,000	64,000	90,000	96,000	102,000	109,000	116,000
Other Agency	28,000	30,000	30,000	30,000	30,000	30,000	30,000
Miscellaneous	18,000	20,000	20,000	20,000	20,000	20,000	20,000
Lawn & Garden Refuse Tax	2,226,000	2,350,000	2,413,450	2,478,613	2,545,536	2,614,265	2,684,850
Total Operating Revenues	14,240,000	14,963,000	14,195,797	13,801,879	13,410,389	13,018,339	12,731,700
Operating Expenses:							
Employee Services	7,855,000	7,969,762	8,447,948	8,954,825	9,492,114	10,061,641	10,665,339
Other Services and Supplies	5,967,000	6,711,709	7,047,294	7,399,659	7,769,642	8,158,124	8,566,030
90 Gallon Container Increased Salary Costs			(164,408)	(338,411)	(532,897)	(749,697)	(987,419)
90 Gallon Container Increased Operating Costs			59,439	63,654	68,141	72,915	77,991
Transfer Station/Sac County Increment					1,390,000	1,473,400	1,561,804
Depreciation	14,000		0	0	0	0	0
Total Operating Expenses	13,836,000	14,681,471	15,390,273	16,079,726	18,187,000	19,016,383	19,883,745
NET OPERATING INCOME (LOSS)	404,000	281,529	(1,194,476)	(2,277,848)	(4,776,610)	(5,998,044)	(7,152,045)
Nonoperating Revenues (Expenses):							
Interest Income	84,000	80,000	0	0	0	0	0
Other Miscellaneous Income	80,000		0	0	0	0	0
Interest Expense	(188,000)	(238,407)	(662,458)	(631,402)	(917,528)	(863,820)	(802,772)
Operating Transfers In (Out)	(13,000)	(24,059)	(25,503)	(27,033)	(28,655)	(30,374)	(32,196)
Net Nonoperating Revenue (Expense)	(37,000)	(182,466)	(687,961)	(658,435)	(946,183)	(894,194)	(834,969)
NET CHANGE TO RETAINED EARNINGS	367,000	99,063	(1,882,436)	(2,936,282)	(5,722,793)	(6,892,238)	(7,987,014)
Retained Earnings (Deficit) Beginning	1,676,016	1,938,016	1,752,079	(130,357)	(3,066,640)	(8,789,433)	(15,681,671)
Prior Period Adjustment							
Equity Transfers In (Out)	(105,000)	(285,000)	0	0	0	0	0
Retained Earnings (Deficit) Ending	\$1,938,016	\$1,752,079	(\$130,357)	(\$3,066,640)	(\$8,789,433)	(\$15,681,671)	(\$23,668,685)
Sources of Working Capital							
Net Income (Loss)	367,000	99,063	(1,882,436)	(2,936,282)	(5,722,793)	(6,892,238)	(7,987,014)
Depreciation	14,000	0	0	0	0	0	0
Increase in Long-Term Liabilities			0	0	0	0	0
Decrease in Restricted Assets			0	0	0	0	0
Decrease in Amt Due from Other Agencies							
COP Proceeds	2,279,000	4,090,441		3,307,653			
Transfer from Waste Removal							
Incr. in Amts Payable from Restr. Assets			0	0	0	0	0
Total Sources of Working Capital	2,660,000	4,189,504	(1,882,436)	371,371	(5,722,793)	(6,892,238)	(7,987,014)

