# WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR THE EASTERN MEDITERRANEAN



# ORGANISATION MONDIALE DE LA SANTÉ BUREAU RÉGIONAL POUR LA MÉDITERRANÉE ORIENTALE

SHORT COURSE ON SOLID WASTES COLLECTION AND DISPOSAL

EMRO 134

Lecture No.22

Damseus, 20-30 May 1968

# Legislation

- A. Legislation -- General principles
  - 1. Statement of objective
  - 2. Definition of terms
  - 3. Specification of the method or means of meeting the objective
  - U. Granting of authority and responsibility for meeting the objective
  - 5. Establishment of penalties for non-compliance
  - 6. Establishment of rules for implementation
  - 7. Means of financing if appropriate

(As examples of legislation included are Act 87 and Act 179 of the Public Acts of Michigan)

- B. Level of Legislation and Regulation
  - 1. Federal -- generally broad
  - 2. State
    - a. Enabling
    - b. Uniform code throughout the state
  - 3. Local ordinances
    - a. Control of local conditions
    - b. Much more specific in details

Rules as adopted by the Director and submitted to the Secretary of State. They are subject to the approval of the Legislative Rules Committee.

# DEPARTMENT OF PUBLIC HEALTH ENGINEERING DIVISION

(By authority conferred on the Department of Public Health by section 6 of Act No.87 of the Public Acts of 1965 being section 325.296 of the compiled laws of 1948 and by section 7 of Act No. 146 of the Public Acts of 1919, as amended, being section 325.7 of the compiled laws of 1948.)

#### Solid Waste Disposal

### R 325.1101. Definitions

Rule 1. As used in these rules:

- (a) "Cell" means compacted refuse completely enveloped by cover material.
- (b) "Central garbage grinding" means the grinding by mechanical means of garbage accumulated by municipal, commercial or private delivery vehicles.
  - (c) "Director" means the director of the department of public health.
- (d) "Disposal area" means a site, location, tract of land, area, building, structure or premise used or intended to be used for partial and/or total refuse disposal.
- (e) "Ground water" means water in the ground that is in the zone of saturation.
- (f) "Habitable building" means a structure or part thereof where persons live, sleep, reside or congregate.
- (g) "Hazardous material" includes, but is not limited to, explosives, pathological wastes, radioactive materials and chemicals.
- (h) "Health department" means an approved city, county or district health department, including the Michigan department of public health.
- (i) "Open dump" means a site where refuse is dumped and which due to lack of control may create a breeding place for flies and rats, may catch fire or may produce air pollution.
- (j) "premises" means a tract or parcel of land with or without habitable buildings.
  - (k) "Salvaging" means the controlled removal of reusable materials.

- (1) "Sanitary landfill" means a method of disposing of refuse on land without creating nuisances or hazards to public health or safety, by utilizing principles of engineering to confine the refuse to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of suitable cover at the conclusion of each day's operation or at more frequent intervals as necessary.
  - (m) "Scavenging" means the uncontrolled picking of materials.
- (n) "Surface water" means a body of water whose top surface is exposed to the atmosphere including a flowing body as well as a pond and a lake.
- R. 325.1102 General requirements for licensing
- Rule 2. Where refuse is removed from premises, to a location other than its point of origin, for disposal or where refuse is not removed from the premises but disposed at the point of origin in such quantities as to become of public health concern:

Plans and specifications

(a) Refuse disposal facilities shall be designed in accordance with these rules by a registered professional engineer. Detailed plans, specifications, and necessary reports shall be submitted in triplicate to the health department having jurisdiction for review, approval and file. Alterations or deviations from these plans shall also be submitted for approval and file. In the development of the required plans and specifications for sanitary landfill, hog feeding and open dump operations when the health department, in their judgment, believe that technical problems will not be encountered, the services of a registered professional engineer may be waived.

Inspection and evaluation

- (b) The director or health department having jurisdiction shall make routine inspections and evaluations of solid waste disposal operations. A written notice of deficiencies, together with recommendations for their correction, shall be provided to the operator or the appropriate individual, firm, corporation, governmental unit or agency thereof responsible for the solid waste disposal operation.
- R 325.1103. Sanitary landfills; design.

