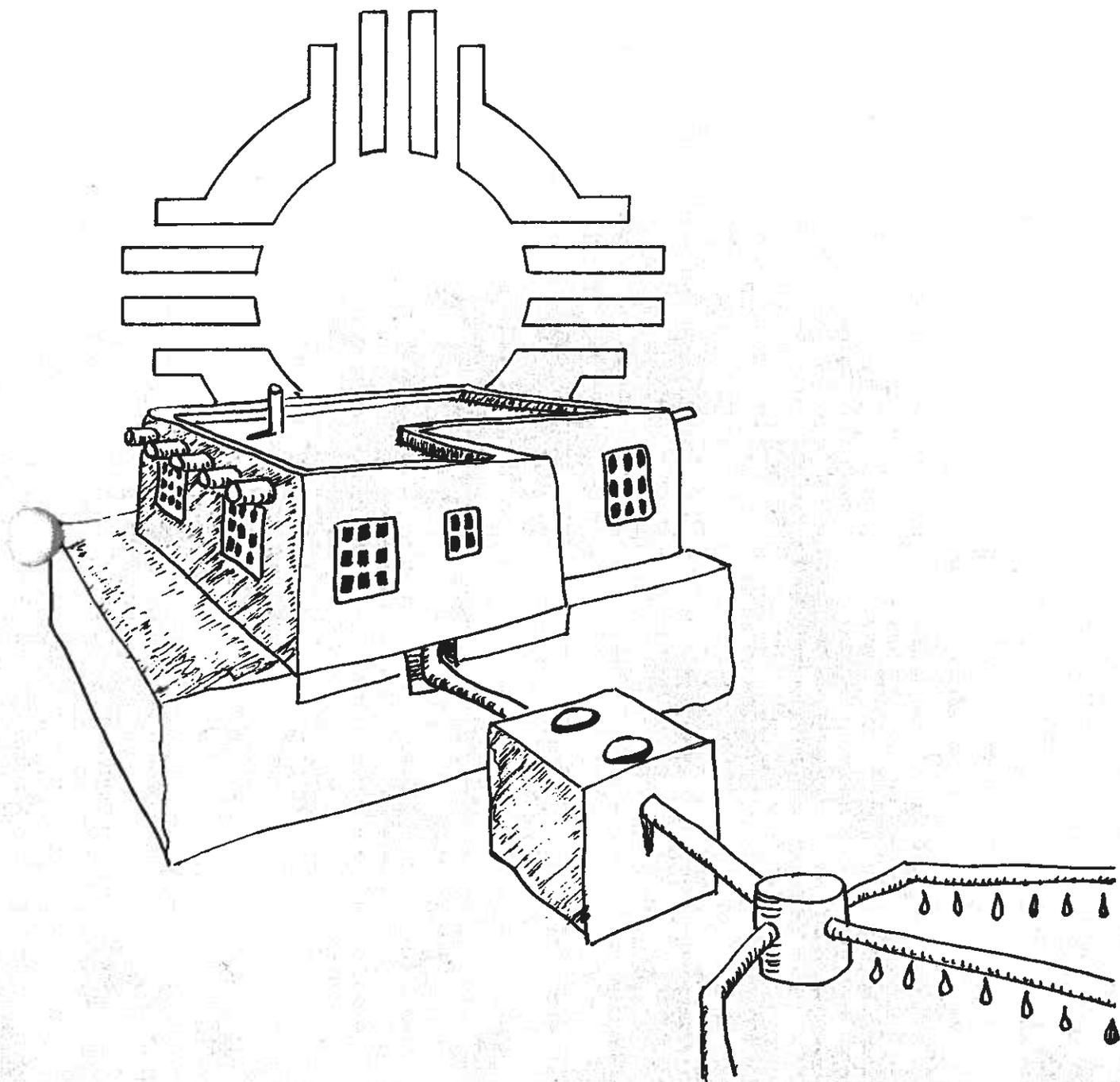


LIQUID WASTE DISPOSAL REGULATIONS



New Mexico Environmental Improvement Board
1190 St. Francis Drive
Santa Fe, New Mexico 87503

EIB/LWDR 2

LIQUID WASTE DISPOSAL REGULATIONS

Part I. General Provisions		
101.	Authority	I-1
102.	Purpose	I-1
103.	Applicability	I-1
104.	Definitions	I-1
105.	Interpretation	I-5
Part II. Procedures		
201.	Liquid Waste System Permits	II-1
202.	Variances	II-2
203.	Hearings	II-3
204.	Inspections and Sampling	II-4
Part III. Standards		
301.	General Requirements	III-1
302.	Lot Size Requirements	III-1
303.	Setback Requirements	III-2
304.	Clearance Requirements	III-3
305.	Holding Tank Requirements	III-3
306.	New Technology	III-4
307.	Septage	III-4
308.	Operation Requirements	III-4
Part IV. Miscellaneous		
401.	Construction	IV-1
402.	Temporary Provision	IV-1
403.	Severability	IV-1
404.	Supersession	IV-1
405.	Savings Clause	IV-1
406.	Collateral Requirements	IV-1
407.	Limitation of Defense	IV-1
Appendices		
A.	Minimum Lot Sizes Required by Section 302 C.	A-1
B.	Summary of Minimum Lot Size Requirements Prior to February 1, 1990	B-1
C.	Major Factors to be Considered in Evaluating Variance Petitions	C-1

PART I. GENERAL PROVISIONS

101. AUTHORITY.--These regulations are adopted under the statutory authority of the Environmental Improvement Act, Sections 74-1-1 through 74-1-10 NMSA 1978.

