



SHORT COURSE ON SOLID WASTES  
COLLECTION AND DISPOSAL

Damascus, 20-30 May 1968

EMRO 134

Lecture No. 18

### Other Methods

This is supplementary to Lecture No. 17. The intention is to suggest ideas for consideration that tend toward economy and may possibly be short of desirable standards of sanitation. In other words, an improvement of open dumping - at the very least.

A. Converting old dump to sanitary fill method

1. (Photos - Figure 1, P. 10 - "Refuse Collection and Disposal for the Small Community" - U.S. Public Health Service and American Public Works Association - 1953)
2. Also cleaning up an area dump (Photos - Figure 2, P. 10 - above reference)

B. Sanitary landfill for small communities

1. Use of a single crawler-type tractor equipped to pick up and carry one to two cubic yards of cover material
2. The tractor-operator serves as landfill superintendant; no other personnel required
3. Tractor can be small
4. Equipment may be used part of time of street or other public works activities
5. Shared with another community - transported from one place to another on load-bed trailer

C. Controlled burning and covering

1. Common practice of burning at refuse dumps is undesirable
  - a. Never hot enough to burn garbage or material other than loose papers
  - b. Provides harbour for rodents
  - c. Bad smoke nuisance

2. With planning and careful operation, several objectionable features can be overcome
  - a. Not a "cure-all"
  - b. Reduce smoke produced at small additional cost
  - c. May provide interim solution until community grows and can afford better
3. Face of dump should be long to prevent too much piling and compaction before burning
4. Locate so as to take advantage of prevailing wind to create draft
5. Sufficient isolation so surrounding residents not effected
6. Don't dump on area burned previous day
7. Bank 6 to 15 ft. high with 45 degree slope so load dumped will loosen and scatter down bank. (Photo- Figures 1, 2 and 3 on Pages 57, 58, 59, "California Vector Views" - November 1959)
8. Caretaker (preferably full time) uses long-handled hook-fork to finish breaking open and spreading refuse for burning
9. Generally toward evening fire is started on downwind side - results in cleaner burn
10. Near end of burn, matted or bundled materials pulled apart by the long hook so air can get to them for complete burning
11. Best results when 4 or 5 truck loads of refuse burnt at one time

D. Variation of above methods

1. Two trenches dug 4 to 6 feet deep - dirt piled on one side - trench 6 to 10 feet wide
2. One used every other day, then allowed to cool while second trench is used.
3. When trench nearly full, dirt cover placed over it
4. Trenches should be placed so that wind ordinarily would blow length-wise along the trench

E. A less-expensive refuse collection truck

1. Body 14 feet long - 7 1/2 to 8 feet wide, 30 to 32 inches high, of galvanized steel, firm construction
  2. Has rear-end (tail) gate and 2 side gates on each side 12 to 14 inches from top rim. (Photo- Fresno Waste Disposal Department truck)
  3. Side gates - hinged - are lowered till truck nearly full - for easier loading - then fastened in place
  4. A sliding, slatted false tailgate - of wood reinforced with steel placed against front end of and inside truck body with chains lying along bottom of body with ring at end at back end of body (see photo)
  5. After body is loaded a canvas which has been lying rolled up at back of cab is unrolled, fastened to hooks at front, sides and back of body to cover refuse and prevent blowing en route to disposal
  6. Body has no dumping devise, thus is lower to ground for easy of loading and also for less expensive first cost
  7. At disposal site, truck backs to edge of fill, tail gate is lowered, a chain from the tractor at bottom of fill is fastened to chain in truck, tractor pulls load out of truck (see photo)
  8. Truck body being open and of metal easily cleaned
  9. No foreign exchange required for hydraulic dumping equipment
  10. Relatively inexpensive truck can be used
- F. Under ordinary conditions for a large city, compactor type truck may be more efficient.
- G. Burning at disposal should not be permitted except under special conditions.