



SHORT COURSE ON SOLID WASTES
COLLECTION AND DISPOSAL
Damascus, 20-30 May 1968

EMRO 134

Lecture No.7

Specifications for Containers

Even in smaller cities and towns where it might be considered that regulations concerning specifications for refuse containers are unnecessary, the establishment of some regulations is essential.

A. Minimum requirements for containers

1. Must be strong enough
2. Leak-proof
3. Not too large
4. Not too heavy

B. Major specification items depend on:-

1. Type of collection system

- a. Large containers for dump-loading (see photo - Palm Springs also University of Wisconsin)

- I Weight per cu.yd. of refuse
- II Capacity of lifting equipment
- III Location convenient for lifting
- IV Dempsters can be used for loading-rear
(show photos - American City - Dec. 1959, pg.24)

b. If separation of refuse is required

- I For garbage-tight container with lids
- II For ashes - fire-proof
- III Limits on sizes

c. Carry-out system

- I Householders' containers must have suitable handles
- II Size and weight limitation to permit easy emptying
- III Requirements on location
- IV Containers for collectors to carry out (photo - Refuse Removal Journal - May 1961 - bottom of p.25)

d. Paper bags for domestic collection

- I Single-use - sanitary
- II Must be leak-proof - well constructed
- III Specifications of holders important (photos - Public Works - April 1962 - bottom of pages 102 - 103)

e. Plastic bags for domestic collection

- I Advantages
 - A. Easy to handle and clean
 - B. Corrosion-resistant
 - C. Do not require expensive special vehicles, expensive bins or sack-holders
 - D. No drippage or leaking
- II Disadvantages
 - A. Not fire-proof
 - B. Some cost but becoming less expensive

Table 1 *

1955 Regulations of 908 Cities Concerning
Use and Type of Refuse Containers, By Class

Class of Refuse	Container Required		Durable Metal		Tightfitting Lids		Suitable Handles	
	Yes	No	Yes	No	Yes	No	Yes	No
Mixed refuse	530	58	414	60	440	57	341	89
Garbage	586	21	518	27	557	16	446	68
Noncombustible rubbish	259	151	143	86	121	92	147	64
Combustible rubbish	239	148	139	66	125	77	126	62
Ashes	308	130	202	67	121	116	190	59

* From: Refuse Collection Practice, APWA, 2nd Edition, 1958, p.70

Table 2 *

1955 Regulations of 908 Cities Concerning Size of Refuse
Containers and Weight when Filled, by Class of Refuse

Class of Refuse	Maximum Size (gallons)				Minimum size (gallons)		Maximum Weight Filled (pounds)				
	10-19	20-32	33-50	51 & over	1-9	10 & over	1-24	25-49	50-74	75- 100	101 & over
Mixed refuse	18	296	46	23	33	72	3	8	59	105	9
Garbage	65	321	25	13	63	70	5	9	55	97	8
Noncombustible rubbish	14	110	21	10	13	27	0	7	33	73	5
Combustible rubbish	8	99	20	8	12	25	0	5	34	63	1
Ashes	25	132	11	2	19	29	1	6	43	78	4

f, "Dustless" system

- I Rubber rings on bottom and **hinged** top metal covers with rubber gaskets for sound-deadening
(photos - Public Works for April 1962 - top of p.101)
- II Two-wheeled truck to transport them (see above photo)
- III Special type of collection body required - with lift arrangement for larger sized containers
- IV Containers range in size from 15 to 65 gallons.

2. Use of containers

- a. Commercial - generally requires large storage containers - mostly paper; light weight.
Large pieces of burlap may be used to unload large bins and to carry out, Salvage.
- b. Multi-storey Buildings
 - I Generally must be fire-proof
 - II Must be carted to collection vehicle

* From: Refuse Collection Practice, APWA, 2nd Edition, 1958, p.70

- c. Produce markets, etc.
 - I Material bulky and rather heavy
 - II Daily
 - III Containers should be easy to unload
- d. Special cases
 - I Service stations and garages
 - II Metal industries
 - III Chemical industries
 - IV Hospitals, schools and institutions
 - V Other

C. Construction material for containers

1. Galvanized steel

- a. Durable
- b. Fire-proof
- c. Heavy
- d. Subject to corrosion
- e. Can be bent and dented out of shape

2. Plastics

- a. Low weight
- b. Tough at normal temperatures
- c. Impermeable to moisture
- d. Easily rinsed out
- e. Less noise during collection
- f. Do not corrode or develop sharp edges
- g. When empty, may be blown about if lids not kept on
- h. Susceptible to deterioration in sunlight, but can be protected with addition of carbon black
- i. Tend to crack in cold weather; will split if improperly handled.
This may be overcome by greater thickness
- j. Plastics manufacturers may be located in countries which have no steel mills.

D. For reference - see "The Application of Plastics to Public Cleansing" by G.F.J. Perry, published by the Institute for Public Cleansing - 67th Annual Conference. Copies may be ordered from the Secretary of Institute.