102. PURPOSE.--The purpose of the Liquid Waste Disposal Regulations is to protect the health and welfare of present and future citizens of New Mexico by providing for the prevention and abatement of public health hazards and surface and ground water contamination from on-site liquid waste disposal practices.

103. APPLICABILITY.--The Liquid Waste Disposal Regulations shall apply to liquid waste systems which are both designed to receive and which receive two thousand (2,000) gallons or less of liquid waste per day, and which are not subject to a National Pollutant Discharge Elimination System (NPDES) Permit. Section 307 shall apply to the disposal of septage and holding tank wastes.

104. DEFINITIONS.--As used in the Liquid Waste Disposal Regulations:

A. "Arroyo" means a dry wash or draw which flows only occasionally;

B. "Bedrock" means consolidated earth materials and includes fractured and cavernous rock;

C. "Black water" means waste from a liquid flushing toilet, urinal or garbage disposal;

D. "Body of water" means all constrained water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface, public or private;

E. "Canal" means a man-made ditch or channel that carries water for purposes other than domestic consumption;

F. "Cesspool" means an excavation or non-water tight unit which receives water-carried liquid waste allowing direct discharge to the soil;

G. "Clearance" means the thickness of suitable soil between any portion of a liquid waste disposal system and the seasonal high ground water table, bedrock, or other limiting layer;

H. "Degrade a body of water" means to reduce the physical, chemical or biological qualities of a body of water and includes, but is not limited to, the release of material which could result in the exceeding of standards established by the Water Quality Standards for Interstate and Intrastate Streams in New Mexico, by the New Mexico Water Quality Control Commission Regulations, and by the New Mexico Regulations Governing Water Supplies;

I. "Design flow" means the flow rate for which a liquid waste system must be designed in order to assure acceptable system performance, assuming the use of conventional plumbing fixtures. For residential sources, the design flow shall be calculated assuming two (2) persons per bedroom for the first two (2) bedrooms and one (1) person per additional bedroom in a single family residential unit, and seventy-five (75) gallons per person per day. Multiple family residential source design flows shall be calculated as the sum of design flows for each single family unit included. Design flows for nonresidential sources shall be based on generally accepted references (such as the New Mexico Uniform Plumbing Code or the USEPA Design Manual: Onsite Wastewater Treatment and Disposal Systems) or based on professional engineering calculations, if more restrictive, and must include safety factors to account for peak flows;

J. "Director" means the Director of the Division or his/her designated representative;

K. "Disposal system" means a generally recognized system for disposing of the discharge from a liquid waste treatment unit and includes, but is not limited to, seepage pits, drainfields, evapotranspiration systems, sand mounds, and sand filters;

L. "Division" means the Environmental Improvement Division of the New Mexico Health and Environment Department;

M. "Edge of a watercourse, canal or arroyo" means that point of maximum curvature at the upper edge of a definite bank or, if no definite bank exists, the highest point where signs of seasonal high water flow exist;

N. "Effluent disposal well" means a drilled, driven, or bored shaft or dug hole with depth greater than any surface dimension, used for subsurface emplacement of liquid waste, including, but not limited to, abandoned water supply wells, irrigation wells, and test holes, but excluding seepage pits used as disposal systems which conform to the standards in the New Mexico Uniform Plumbing Code;

O. "Enclosed system" means a watertight liquid waste system which does not discharge to the soil, including, but not limited to, holding tanks ;

P. "Established liquid waste system" means a liquid waste system on the property in question which has been in use in the ten (10) years prior to the date of consideration;

Q. "Evapotranspiration system" means a disposal system designed to dispose of all the design flow from a liquid waste treatment unit through evaporation and plant transpiration;

R. "Grey water" means water carried waste from kitchen (excluding garbage disposal) and bathroom sinks, showers, bathtubs and washing machines;

S. "Ground water" means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply;

T. "Hazard to public health" means the indicated presence in water or soil of biological, chemical or other agents under such conditions that they may adversely impact human health and includes, but is not limited to, cases of surfacing liquid waste, contamination of a domestic water supply source, presence of an open cesspool or tank, or exposure of liquid waste or septage in a manner that allows transmission of disease;

U. "Holding tank" means a watertight tank designed to receive and retain liquid waste for periodic pumping and disposal off-site;

V. "Interstitial water" means water in spaces between solid earth particles;

W. "Limiting layer" means a layer of soil which is unsuitable for filtration or transmission of liquid waste, and includes but is not limited to soil with a percolation rate faster than 1 minute per inch or soils with a percolation rate slower than 120 minutes per inch;

