

REFERRAL FROM WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION
TO HAYSVILLE CITY PLANNING COMMISSION.

CASE No. CU-76 TO BE HEARD BY THE M. A. P. C. ON March 5, 1964

Request for a Conditional Use Permit to establish a Sanitary Landfill Site.

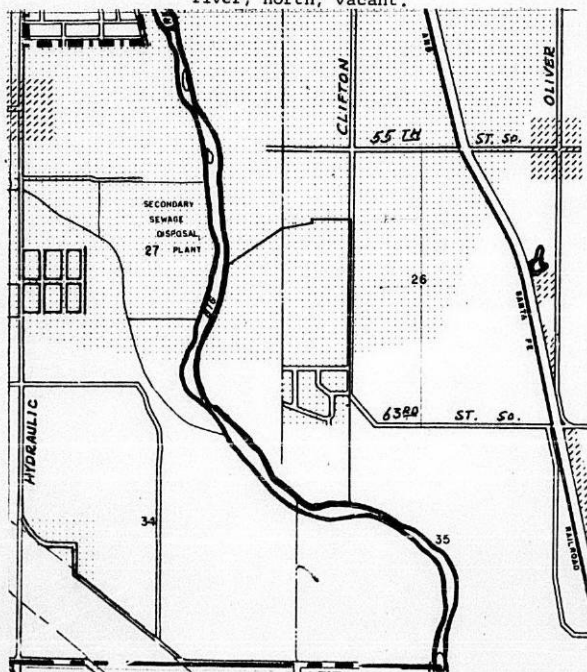
LOCATION OF PROPERTY: South of 55th Street South and west of Clifton.

LEGAL DESCRIPTION OF PROPERTY:

See Attached Sheet.

PETITIONER: Metropolitan Area Planning Commission
ADDRESS: 104 South Main

COUNCIL FOR PETITIONER: Leland R. Edmonds, Secretary
SURROUNDING LAND USE: East, farm house and vacant; south, river; west,
river; north, vacant.



RECOMMENDATION OR COMMENTS BY H. C. P. C. :

CASE NO. CU-76
CONDITIONAL USE PERMIT TO ESTABLISH
A SANITARY LANDFILL SITE

Beginning at the NE corner of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 26, Township 28 South, Range 1 East; thence W along the N line of said SW $\frac{1}{4}$ to a point 568 feet E of the NW corner of said SW $\frac{1}{4}$; thence S parallel to the E line of said SW $\frac{1}{4}$ a distance of 58.3 feet; thence SWly 570 feet to a point on the W line of said SW $\frac{1}{4}$; said point being 140 feet S of the NW corner; thence SWly to a point on the left bank of the Arkansas River, said point being 850 feet S of the N line of Government Lot 2 in the NE $\frac{1}{4}$ of Section 27, Township 28 South, Range 1 East; thence Sly and Ely along said left bank to the E line of the W $\frac{1}{4}$ of the NW $\frac{1}{4}$; thence N to the point of beginning, except for that portion dedicated as Clifton Avenue. Generally located in an area south of 55th Street South and west of Clifton.

City Commission Communication

To: The Honorable Board of City Commissioners May 2, 1963
Subject: Sanitary Landfill Site CC 298

The present sanitary landfill site, located three-fourths of a mile east of Hydraulic on MacArthur Road, is nearly filled to its capacity. It is, therefore, necessary that immediate steps be taken to acquire additional land for refuse disposal for the City and the Metropolitan Area.

BACKGROUND

The City and County governments have provided sites for the disposal of refuse for at least the past twenty-five years, the purpose being to prevent insanitary and dangerous conditions caused by the accumulation of garbage and trash and to prevent the dumping of same along the public rights-of-way.

The present refuse disposal site was acquired in two separate transactions. The first tract, approximately 58 acres, was acquired in June, 1954, by negotiated purchase. The second tract, approximately 10.13 acres, was acquired in October, 1960, also by negotiated purchase.