Maps

Rule 3. (1) The design of the sanitary landfill shall include 1 or more topographic maps at a scale of not over 100 feet to the inch with contour intervals which clearly show the character of land. These maps and accompanying data shall indicate the following: the proposed fill area; any borrow area; access roads; on-site roads; grades for proper drainage of each lift required and a typical cross-section of a lift; special drainage devices if necessary; fencing; structures on the site; existing and proposed utilities; and all other pertinent information to indicate clearly the soil

characteristics, water table, orderly development, operation and completion of the sanitary landfill. A sanitary survey and a land use plan of the adjacent areas may be required.

Geology

- (2) The geological characteristics of the site shall be determined by on-site testing or from earlier reliable survey data to indicate soil conditions, water tables and subsurface characteristics.
- Characteristics of cover material
  (3) Cover material shall be of such character that it can be compacted to provide a tight seal and shall be free of putrescible materials and large objects.

Water collution and nuisance control

(h) Sanitary landfill operations shall be so designed and operated that conditions of unlawful pollution will not be created and injury to ground and surface waters avoided which might interfere with legitimate water uses. Water-filled areas not directly connected to natural lakes, rivers or streams may be filled with specific inert material not detrimental to legitimate water uses and which will not create a nuisance or hazard to health. Special approval of the inert material to be used in this manner is required in writing from the health department having jurisdiction. Such approval shall be filled with the Director. Inert material shall not include residue from refuse incinerators, unless evidence, satisfactory to the Director, is submitted by the licensee substantiating that such residue will not create a nuisance or hazard to health.

Equipment

- (5) Adequate numbers, types and sizes of properly maintained equipment shall be used in operating the landfill in accordance with good engineering practice and with these rules. Emergency equipment shall be available on the site or suitable arrangements made for such equipment from other sources during equipment breakdown or during peak loads.
- R 325.1104. Sanitary landfills; Preparation of the site

On-site roads

Rule 4. (1) On-site roads shall be designed and constructed so that traffic will flow smoothly and will not be interrupted by ordinary inclement weather.

Fire protection

- (2) Suitable measures shall be available to extinguish accidental fires.
- R 325.1105. Sanitary landfills; Operations

Supervision of Operation

Rule 5. (1) A landfill operation shall be under the direction of a responsible individual at all times.

Limited access

(2) Access to a sanitary landfill shall be limited to those times when an attendant is on duty and only to those authorized to use the site for the disposal of refuse, except as otherwise approved in writing by the health department having jurisdiction and concurred in by the director. Access to the site shall be controlled by a suitable barrier.

Unloading of refuse

(3) Unloading of refuse shall be continuously supervised, except as may be modified by Rule 5. (2)

Site maintenance

(4) Measures shall be provided to control dust and blowing paper. The entire area shall be kept clean and orderly.

Soreading and compacting of refuse

(5) Pefuse shall be spread so that it can be compacted in layers not exceeding a depth of 2 ft. of compacted material. Large and bulky items, when not excluded from the site, shall be disposed of in a manner approved by the health department.

Volume of cells

(6) Volumes of individual cells shall not exceed the darly quantity of wastes.

Daily cover

(7) A compacted layer of at least 5 inches of suitable cover material shall be placed on all exposed refuse by the end of each working day. The placing of cover material may be modified in writing by the health department having jurisdiction when deemed necessary.

Final cover

(8) A layer of suitable cover material compacted to a minimum thickness of 2 feet shall be placed over the entire surface of each portion of the final lift not later than 1 week following the placement of refuse within that portion.

Maintenance of cover

(9) All daily cover depths must be continually maintained and final cover depths shall be maintained for a period of 2 years.

Hazardous materials, including liquids and sewage

(10) Hazardous materials, including liquids and sewage, shall not be disposed of in a sanitary landfill unless special provisions are made for such disposal through the health department having jurisdiction. This provision in no way precludes the right of a landfill operator to exclude any materials as a part of his operational standards.

Burning

(11) No garbage or refuse containing garbage shall be burned at a sanitary landfill. Burning of select materials shall be severely restricted and shall be conducted only in designated areas with the permission of the health department having jurisdiction and other appropriate authorities.

Salvage

(12) Salvaging, if permitted, shall be organized so that it will not interfere with prompt sanitary disposal of refuse or create unsightliness or health hazards. This provision in no way precludes the right of a landfill operator to prevent salvaging as a part of his operational standards. Scavenging shall not be permitted.

Insect and rodent control

(13) Conditions unfavourable for the production of insects and rodents shall be maintained by carrying out routine landfill operations promptly in a systematic manner. Supplemental insect and rodent control measures shall be instituted whenever necessary.