X. "Liner" means a manufactured or naturally occurring substance which restricts seepage to no greater than 0.5 acre-foot per year per acre over the design service life of the lined unit;

Y. "Liquid waste" means human excreta and water carried wastes from typical residential plumbing fixtures and activities, including, but not limited to, wastes from toilets, sinks, bath fixtures, clothes- and dish-washing machines, and floor drains. Water carried wastes from non-residential sources shall be considered liquid waste if the composition and concentrations of waste do not differ from typical domestic wastewaters. Specifically excluded from the definition of liquid waste are commercial process wastewaters, roof drainage, and wastes containing high concentrations of stabilizing or deodorizing agents;

Z. "Liquid waste system" means a system which is designed to receive liquid waste and includes a liquid waste treatment unit and associated disposal system, or an enclosed system;

AA. "Lot" means a single parcel or area of land excluding roadways, legally recorded or validated by other means, where liquid waste will be generated or disposed ;

BB. "Modify" means:

(1) to change the method of liquid waste treatment or disposal;

(2) to enlarge the liquid waste system;

(3) to alter the horizontal or vertical location of the liquid waste system;

(4) to increase the amount of design flow received by the liquid waste system above the original design flow; or

system;

(5) to remove or replace component materials in a disposal

CC. "Off-site water" means that the domestic water supply for the lot is from:

(1) a private water supply source which is neither within the lot nor within one hundred (100) feet of the property line of the lot, or

(2) a public water supply source which is not within the lot;

DD. "On-site water" means that the domestic water supply for the lot is from:

(1) a private water supply source which is within the lot or within one hundred (100) feet of the property line of the lot, or

(2) a public water supply source which is within the boundaries of the lot;

EE. "Percolation rate" means the rate of entry of water into soil as determined by a standard soil test at the depth of a proposed soil disposal system;

FF. "Person" means any individual, partnership, firm, public or private corporation, association, trust, estate, the state or any political subdivision or agency, federal agency, or any other legal entity or their legal representative, agents or assigns;

GG. "Private water supply source" means a water supply source such as a well, spring, infiltration gallery, or surface water withdrawal point used to provide water to a water supply system, if such system does not have at least fifteen (15) service connections and does not serve an average of twenty-five (25) individuals at least sixty (60) days during the year;

HH. "Privy" means a receptacle for non-liquid-carried excreta allowing direct discharge to the soil;

II. "Public water supply source" means a water supply source such as a well, spring, infiltration gallery, or surface water intake structure used to provide water to a public water supply system for human consumption if the system served has at least fifteen (15) service connections or regularly services an average of twenty-five (25) individuals at least sixty (60) days out of the year;

JJ. "Roadway" means any area of land dedicated by easement or use to provide vehicular passage serving more than one lot or more than five residential or commercial units on a single property;

KK. "Seasonal high ground water table" means the highest level to which the upper surface of ground water may be expected to rise within a one (1) year period;

LL. "Septage" means the residual wastes and water periodically pumped from a liquid waste treatment unit or from a holding tank for maintenance purposes;

MM. "Setback distance" means a straight line, horizontal distance measured from the liquid waste system or portion thereof to the object being considered;

NN. "Suitable soil" means a soil, whether naturally occurring or introduced, which will act as an effective filter in removal of organisms and suspended solids prior to the discharge reaching ground water, bedrock or a limiting layer, and which will provide adequate transmission to prevent surfacing of the discharge. Suitable soils are minimally characterized by percolation rates between one (1) and one hundred twenty (120) minutes per inch.;

OO. "Total design flow" means the sum of design flows for all liquid waste systems and other wastewater discharges on a lot;

PP. "Treatment unit" means a watertight unit designed, constructed and installed to retain solids and to stabilize liquid waste and includes, but is not limited to, aerobic treatment units and septic tanks; and

QQ. "Watercourse" means any river, creek, arroyo, draw, canal or wash, or any other channel having definite banks and beds with visible evidence of the flow of water.

105. INTERPRETATION.--The definitions in Section 104 shall be construed so as to achieve the purpose of these regulations.

PART III. STANDARDS

301. GENERAL REQUIREMENTS.

A. No person shall discharge untreated liquid waste except into an enclosed system, a liquid waste treatment unit, or a public sewer system. No person shall discharge liquid waste into a cesspool or effluent disposal well. A privy may be used for the disposal of human excreta and toilet paper, and not for the disposal of other liquid wastes.

B. No person shall discharge the effluent from a liquid waste treatment unit except through a liquid waste disposal system or to a public sewer system. No person shall discharge effluent from a liquid waste treatment unit to an effluent disposal well.

C. No person shall install, have installed, modify or have modified, own or use a liquid waste system which, by itself or in combination with other liquid waste systems, may cause a hazard to public health or degrade any body of water. Compliance with the requirements contained in Part III of these regulations does not preclude the imposition of additional or more stringent requirements necessary to prevent a hazard to public health or the degradation of a body of water.