During five years of operation at the present landfill site, a second refuse disposal site was also in operation. The first of these operations was on the Cooper tract, at Meridian and Central. This tract was approximately 18 acres and included an abandoned sand pit, approximately 12 acres in size, with water about 40 feet deep.

Upon completion of the Cooper disposal operation, in May, 1956, another refuse disposal site was acquired at 21st and Meridian. This site was known as the Provence tract, and also included an abandoned sandpit. The tract was approximately 15 acres, with the sand pit approximately 10 acres in size. The average depth of the water in this pit was about 35 feet. The completion date of the refuse disposal operation at this location was about July 1, 1958, although the site is still used for the disposal of street sweepings.

In the summer of 1958, negotiations were begun for a tract of land of approximately 140 acres located near 13th Street and Hoover Road. An option to purchase was taken by the City and an application for a conditional use permit for the operation of a sanitary landfill was filed with the Metropolitan Area Planning Department in October, 1958. Hearings were held December 18, 1958, and January 8, 1959. As a result of these hearings, the Metropolitan Area Planning Commission referred the request to the County Commission without recommendation. The County Commission later denied the application.

City of Wichita, Kansas

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963
CC 298 - 2

Again in October, 1959, an option to purchase 160 acres of land, located south of 37th Street North and east of Ridge Road, was taken by the City. An application for a conditional use permit for the operation of a sanitary landfill on this property was filed with the Metropolitan Area Planning Department in November, 1959. A hearing was held on December 3, 1959, at which time the application was denied by the Metropolitan Area Planning Commission. This action was upheld by the County Commission at a later date.

In August, 1960, negotiations were begun for the acquisition of a tract of land, 10.13 acres, located adjacent to the present landfill site on East MacArthur Road. This tract was acquired by negotiated purchase in October, 1960.

The acquisition of this land helped to relieve the situation with regard to needed landfill space, until the present time. Additional relief resulted from raising the entire dumping area grade. The total depth of fill at the present landfill site averages about 30 feet. This is about three times deeper than the completed fill for an average landfill operation. The depth of fill also accounts for the length of time this site has been used for a refuse disposal operation.

METHODS OF DISPOSAL

Several methods have been developed for the disposal of household refuse. Among these are Sanitary Landfills, Centralized Incinerators, Composting and Open Dumping. Where land is available not too far a distance from the point of collection, the Sanitary Landfill has generally proved itself to be the most economical and satisfactory method. Open dumps are still common in some places, but since they are the source of a number of public health and safety problems--diseases, air and water pollution, fires, mosquitoes, rodents, insects--they are not recommended. Cost comparisons, both for capital costs and for operating costs, as obtained from Municipal Refuse Disposal¹ and from recent articles published in trade magazines, are as follows:

Centralized Incinerators

Following are operating costs per ton for municipal incinerators in six cities of the United States:

Philadelphia, Pennsylvania	\$4.24
Washington, D. C. (does not include amortization costs)	2.28
Detroit, Michigan	4.30
Milwaukee, Wisconsin	6.49
New York City	5.55
Los Angeles, California	3.13 ¹

¹Municipal Refuse Disposal, prepared by the Committee on Refuse Disposal, American Public Works Association, 1961.

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963

CC 298 - 3

Following is a quote from the same text¹ with regard to municipal incinerators:

"The capital costs of an incineration plant are relatively high; operating costs, considered alone, are also usually relatively high; and it is not a complete disposal method--ashes and other residue from the furnaces must be hauled to a disposal site."

A modern, high-efficiency incinerator costs approximately \$5,000.00 per ton of rated 24-hour burning capacity. The estimated daily volume of refuse disposal of by the Metropolitan Area is 700 to 800 tons. Thus, the capital costs for the installation of an incinerator would be approximately \$3,500,000.00 to \$4,000,000.00.