ATTACHMENT "B-1" CONTINUED

Uses of Working Capital:								
Acquisition of Property/Plant/Equipment	532,000	3,753,711	228,000	3,307,653				
90 Gallon Container Capital Costs			1,063,985	1,223,863	1,383,843	1,552,319	1,729,659	
Decrease in Long-Term Liabilities	23,000	256,500	281,200	618,600	701,932	758,796	737,395	
Transfers to Other Funds	105,000	285,000	0	0	0	0	0	
Prior Period Adj. (vaca/sick lv accrual)	564,000							
Increase in Restricted Assets								
Decr. in Amts Payable from Restr. Assets								
Payment to Risk Management	1,293,000							
Total Uses of Working Capital	2,517,000	4,295,211	1,573,185	5,150,116	2,085,775	2,311,115	2,467,054	
Working Capital Balance - Beginning	576,918	673,725	568,018	(2,887,603)	(7,666,349)	(15,474,917)	(24,678,270)	
Net Change to Working Capital	143,000	(105,707)	(3,455,621)	(4,778,745)	(7,808,568)	(9,203,353)	(10,454,068)	
Current Operating Encumbrances	(115,870)							
Prior Year Operating Encumbrances	39,537							
Current Year CIP Carryover	(23,864)							
Prior Year CIP Carryover	53,804		0	0	0	0	0	
WORKING CAPITAL BALANCE - ENDING	673,725	568,018	(2,887,603)	(7,666,349)	(15,474,917)	(24,678,270)	(35,132,338)	

ASSUMPTIONS

1. Rate increases are required to maintain appropriate fund balances for each year after 1984-85.
2. 20% rate increase was presented to the Council during August 1984 in connection with the expansion of the interim site.
3. Additional funds will be needed during 1984-85 and 1985-86 to begin covering parts of the existing site and to respond local residents' concerns about the amount of fill which can be placed in the interim site.
4. Major costs associated with the initiation of a transfer station/hauling to Sac Co. assumed: debt service on transfer station COP of \$3.307 million (\$364397 annually); less landfill operations (\$197000) and landfill equipment (\$158000); plus tipping fee (\$757,120). All costs increased by 6% annually except for debt service.
5. Includes 90 Gallon Container Operating and Capital costs.

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SOLID WASTE FINANCIAL HISTORY & PROJECTIONS	ACTUAL 1983-84	BUDGET 1984-85	PROJECTED 1985-86	PROJECTED 1986-87	PROJECTED 1987-88	PROJECTED 1988-89	PROJECTED 1989-90
Average Increase in All Solid Waste Rates			28.00%	16.00%	14.00%	12.00%	10.00%
Monthly Curbside Rate: 1 can		\$5.50	\$7.04	\$8.17	\$9.31	\$10.43	\$11.47
Monthly Backyard Rate: 1 can		\$10.75	\$13.76	\$15.96	\$18.20	\$20.38	\$22.42
Monthly 90 Gallon Rate		\$4.55	\$5.82	\$6.76	\$7.70	\$8.63	\$9.49
Operating Revenues:							
User Fees and Charges (MEMO ITEM ONLY)	\$11,358,000	\$11,825,000					
-Backyard		4,264,116	4,217,995	3,715,160	2,950,721	1,928,355	943,718
-Curbside		2,704,230	3,075,683	3,073,110	2,881,397	2,460,766	2,003,086
-90 Gallon		371,450	1,440,774	2,599,871	4,022,246	5,690,609	7,303,156
-All Other		4,485,204	5,798,472	6,793,489	7,822,024	8,848,273	9,830,432
Lien Collections	576,000	674,000	236,500	290,658	323,633	353,528	378,560
Vegetal Waste			52,000	52,000	52,000	52,000	52,000
Sidewalk Maintenance	34,000	64,000	90,000	96,000	102,000	109,000	116,000
Other Agency	28,000	30,000	30,000	30,000	30,000	30,000	30,000
Miscellaneous	18,000	20,000	20,000	20,000	20,000	20,000	20,000
Lawn & Garden Refuse Tax	2,226,000	2,350,000	2,413,450	2,478,613	2,545,536	2,614,265	2,684,850
Total Operating Revenues	14,240,000	14,963,000	17,374,874	19,148,902	20,749,555	22,106,796	23,361,802
Operating Expenses:							
Employee Services	7,855,000	7,969,762	8,447,948	8,954,825	9,492,114	10,061,641	10,665,339
Other Services and Supplies	5,967,000	6,711,709	7,047,294	7,399,659	7,769,642	8,158,124	8,566,030
90 Gallon Container Increased Salary Costs			(164,408)	(338,411)	(532,897)	(749,697)	(987,419)
90 Gallon Container Increased Operating Costs			59,439	83,654	68,141	72,915	77,991
Transfer Station/Sac County Increment					1,390,000	1,473,400	1,561,804
Depreciation	14,000		0	0	0	0	0
Total Operating Expenses	13,836,000	14,681,471	15,390,273	16,079,726	18,187,000	19,016,383	19,883,745
NET OPERATING INCOME (LOSS)	404,000	281,529	1,984,601	3,069,176	2,562,556	3,090,413	3,478,057
Nonoperating Revenues (Expenses):							
Interest Income	84,000	80,000	0	0	0	0	0
Other Miscellaneous Income	80,000		0	0	0	0	0
Interest Expense	(188,000)	(238,407)	(662,458)	(631,402)	(917,528)	(863,820)	(802,772)
Operating Transfers In (Out)	(13,000)	(24,059)	(25,503)	(27,033)	(28,655)	(30,374)	(32,196)
Net Nonoperating Revenue (Expense)	(37,000)	(182,466)	(687,961)	(658,435)	(946,183)	(894,194)	(834,969)
NET CHANGE TO RETAINED EARNINGS	367,000	99,063	1,296,641	2,410,741	1,616,373	2,196,219	2,643,088
Retained Earnings (Deficit) Beginning	1,678,016	1,938,016	1,752,079	3,048,720	5,459,461	7,075,834	9,272,053
Prior Period Adjustment							
Equity Transfers In (Out)	(105,000)	(285,000)	0	0	0	0	0
Retained Earnings (Deficit) Ending	\$1,938,016	\$1,752,079	\$3,048,720	\$5,459,461	\$7,075,834	\$9,272,053	\$11,915,141
Sources of Working Capital							
Net Income (Loss)	367,000	99,063	1,296,641	2,410,741	1,616,373	2,196,219	2,643,088
Depreciation	14,000	0	0	0	0	0	0
Increase in Long-Term Liabilities			0	0	0	0	0
Decrease in Restricted Assets			0	0	0	0	0
Decrease in Amt Due from Other Agencies							
COP Proceeds	2,279,000	4,090,441		3,307,653			
Transfer from Waste Removal			0	0	0	0	0
Incr. in Amts Payable from Restr. Assets							
Total Sources of Working Capital	2,660,000	4,189,504	1,296,641	5,718,394	1,616,373	2,196,219	2,643,088