D. Liquid waste systems installed prior to February 1, 1990, shall meet the requirements of the regulations in effect at the time of their initial installation or the corresponding requirements of Part III of these regulations, whichever are less stringent, until such time as system design flow is increased. When the design flow for a system is increased above that existing as of February 1, 1990, that system shall meet the requirements of Part III of these regulations.

E. Liquid waste systems installed after February 1, 1990, shall meet the requirements of Part III of these regulations.

302. LOT SIZE REQUIREMENTS.--The requirements of Subsections A through F of this section apply to all liquid waste systems which discharge to the soil, and to evapotranspiration systems. Compliance with the requirements of this section shall be based on the total design flow for the lot. Water conservation devices or demonstrated actual flows cannot be used to reduce the requirements of this section. For the purposes of these regulations, lot sizes shall be calculated to the nearest hundredth (0.01) acre.

A. The date of record for a lot shall be considered to be either:

(1) the date of legal recording or validation by other means associated with the most recent change in lot size or boundaries; or

(2) for those lots in subdivisions having received final approval from governments having jurisdiction therein prior to February 1, 1990, such date of record shall be two and one-half ($2\frac{1}{2}$) years from the date of the final government approval or July 1, 1992, whichever occurs first.

B. A liquid waste system shall be located wholly on the same lot which is the site of the source or sources served by the liquid waste system.

C. Liquid waste systems on lots with record dates after February 1, 1990, shall not exceed the total design flow limitation given by the following formula:

$$\text{Total Design Flow (gallons per day)} = \text{Lot Size (acres)} \times 500.$$

The minimum lot size required for a liquid waste system on a lot with record date after February 1, 1990, is 0.75 acres. (A table listing lot sizes required for typical flow rates is given in Appendix A.)

D. Liquid waste systems initially installed after February 1, 1990, on lots with record dates prior to February 1, 1990, without established liquid waste systems shall not exceed:

(1) a total design flow greater than that allowed by Subsection C above or three hundred seventy-five (375) gallons per day, whichever is greater, if the lot is smaller than 0.50 acres;

(2) a total design flow greater than that allowed by Subsection C above or four hundred fifty (450) gallons per day, whichever is greater, if the lot is equal to or larger than 0.50 acres; and

(3) the total design flow limitations of the minimum lot size requirements of the regulations in effect at the time of recording.

E. Liquid waste systems on lots with record dates prior to February 1, 1990, having any established liquid waste system shall not:

(1) be modified to increase the total design flow if the resulting total design flow would exceed three hundred seventy-five (375) gallons per day or that allowed in Subsection C above, whichever is greater, if the lot is smaller than 0.50 acres;

(2) be modified to increase the total design flow if the resulting total design flow would exceed four hundred fifty (450) gallons per day or that allowed in Subsection C above, whichever is greater, if the lot is equal to or larger than 0.50 acres; and

(3) exceed the total design flow limitations of the minimum lot size requirements in effect at the time of their initial installation.

F. Appendix B summarizes the minimum lot size requirements of the regulations in effect prior to February 1, 1990.

303. SETBACK REQUIREMENTS.--Liquid waste systems shall be located to meet setback distances specified in Table 1. Setback distances to watercourses, canals and arroyos shall be measured to the edge of the channel closest to the liquid waste system component. Setback distances to artificially controlled lakes or reservoirs

shall be measured from the closest projected shoreline at the maximum controlled water level.

TABLE 1. REQUIRED MINIMUM SETBACK DISTANCES (feet)

OBJECT	PRIVIES, ENCLOSED SYSTEMS, AND LIQUID WASTE TREATMENT UNITS	DISPOSAL SYSTEMS DISCHARGING TO SOIL
PRIVATE WATER SUPPLY SOURCE	50	100
PUBLIC WATER SUPPLY SOURCE	100	200
PUBLIC LAKES	50	100
WATERCOURSES EXCEPT CANALS AND ARROYOS	50	100
UNLINED CANALS, AND ARROYOS	15 + depth of channel	25 + depth of channel
LINED CANALS	10 + depth of channel	10 + depth of channel
POTABLE WATER LINES	10	10

304. **CLEARANCE REQUIREMENTS.**--Seasonal high ground water levels shall be determined by the Division either by direct observation or by another source such as the findings of a geohydrologist, the U. S. Soil Conservation Service, the U. S. Bureau of Reclamation, etc. Compliance with seasonal high ground water table clearances in this section shall be based on the best documented evidence available to the Division at the time of installation or modification.

A. No liquid waste system shall discharge liquid waste into the soil where clearance to seasonal high ground water table, bedrock, or other limiting layer is less than four (4) feet.

B. Unlined privy pits shall provide a clearance of no less than two (2) feet to seasonal high ground water table, bedrock, or other limiting layer.

305. **HOLDING TANK REQUIREMENTS.**

A. Holding tanks shall not be installed after February 1, 1990, to serve any design flow greater than three hundred seventy-five (375) gallons per day, except to replace an existing holding tank. Total design flow on any property served by holding tank installed after February 1, 1990, shall not exceed 375 gallons per day.