Composting

Since there are so few composting plants in operation in the United States that handle refuse for municipalities, capital and operating costs can only be estimated on the basis of experience in pilot operations. Costs will approximate those of an incineration plant for a comparable amount of refuse disposal and net costs will vary widely with the type of plant, degree of mechanization, and amount of revenue there is from the sale of the end product. Capital costs may be as low as \$1,500.00 per ton of daily capacity and as high as \$6,000.00; and plant operating costs may vary from \$2.00 to \$5.00 a ton of refuse received at the plant. Revenue from the sale of the end product can either reduce the costs or can produce a profit under favorable conditions.¹

Mr. Richard Stovroff of the Composting Corporation of America in San Francisco made rather extensive studies of costs in connection with his plans to build a composting plant to operate on a profitable basis. His figures were based on costs some 8 or 9 years ago. At that time the analysis indicated that it would cost around \$3.00 a ton to compost the material delivered to the plant, after deducting the value of salvagable materials. This figure at that time could have been reduced some if the plant were to operate on a two or three shift basis. However, this analysis indicated that the material would have to sell for at least \$3.00 a ton at the plant site, not including the cost of advertising or sales operations. This was based on an operation of 200 to 300 tons per day. It would have required an extensive sales operation to dispose of that much compost material. This figure would be increased a little now with increased costs, so you can estimate from that figure as to whether or not the necessary quantity of material can be sold at a particular plant.²

¹Municipal Refuse Disposal, prepared by the Committee on Refuse Disposal, American Public Works Association, 1961.

²Compost Science, Spring, 1961 -- "Contribute to Normal Disposal Cost" by Harold B. Gotaas, Dean, the Technological Institute, Northwestern University.

City of Wichita, Kansas

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963

CC.298 - 4

As of this date, Phoenix, Arizona, is the only city in the United States known to be disposing of their refuse through the composting method. Even in Phoenix, only a small portion of the total volume of refuse is being disposed of in this manner.

Sanitary Landfills

Operating costs for sanitary landfills are approximately one-third of those for incineration, unless hauling costs to landfill sites are excessive. Landfills are operated for from 50¢ to \$2.00 per ton. The total includes cost of land, equipment, depreciation, labor and operation. The average cost nationwide is approximately \$1.00 a ton of refuse delivered to the site. Los Angeles, California, operates five sanitary landfills at costs ranging from 52¢ to 99¢ per ton. Wichita's costs have ranged from 23¢ to 39¢ per ton, excluding land costs.

SITE CONSIDERATIONS

The General Statutes of Kansas, 1961 Supplement, Section 12-2123, give the City authority to acquire a site or sites for the disposal of garbage, rubbish or trash within or without the City by gift, purchase or condemnation. If the City condemns, it acquires a fee simple title thereto. The statute further authorizes the City to pay for such site or sites and the construction of all necessary facilities and equipment to be used in the disposal of garbage, rubbish or trash by the issuance of general bonds in the manner provided by law for the issuance of general improvement bonds of the City. (No vote required.)

Many factors must be considered to determine the suitability of a site for a landfill project. Some of these factors are as follows:

- (1) Public Health and Safety: A sanitary landfill should be located, designed and operated in a manner to meet public health standards and requirements for control of nuisances, health hazards, fires and air pollution. The landfill should be aesthetically acceptable and noise kept at a minimum.
- (2) Land Requirements: The land requirement for the City of Wichita and the metropolitan area is approximately 30 acres per year. An average of one acre per year is required for each 10,000 population if the depth of compacted refuse is to be about seven feet. In general, an area should be large enough to permit disposal for a period of at least five years.
- (3) Topography: Depressed areas such as ravines, swamps, and abandoned barrow pits in which the grade must be raised are usually considered topographically and economically suitable for sanitary landfill sites. In these areas, the fill operations must be conducted

City of Wichita, Kansas.