Drainage of surface water

(14) The entire site, including the fill surface, shall be graded and provided with drainage facilities to minimize runoff onto and into the fill, to prevent erosion or washing of the fill, to drain off rainwater falling on the fill, and to prevent the collection of standing water.

Completion of landfill

(15) An inspection of the entire site shall be made by the health department having jurisdiction to determine compliance with approved plans and specifications before the earth-moving equipment is removed from the site. Any necessary corrective work shall be performed before the landfill project is accepted as completed. Arrangements shall be made for the repair of all cracked, eroded, and uneven areas in the final cover during the first 2 years following completion of the fill.

Modification of sanitary landfill rules

(16) Modifications of the rules on sanitary landfills as applicable to existing disposal areas may be made by the health department having jurisdiction. These modifications may continue in effect to May 31, 1968 providing the modifications are: approved in writing, supported by a comprehensive improvement plan, the modified operations are not a hazard to public health nor contribute to a nuisance and are concurred in by the director.

R 325.1106. Open dumps

Rule 6. Open dumps shall not be permitted unless the location and specific method of operation has been approved in writing by the health department and concurred in by the director, and provided further that the isolation and operation and maintenance does not constitute a nuisance or hazard to health.

R 325.1107. Hog feeding

Feeding area

Rule 7. (1) Garbage, as defined in Act 87, Public Acts of 1965, when fed to hogs shall be fed on a readily cleanable impervious feeding area.

#### General area

(2) The general area including cooking facilities, when provided, shall be kept in a sanitary manner to prevent the attraction, harborage, and breeding of insects and rodents and shall not create a nuisance.

#### Residue disposal

(3) All residues resulting from the day's feeding operation shall be disposed of by a method approved by the health department having jurisdiction.

## Garbage cooking

(4) Garbage cooking operations licensed under Act No.173, Public Acts of 1953 are exempt from the license provision of Act No.87, Public Acts of 1965 but shall comply with all other applicable sections and these rules.

## R 325.1108. Central garbage grinding

Rule 8. Central garbage grinders receiving wastes categorized under introductory paragraph of Rule 2. shall be designed to provide reasonable safety for employees and to incorporate operating features which will assist in maintaining and operating the facility in a sanitary manner. The general sanitation in and around the central garbage grinder as well as the operational procedures embloyed shall be subject to the approval of the health department.

#### R 325.1109. Refuse burners

Refuse burners receiving wastes categorized under introductory paragraph of Rule 2. shall be designed: to provide reasonable safety for employees, to incorporate operating features which will assist in maintaining and operating the facility in a sanitary manner and in accordance with Act No.348 of the Public Acts of 1965 (the Air Pollution Control Act) and applicable local requirements. The general sanitation in and around the refuse burner as well as the operational procedures employed shall be subject to the approval of the health department.

#### R 325.1110. Other methods

Rule 10. Any other method of solid waste disposal not covered by these rules shall be reviewed by the health department for the purposes of evaluating the design and operational methods with reference to: the nuisance factor, the safety of employees and the protection of the public health. Such disposal methods shall be subject to the evaluation and approval of the director.

# ACT 87

# OF THE PUBLIC ACTS OF 1965

AN ACT to license and regulate garbage and refuse disposal; and to provide a menalty for violation of this act.

The People of the State of Michigan enact:

Sec. 1. As used in this act:

- (a) "Refuse" means putrescible and nonputrescible solid wastes, except body wastes, and includes garbage, rubbish, ashes, incinerator ash, incinerator residue, street cleanings and solid market and industrial wastes.
- (b) "Garbage" means rejected food wastes including waste accumulation of animal, fruit or vegetable matter used or intended for food or that attend the preparation, use, cooking, dealing in or storing of meat, fish, fowl, fruit or vegetable.
- (c) "Rubbish" means nonputrescrible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes, such as paper, cardboard, tin cans, yard clippings, wood, glass, bedding, crockery, or litter of any kind that will be a detriment to the public health and safety.
- (d) "Ashes" means the residue from the burning of wood, coal, coke, or other combustible materials.
  - (e) "Commissioner" means the state health commissioner.
- (f) "Health Officer" means a full time administrative officer of an approved city, county or district department of health.
- (g) Applicant means individuals, firms, corporations or any political subdivisions of the state including any governmental authority created by statute.
- Sec. 2. No person shall dispose of any refuse at any place except a disposal area licensed as provided in this act. Nothing in this act nor any act of the commissioner's shall usure the legal right of a local governing body from developing and enforcing local ordinances, codes, or rules and regulations on solid waste disposal equal to or more stringent than the provisions of this act, nor will this act relieve the applicant for license to operate a disposal area from obtaining a license from a local governing body when required or relieve the person owning or operating a disposal area from responsibility for securing proper zoning permits or complying with all applicable local ordinances, codes, or rules and regulations not in conflict with this act.