B. Owners of holding tanks shall maintain records demonstrating sufficient pumping and proper disposal of liquid waste (septage) from those units to prevent discharge. Copies of these records shall be retained by the owner for at

least one year, and shall be made available to the Division for inspection on request. The records shall be:

- (1) kept on a form provided by the Division;
- (2) accompanied by such other documentation as the Division may reasonably require;
- (3) signed by the owner or an authorized representative; and
- (4) mailed on a semi-annual basis to the Division field office having jurisdiction.

C. No person shall install, operate, or maintain a holding tank to allow discharge to enter the soil.

D. The Division may perform site inspections periodically to ensure that a holding tank does not discharge.

306. NEW TECHNOLOGY.--The Division may approve, on an individual basis, the installation of a liquid waste system employing significant new technology if the Division determines that the system will neither cause a hazard to public health, nor degrade a body of water.

307. SEPTAGE.--Septage shall be disposed of so that it will not cause a hazard to public health and so that it will not degrade a body of water. Disposal of septage may also be subject to the New Mexico Water Quality Control Commission Regulations and other federal, state and local requirements.

308. OPERATION REQUIREMENTS.

A. No person shall introduce motor oil, gasoline, paint, varnish, solvents, pesticides, fertilizer, or other materials of a composition or concentration not generally associated with toilet flushing, food preparation, laundry and personal hygiene to a liquid waste system.

B. No person shall introduce any chemical defined by the New Mexico Water Quality Control Commission as a toxic pollutant into a liquid waste system.

PART II. PROCEDURES

201. LIQUID WASTE SYSTEM PERMITS.

A. No person shall install or have installed a new liquid waste system or modify or have modified an existing liquid waste system, unless that person obtains a permit issued by the Division prior to such installation or modification. No person shall install or have installed a new privy or modify or have modified an existing privy, unless that person obtains a permit issued by the Division prior to such installation or modification.

B. Obtaining a permit from the Division for installation or modification of a liquid waste system does not relieve any person from the responsibility of obtaining any other permit required by state, city or county regulations or ordinances or other requirements of state or federal laws.

C. Any person seeking a permit shall do so by filing an application with the field office of the Division having jurisdiction for the area where the system is to be installed or modified. The application shall be:

(1) made on a form provided by the Division;

(2) accompanied by such other relevant information as the Division may reasonably require or that the applicant may consider appropriate; and

(3) signed by the applicant or his authorized representative.

D. (1) Except as otherwise provided in Section 201.D(2), the Division shall, within ten (10) working days after receipt of the completed application, grant the permit, grant the permit subject to conditions, or deny the permit and shall notify the applicant of the action taken.

(2) If the Division's initial review of the application indicates that the imposition of more stringent requirements may be necessary pursuant to Section 201.E or Section 301.C, the Division may extend the time for the review of the application until twenty (20) working days after receipt of the completed application; provided, the Division shall notify the applicant of such extension within ten (10) working days after receipt of the completed application.

(3) When the permit is granted subject to conditions or denied, the reason for the action shall refer to the appropriate regulation(s) and be given in writing.

E. If the Division finds that specific requirements in addition to or more stringent than those provided in Part III of these regulations are necessary to prevent a hazard to public health or the degradation of a body of water, the Division may issue a permit conditioned on those more stringent or additional specific requirements. Such additional or more stringent requirements may apply to system design, siting, construction, inspection, operation and monitoring.

F. The Division shall deny the permit if the proposed system will not meet the requirements of these regulations.

G. The Division shall maintain a file of all permits issued and denied. The file shall be open for public inspection.

H. The installation or modification of the liquid waste system shall be in accordance with the permit. Any change from the permitted installation or modification plans must receive written Division approval prior to implementation.

I. The Division may cancel a permit if the installation or modification of the liquid waste system has not been completed within one (1) year of the issuance of the permit, or if the Division determines that material information in the application was false, incomplete, or inaccurate and that the correct information would have resulted in the Division denying the original application. If a permit is cancelled, the Division shall notify the permittee of the decision and the reason for cancellation.

202. VARIANCES.

A. Any person seeking a variance from the requirements contained in these regulations shall do so by filing a written petition with the field office of the Division having jurisdiction for the area where the system is to be installed.

B. The petition shall be:

(1) made on a form provided by the Division;

(2) accompanied by relevant documents or materials which the petitioner believes would support the petition;

(3) accompanied by documentation demonstrating that all owners of adjacent property sharing a common border with the lot for which the variance is sought have been notified of the nature of the variance petition, the date of submission of the petition to the Division, the address of the Division field office to which the petition is being submitted, and the time frame for Division action as provided in Subsection C. of this Section, unless all adjacent properties are more than one thousand (1,000) feet from the liquid waste system for which the variance is sought;

(4) accompanied by such other relevant information as the Division may reasonably require; and

(5) signed by the petitioner or an authorized representative.