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963
CC 298 - 5

so that proper surface drainage is maintained. The topography of the site may determine the method of landfill to be used; that is, the trench method, the area method, or the ramp method. Under certain conditions, variations or combinations of these methods may be used. The flat or gently rolling ground is particularly suited to the trench method of disposal in which refuse is placed in a trench and covered with the material removed from the excavation.

(4) Availability of Cover Material: The availability of adequate cover material for a landfill operation is most important. The type of soil used is important since it determines the equipment requirements for excavating, hauling and compacting. The most desirable is a sandy loam, free of large stones. When sandy loam soil is used, a tight cover can be provided and maintained with the least expense. Other types of soil can be used, but frequently require additional work for excavation or compaction. Although a landfill site may be located ideally, without an adequate supply of cover material at the site, it should not be considered.

(5) Proximity to Residences and Industry: In selecting a site, consideration must be given to residences in the vicinity. The public is usually concerned with health nuisances and safety problems and with the possibility that the area in which a landfill is to be located will depreciate. It is best to consider the possibility of objections in advance of a site selection and overcome these objections with a stated plan of efficient landfill operation. Proper operation of a fill and emphasis on how the site eventually will be improved and used usually overcome these objections.

(6) Accessibility: The site should have several access roads so that if one road is temporarily unusable, the site is not isolated.

(7) Length of Haul: The location of a site beyond ten miles from the collection area is undesirable; however, the use of transfer stations and large compaction trailers for hauling refuse to a disposal site has increased the economical-haul distance. The use of this type equipment may even increase this distance as much as one hundred per cent. The maximum length of haul can be answered only by an engineering analysis. Hauling costs may not be the deciding factor in the selection of a landfill site, but they must be considered.

(8) Climatology: Weather is a significant factor in evaluating landfill sites. A prolonged rainy season can flood low areas making it difficult, if not impossible, for refuse vehicles to maneuver at a landfill site. The intensity and direction of prevailing winds are very important in controlling blowing paper and in determining in which direction possible odors will be blown.

City of Wichita, Kansas

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963
CC 298 - 6

(9) Drainage: Proper drainage for a sanitary landfill itself is important; however, it is also important to consider what effect the fill will have on natural drainage in the general area. A ravine that is dry most of the year, but which may be a channel for a torrent of water after a cloudburst, should not be used as a landfill area. However, run-off water can frequently be inexpensively diverted around landfill areas.

(10) Future Land Uses: Consideration must be given as to how a landfill site can be used when it is completed. Many cities have turned sanitary landfills into play areas, athletic fields and parks. Other cities have completed sanitary landfills to extend airport runways. The improvement of property by filling it is one of the chief economic advantages of the sanitary landfill method of disposal.

(11) Land Costs: Several factors should be considered in evaluating the cost of a site. These include access roads, the cost of hauling based on the distance, present road conditions, the availability of cover material, the proximity to residences and the topography. The initial cost, however, should be considered in comparison with the value of the land when the fill is completed.

(12) Public Acceptance: Public acceptance is very important in the selection of a site for a sanitary landfill. Even though a proposed site is in an uninhabited area, people who regularly drive past it think it will be undesirable and will protest having it there. Although no sanitary landfill site will be acceptable to all, the success of its operation depends upon minimum objection which is accomplished through efficient operation.

OTHER CONSIDERATIONS

As indicated previously, the City of Wichita and Sedgwick County have operated two separate landfills concurrently for substantial periods of time. This procedure, while more expensive as far as disposal costs are concerned, does operate to reduce collection costs. In recent meetings with representatives of the Independent Trash Haulers Association, it has been stated that the association would support an increase in disposal fees, provided the revenues were used for the acquisition and operation of additional disposal sites.