- Sec. 3. (1) A person, partnership, corporation, governmental unit or agency thereof desiring a license to operate a disposal area shall make application therefor each year to the commissioner through the health officer on a form provided by the commissioner. Where the disposal area is located in a county or city not having a full time organized local health department, the application shall be made directly to the commissioner.
- (2) The application shall contain the name and residence of the applicant, the location of the proposed disposal area, and such other information as may be necessary. The application shall be accompanied by a fee of \$25.00, except that governments and agencies thereof are exempt from payment of the fee.
- (3) Fees collected by the health officer shall be deposited with the city or county treasurer, who shall keep the deposits in a special fund designated for use in carrying out the purposes of this act. If there is an ordinance or regulation prohibiting a city board of health or health officer from maintaining any such special fund, the fees shall be deposited and used in accordance with the ordinance and regulations. Fees collected by the commissioner shall be deposited in the state treasury to the credit of the general fund.
- Sec. 4. (1) Upon receipt of the application the commissioner or health officer or their representatives shall inspect the proposed site and determine if the proposed operation complies with this act and the rules and regulations adopted pursuant thereto.
- (2) If the inspection discloses that the disposal area and the proposed operation thereof comply with this act and the rules and regulations adopted hereunder, and the commissioner or health officer finds that the applicant is a responsible and suitable person to conduct the business, the commissioner shall issue a license to the applicant upon filing by the applicant with the commissioner a performance bond in an amount equal to \$500.00 per acre of disposal area, but not less than \$2,500.00.
- (3) Licenses shall expire on September 1 following the date of issuance but may be renewed upon payment of an annual fee of \$25.00 if the licensee has complied with the act and the rules and regulations adopted hereunder.
- Sec. 5. The commissioner may revoke a license, after reasonable notice and hearing if he finds that the disposal area is not operated in accordance with this act and the rules and regulations adopted hereunder.
- Sec. 6. The commissioner shall promulgate rules and regulations which shall contain sanitary standards for disposal areas and otherwise implement this act. The rules shall be promulgated in accordance with the provisions of Act No.88 of the Public Acts of 1913, as amended, being sections 24.71 to 24.80 of the Compiled Laws of 1948, and subject to Act No.197 of the Public Acts of 1952, as amended, being sections 24.101 to 24.110 of the Compiled Laws of 1948. The commissioner or health officer shall periodically inspect all licensed disposal areas and enforce this act.

Lecture No.22 page 10

- Sec. 7. This act does not prohibit a person from discosing of refuse from his own household upon his own land as long as such disposal does not create a nuisance or hazard to health.
- Sec. 8. Any person who violates any provisions of this act is guilty of a misdemonar. Each day of the violation shall be considered a separate violation.

This act is ordered to take immediate effect.

This Act became effective June 28, 1965.

#### STATE OF MICHIGAN

Act 179, Public Acts of 1947 As Last Amended By Act 16, Public Acts of 1962

An act to provide for the incorporation of certain municipal authorities for the collection or disposal, or both, of garbage or rubbish, or both, and for the operation of a dog pound; and to prescribe the powers, rights and duties thereof.

123.301 Garbage and rubbish disposal and dog pound authority; incorporation by municipalities. M.S.A. 5.2725(1)

Sec. 1. Any 2 or more cities, villages or townships, hereinafter referred to as "municipalities", or any combination thereof, may incorporate an authority for the purpose of the collection or disposal, or both, of garbage or rubbish, or both, and for the establishment and operation of a dog pound, by the adoption of articles of incorporation, by the legislative body of each such municipality. The fact of such adoption shall be endorsed on such articles of incorporation by the mayor and clerk of the city, the president and clerk of the village, or the supervisor and clerk of the township, as the case may be, in form substantially as follows:

	foregoing articles				
	of the				
	county, Michigar		duly hel	ld on the .	
day	of,	19			
of a	sa <b>i</b> d	Clerk	of said		

The authority shall be comorised of the territory within such incorporating municipalities. The articles of incorporation shall be published at least once in a newspaper designated in said articles and circulating within the authority. One printed copy of such articles of incorporation certified as a true copy by the person or persons designated therefor, with the date and place of such publication, shall be filed with each the secretary of state and the clerk of the county within which such authority or the major portion thereof is located. Such authority shall become effective at the time provided in said articles of incorporation. The validity of such incorporation shall be conclusively presumed unless questioned in a court of competent jurisdiction within 60 days after the filing of such certified copies with the secretary of state and the county clerk.