Uses of Working Capital:							
Acquisition of Property/Plant/Equipment	532,000	3,753,711	228,000	3,307,653			
90 Gallon Container Capital Costs			1,063,985	1,223,863	1,383,843	1,552,319	1,729,659
Decrease in Long-Term Liabilities	23,000	256,500	281,200	618,600	701,932	758,796	737,395
Transfers to Other Funds	105,000	285,000	0	0	0	0	0
Prior Period Adj. (vac/sick lv accrual)	564,000						
Increase in Restricted Assets							
Decr. in Amts Payable from Restr. Assets							
Payment to Risk Management	1,293,000						
Total Uses of Working Capital	2,517,000	4,295,211	1,573,185	5,150,116	2,085,775	2,311,115	2,467,054
Working Capital Balance - Beginning	576,918	673,725	568,018	291,474	859,752	390,350	275,454
Net Change to Working Capital	143,000	(105,707)	(276,544)	568,278	(469,402)	(114,896)	176,034
Current Operating Encumbrances	(115,670)						
Prior Year Operating Encumbrances	39,537						
Current Year CIP Carryover	(23,864)						
Prior Year CIP Carryover	53,804		0	0	0	0	0
WORKING CAPITAL BALANCE - ENDING	673,725	568,018	291,474	859,752	390,350	275,454	451,488

ASSUMPTIONS

1. Rate increases are required to maintain appropriate fund balances for each year after 1984-85.
2. 20% rate increase was presented to the Council during August 1984 in connection with the expansion of the interim site. 90 Gallon program would add 8% to the rates necessary to meet these requirements.
3. Additional funds will be needed during 1984-85 and 1985-86 to begin covering parts of the existing site and to respond local residents' concerns about the amount of fill which can be placed in the interim site.
4. Major costs associated with the initiation of a transfer station/hauling to Sac Co. assumed: debt service on transfer station COP of \$3.307 million (\$364397 annually); less landfill operations (\$197000) and landfill equipment (\$158000); plus tipping fee (\$757,120). All costs increased by 6% annually except for debt service.
5. Includes 90 Gallon Container Operating and Capital costs.