C. The Division shall, after a minimum of ten (10) but not later than twenty (20) working days following receipt of the completed petition, grant the variance, grant the variance subject to conditions, or deny the variance and shall so notify the applicant and any other person making a written submission concerning

the petition. The reason for the Division's action shall be provided in writing and the appropriate regulation(s) cited.

D. The Division shall deny the variance petition unless the petitioner establishes by clear and convincing evidence that:

(1) the proposed liquid waste system will, by itself or in combination with other liquid waste systems, neither cause a hazard to public health nor degrade any body of water; and

(2) granting the variance will result in public health and environmental protection equal to or greater than the minimum protection provided by the variances requirement.

E. The Division shall maintain a file of all variances granted and denied. The file shall be open for public inspection.

203. HEARINGS.

A. If any affected person is dissatisfied with the action taken by the Division on a permit application or variance petition, that person may request a hearing before the Director. The request must be made in writing to the Director within fifteen (15) working days after notice of the Division's action has been issued. Unless a request for hearing is made within fifteen (15) working days after notice of the Division's action has been issued, the decision of the Division shall be final.

B. If a request for hearing is made within the fifteen (15) working day time limit, the Director shall hold a hearing within fifteen (15) working days after receipt of the request. The Division shall notify the person who requested the hearing of the date, time and place of the hearing by certified mail. If the hearing is in regard to a variance petition, the Director shall also notify all persons involved under Section 202.B(3) of the hearing date, time and place, by certified mail.

C. In the hearing, the burden of proof shall be upon the person requesting the hearing. Where the Division requires standards more stringent than those provided in these regulations, the burden of proof of the necessity for those specified standards shall be upon the Division.

D. Hearings shall be held at a place designated by the Director in the area where the proposed liquid waste system is to be located, unless other mutually agreed upon arrangements are made.

E. Upon request, the hearing shall be recorded. Recording and transcript costs shall be paid by those persons requesting such recordings and transcripts.

F. In hearings, the rules of civil procedure and the technical rules of evidence shall not apply, but hearings shall be conducted so that all relevant views, arguments and testimony are amply and fairly presented without undue repetition. The Director shall allow the Division and the person who requested the hearing to

call and examine witnesses, to submit written and oral evidence and arguments, to introduce exhibits, and to cross-examine persons who testify. At the end of the hearing, the Director shall decide and announce if the hearing record will remain open, how long it will be left open, and for what reason it will be left open.

G. Based upon the evidence presented at the hearing, the Director shall sustain, modify or reverse the action of the Division. The action taken shall be by written order within fifteen (15) working days following the close of the hearing record. The order shall state the decision and the reasons therefor and shall be sent by certified mail to the person requesting the hearing.

204. INSPECTIONS AND SAMPLING. --The Division may perform site inspections prior to making a decision on the permit application, during construction of the system, and after completion of the system. The Division may require inspection holes to be excavated and/or documentation provided for purposes of determining soil types, percolation rates and soil and water table depths. The Division may collect samples of soils, liquid waste, or water, including water from wells, to determine compliance with these regulations.