The Director of Water and Sewage Treatment has indicated that the existing sanitary landfill site would be favorable to that department for the disposal of digested sludge. It has been indicated that the availability of such a site would postpone the time when it will be necessary to construct and operate a vacuum filtering and drying facility for sludge disposal. A filtering and drying facility will cost from \$500,000.00 to \$750,000.00 to construct, depending upon the type constructed, and will cost between \$100,000.00 and \$130,000.00 per year to operate, again depending

City of Wichita, Kansas

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963

CC 298 - 7

upon the type of operation. Funds are currently available in the Sewage Treatment Plant Bond Fund which could be used for the purchase of the existing sanitary landfill site. These funds, in turn, can be made available to offset a portion of the cost of acquiring additional landfill space.

During the past year, a large number of sites have been viewed and considered for use for sanitary landfill purposes. Locations have ranged from sites within the present city limits to sites located as much as fourteen miles from the center of the city. Asking prices have ranged from \$250.00 per acre to \$2,750.00 per acre.

Although the trend in recent years has been toward municipal operation of refuse disposal services, some municipalities contract with private companies to provide such service. The bases on which a city decides whether to use contract disposal services are costs and efficiency. Whether contract disposal is economical for the city depends on local circumstances. Under contract disposal, the major direct expenditures are to the contractor and to city employees for regulatory and inspection services. Capital expenditures for sites, buildings and equipment are reduced. This may be an important factor if other capital improvements are more urgently needed. A proposal has been received from a Wichita company looking toward the negotiation of a contract for the operation of a sanitary landfill site. The proposal indicates that the company would be willing to bind itself to conduct such an operation for a period of from five to ten years. The company further proposes to provide all facilities necessary for refuse disposal, including the land, machinery, equipment, labor and any other facilities required. The schedule of rates to be charged for all users of disposal facilities, including all City, County and other governmental vehicles, would be comparable to that now charged by the City and would be subject to the approval of the City Commission. It is further proposed that the appropriate City department would prescribe all disposal procedures and approve disposal methods. The company would receive all revenues derived from the present fees, plus exclusive right to salvage any salable material at the disposal site. It is the company's contention that an operation of this type by a private contractor could provide additional services to both independent refuse collectors and manufacturing concerns not now provided by the City.

RECOMMENDATIONS

Based on the above considerations, it is recommended that the City acquire immediately an additional 38 acres immediately adjacent to the existing sanitary landfill site to be used for the continuation of the operation of the City's primary disposal operation. An option (Option A) has been obtained for the purchase of 38 acres from Dwight and Hazel Chapin at a price of \$1,750.00 per acre. A second option (Option B) has been acquired for the purchase of an additional 60.95 acres, including all improvements, at a price of \$1,750.00 per acre. This option becomes effective upon the purchase of the initial 38 acres and extends until March in 1964. The above properties have been appraised by appraisers appointed by the Wichita Real Estate Board (Herman M. Oakes, Roscoe Williams and James W. Sanders) at a total value of \$170,285.00. The report, dated March 15, 1963, is available for review and consideration.

City of Wichita, Kansas

City Commission Communication

Subject: Sanitary Landfill Site

May 2, 1963
CC 298 -8

It is further recommended that a second or supplementary landfill site be acquired adjacent to the northwest limits of the city. Sites can be acquired in this area at prices ranging from \$750.00 to \$1,000.00 per acre.

The City Commission should also consider the proposal from a Wichita company to contract with the city for the private operation of a sanitary landfill site.

ACTION NEEDED

1. Receive and file the communication.
2. Exercise Option A and authorize the City Manager to complete the purchase, with financing to be obtained through the conversion of the presently owned sanitary landfill site to the disposal of sludge from the primary treatment plant.
3. Receive and file Option B.
4. Instruct the City Manager to obtain an option for the purchase of a second landfill site located to the northwest of the city.

OR

1. Receive and file the communication.
2. Instruct the City Manager to negotiate a contract for the disposal of refuse by the sanitary landfill method along the lines set forth in the proposal referred to above.

Respectfully submitted,

Russell E. McClure

Russell E. McClure
City Manager

REM:ct

City of Wichita, Kansas