123,302 Same; articles of incorporation, contents.

Sec. 2. Said articles of incorporation shall state the name of such authority, the names of various municipalities creating the same, the purpose or purposes for which it is created, the nowers, duties and limitations of the authority and its officers, the method of selecting its governing body,

officers and employees, the person or persons who are charged with the responsibility of causing the articles of incorporation to be published and printed copies to be certified and filed as above provided or who are charged with any other responsibility in connection with the incorporation of said authority, all of which shall be subject to the provisions of the constitution and statutes of the state of Michigan and particularly of this act.

- 123.303 Same: corporate powers: construction of act.
- Sec. 3. Such authority shall be a body coroorate with power to sue or be sued in any court of this state. It shall possess all the powers necessary to carry out the purposes of its incorporation, and those incident thereto. The enumeration of any powers in this act shall not be construed as a limitation upon such general powers.
- 123.304 Same; acquisition, management, sale or lease of land; condemnation. Sec. 4. For the purposes of its incorporation, the authorit may acquire private property by purchase, lease, gift, devise or condemnation, either within or without its corporate limits, and may hold, manage, control, sell, exchange or lease such property. For the purpose of condemnation, it may proceed under the provisions of Act No.119 of the Public Acts of 1911 as now or hereafter amended, or any other appropriate statute.
- 123.305 Same; contracts, time limitations, charges. M.S.A. 5.2725(5)

  Sec. 5. The authority and any municipality which shall be a part thereof, shall have authority to enter into contract for the collection or disposal, or both, by the authority of garbage or rubbish, or both, originating in such municipality, and for the establishment and operation of a dog pound for such member municipalities, for a period not exceeding 30 years. The charges specified in such contract shall be subject to increase by the authority, if necessary, in order to provide funds to meet its obligations. Such authority may also enter into contracts with cities, villages and townships which are not a part thereof, which contracts may provide for charges greater than those to the municipalities which are a part of the authority, but no such contract shall be for a period longer than 30 years and the charges thereunder shall be subject to change from time to time.
- 123.306 Same; right to make subcontracts.
- Sec. 6. The authority shall have the power to contract with any person, firm or corporation for the performance by the latter of any part of the work of collecting or disposing, or both, of garbage or rubbish, or both.
- 123.307 Same; amendments of articles of incorporation.
- Sec. 7. Any city, village or township may become a part of such authority by amendment to the articles of incorporation, adopted by the legislative body of such city, village or township and by the legislative body of each city, village or township of which such authority is composed. Other amendments may be made to such articles of incorporation if adopted by the legislative body of each city, village or township of which the authority is composed. Any such amendment shall be endorsed, published and certified printed copies filed in the same manner as the original articles of incorporation, except that the filed printed copies shall be certified by the recording officer of the authority.

- 123,308 Power to raise and expend moneys; payment of contracts; taxing power denied authority.
- Sec. 8. The legislative body of each city, village or township which is a part of such authority is authorized to raise by tax or par from its general funds, any moneys required to be paid by the articles of incorporation or by the terms of any contract between it and the authority, unless some other method is provided therefor in such articles of incorporation or contract. The authority shall have no direct taxing power.
- 123.309 Garbage and rubbish disposal authority; bonds, issuance, payment.
  M.S.A. 5.2725(9)
- Sec. 9. For the purpose of acquiring constructing, improving, enlarging or extending facilities for the collection or disposal, or both, of garbage or rubbish, or both, or for the purpose of refunding bonds previously issued, the authority may issue self-liquidating revenue bonds in accordance with the provisions of Act No. 94 of the Public Acts of 1933, as amended, being sections 141.101 to 141.139 of the Compiled Laws of 1948. No such bonds shall be a general obligation of the authority but shall be payable from revenues only.
- 123.310 Powers additional.
- Sec. 10. The powers herein granted shall be in addition to those granted by any statute or charter.

Distributed by Division of Engineering, Michigan Denartment of Public Health 10/66