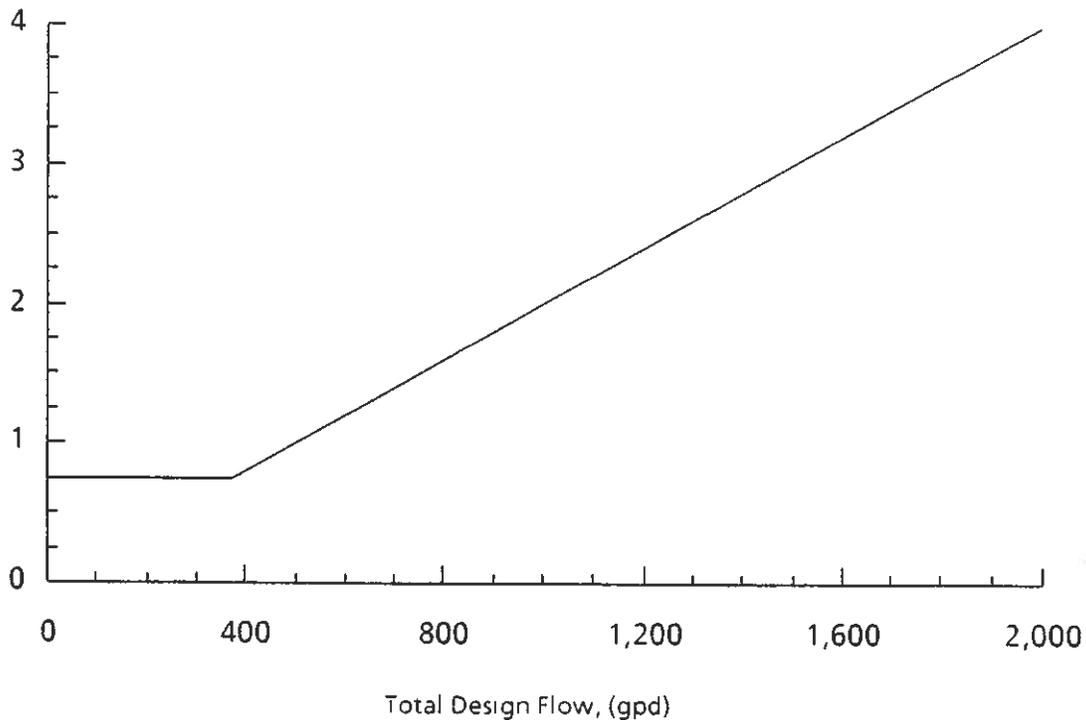
PART IV. MISCELLANEOUS

401. CONSTRUCTION.--The Liquid Waste Disposal Regulations shall be liberally construed to carry out their purpose.
402. TEMPORARY PROVISIONS.--All registration certificates, permits, orders, rulings, and variances issued pursuant to the regulations in effect at the time such registration certificates, permits, orders, rulings, or variances were issued shall remain in full force and effect until repealed, replaced, superseded, or amended pursuant to these regulations.
403. SEVERABILITY.--If any part or application of the Liquid Waste Disposal Regulations is held invalid, the remainder, or its application to other situations or persons, shall not be affected.
404. SUPERSESSON.--These regulations supersede the Liquid Waste Disposal Regulations, EIB/LWDR 1, filed October 10, 1985.
405. SAVINGS CLAUSE.--Supersession of the Liquid Waste Disposal Regulations, EIB/LWDR 1, filed October 10, 1985, shall not abate any violations of those regulations or any action for the enforcement thereof.
406. COLLATERAL REQUIREMENTS.--Compliance with these regulations does not relieve any person from the responsibility of meeting more stringent city or county regulations or ordinances or other requirements of state or federal laws governing the disposal or treatment of liquid waste.
407. LIMITATION OF DEFENSE.--The existence of a valid permit for installation or modification of a liquid waste system shall not constitute a defense to a violation of any section of these regulations except the requirement for obtaining a permit (Section 201).

**APPENDIX A.
MINIMUM LOT SIZES REQUIRED BY SECTION 302.C**

TOTAL DESIGN FLOW (gallons per day)	MINIMUM LOT SIZE REQUIRED (acres)
Less than 375	0.75
375	0.75
450	0.90
600	1.20
750	1.50
1125	2.25
1500	3.00
1875	3.75
2000	4.00

Required Minimum Lot Size, (acres)



APPENDIX B.

SUMMARY OF MINIMUM LOT SIZE REQUIREMENTS PRIOR TO FEBRUARY 1, 1990

RECORD DATE:	1/1/60 to 11/1/73	11/1/73 to 9/7/79 *		9/7/79 to 3/1/80		3/1/80 to 11/9/85		11/9/85 to 2/1/90	
	Minimum Lot Size (acres)	Soil Group **	Minimum Lot Size (acres)	Total Design Flow (gpd)	Minimum Lot Size (acres)	Total Design Flow (gpd)	Minimum Lot Size (acres)	Total Design Flow (gpd)	Minimum Lot Size (acres)
OFF-SITE WATER **	0.25***	A	0.50	0-1000	0.50	0-375	0.33	0-375	0.33
		B	0.75	1000-1500	1.00	376-1000	0.50	376-750	0.50
		C	1.00	1500-2000	1.25	1000-1500	1.00	750-1125	1.00
		D	****			1501-2000	1.25	1126-1500	1.25
								1501-2000	1.75
ON-SITE WATER **	0.50***	A	0.75	0-1000	0.75	0-1000	0.75	0-375	0.75
		B	1.00	1000-1500	1.25	1000-1500	1.25	376-750	1.50
		C	1.25	1500-2000	1.70	1501-2000	1.70	750-1125	2.00
		D	****					1126-1500	2.75
								1501-2000	3.50

*The maximum total design flow allowed was 1,000 gpd for the lot sizes shown.

**Refer to the next page.

***These requirements applied to lots in subdivisions which were required at the time of subdivision to obtain State Health Department review and approval.

**** No on-site disposal to soil allowed.

Note: Roadways were first excluded from figuring lot sizes as of 11/9/85.

**SOIL GROUPS FOR LOT SIZE DETERMINATIONS
FOR THE PERIOD 11/1/73 TO 9/7/79**

SOIL CHARACTERISTICS	A Slight Limitations	B Slight Limitations	C Moderate Limitations	D Severe Limitations
1. SOIL DEPTH (Depth to Bedrock in Feet)	More than 6 and	More than 6 and	4-6 or	Less than 4 or
2. PERCOLATION RATE (Rate of percolation of water into soil in minutes per inch)	0-15 and	16-30 and	31-60 or	More than 60 or
3. SEASONAL WATER TABLE (Depth to shallowest water table during the year in feet)	More than 12 and	More than 12 and	4-12 or	Less than 4 or
4. SLOPE (Incline of the land surface in percent)	0-8 and	0-8 and	8-25 or	More than 25 or
5. FLOODING POTENTIAL (Overflow frequency in years)	None.	None.	No more than 1 in 25.	More than 1 in 25.

The minimum lot size required for the location of an individual liquid waste disposal system is determined by the most limiting soil group under which any soil characteristic falls.

The distinction between "Off-Site" and "On-Site" Water has changed with different versions of the regulations.

Prior to 9/7/79, the distinction was between a Public Community Water Supply (Off-Site) and a Private, On-Site well.

From 9/7/79 to 11/9/85, the "Public Water Supply" (i.e., Off-Site) was defined as "a water supply for the provision to the public of piped water for human consumption if such system has at least fifteen (15) service connections or regularly services an average of twenty-five (25) individuals at least sixty (60) days out of the year." A "Private Water Supply" (i.e., On-Site) was defined as "a non-public water supply."

Between 11/9/85 and 2/1/90, the following definitions were in place:

"Off-site water" means that the domestic water supply for the lot is from: 1) a private water supply source which is neither within the lot nor within one hundred (100) feet of the property line of the lot, or 2) a public water supply source which is not within the lot.

"On-site water" means that the domestic water supply for the lot is from: 1) a private water supply source which is within the lot or within one hundred (100) feet of the property line of the lot, or 2) a public water supply source which is within the boundaries of the lot.



APPENDIX C. MAJOR FACTORS TO BE CONSIDERED IN EVALUATING VARIANCE PETITIONS

Note: The following is a list of factors of importance in evaluating petitions for variance to the principal requirements of Part III of these regulations. The list is not exhaustive, and should not be considered limiting for either the petitioner or the Division. Similarly, not all the factors listed within a category may be important in every case.

LOT SIZE REQUIREMENTS, Section 302

Proposed System Discharge

- Design flow--projected average flows, basis for projection
- Discharge quality--degree of treatment, separation of black water, etc.
- Type of system --trenches, bed, pit, pressure distribution, etc.
- Location and arrangement of discharge--in relation to property borders

Geological Factors

- Depth to seasonal high ground water
- Intervening stratigraphy--geological layer composition (sand, clay, rock) and thicknesses, information from well logs
- Presence of any barriers to pollutant movement

Hydrological Factors

- Ground water flow direction and gradient
- Transmissivity of the aquifer
- Background quality of the ground water
- Thickness of the saturated aquifer
- Projected mixing depth
- Artificial influences on ground water flow direction and gradient--such as pumping wells, irrigation and agricultural drains

Additional Factors

- Current and future housing density in the area--notably legal limitations
- Potential for future community sewer--
- Current and future use of the ground water

SETBACK REQUIREMENTS, Section 303

Proposed System Discharge

- Design flow--projected average and peak flows, basis for projection
- Discharge quality--degree of treatment, separation of black water, etc.
- Type of system --trenches, bed, pit, pressure distribution, etc.
- Location and arrangement of discharge--in relation to all objects in Table 1

Geological Factors

- Depth to seasonal high ground water
- Intervening stratigraphy--geological layer composition (sand, clay, rock) and thicknesses, information from well logs
- Presence of any barriers to pollutant movement

Hydrological Factors

- Ground water flow direction and gradient
- Transmissivity of the aquifer

Background quality of the ground water
Thickness of the saturated aquifer
Projected mixing depth
Artificial influences on ground water flow direction and gradient--such as pumping wells, irrigation and agricultural drains

Factors Relating to the Setback Objects

Well construction and protection--sanitary surface seal, casing sealed past first aquifer, depth of solid casing, location of water inlets
Well pumping rates and projected drawdown
Whether the watercourse is losing or gaining with respect to local ground water
Potential for future construction of wells, canals, etc., in area
Potential for future change in watercourse or public lake shore
Potential flooding affects

Additional Factors

Current and future housing density in the area--notably legal limitations
Current and future use of the water that could be affected by the proposed system

CLEARANCE REQUIREMENTS, Section 304

Proposed System Discharge

Design flow--projected average and peak flows, basis for projection
Discharge quality--degree of treatment, separation of black water, sand filtration, etc.
Type of system --trenches, bed, pit, pressure distribution, mound, etc.
Location and arrangement of discharge--in relation to all objects in Table 1

Geological Factors

Depth to seasonal high ground water
Type of limiting layer and depth to limiting layer
Intervening stratigraphy--geological layer composition (sand, clay, rock) and thicknesses, information from well logs
Percolation rates of soils involved
Soil chemistry parameters--pH, cation exchange capacity, etc.
Presence of any barriers to pollutant movement
Possibility of discharge to the surface at terrain breaks, embankments, road cuts, etc.

Hydrological Factors

Ground water flow direction and gradient
Transmissivities of the various soils and geological layers involved
Projected ground water mounding affects--basis for projection
Background quality of the ground water
Thickness of the saturated aquifer
Projected mixing depth
Artificial influences on ground water flow direction and gradient--such as pumping wells, irrigation and agricultural drains

Additional Factors

Current and future housing density in the area--notably legal limitations
Current and future use of the water that could be affected by the proposed system