



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

April 29, 2002

Mr. Mike Houck
Rural Lakes Region
1212 W. Ash, PO Box 282
Junction City, KS 66441

Dear Mr. Houck:

The amended Morris County Sanitary Code has been reviewed and approved by the Kansas Department of Health and Environment in accordance with Kansas Statutes Annotated 19-3704. An official copy of the amended code, as approved by this Agency, is attached for your records.

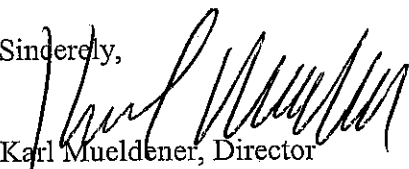
After the amended Morris County Sanitary Code has been officially adopted by the Board of County Commissioners, please send one copy of the code and the attached form to the following address:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
Attn. Lisa Duncan
1000 SW Jackson, Suite 420
Topeka, Kansas 66612-1367

KDHE recommends you contact the conservation district, extension office, contractors and lending institutions within Morris County informing them of the amendments to the code.

If you have any questions, please call Don Chisam at 785/827-9639.

Sincerely,


Karl Mueldener, Director
Bureau of Water

Be a clean water neighbor.

KM/lmd
Enclosures
pc- Morris County Commissioners
Morris County Code File
Don Chisam, KDHE-NCDO

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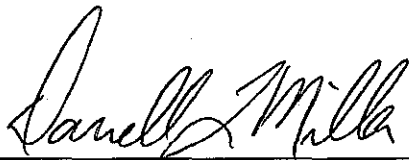
DIVISION OF ENVIRONMENT
Bureau of Water

1000 SW Jackson, Suite 420
(785) 296-4195

Printed on Recycled Paper

Topeka, KS 66612-1367
FAX (785) 296-5509

The enclosed Morris County Sanitary Code has been officially adopted by the Morris County Board of Commissioners.

A handwritten signature in cursive script, appearing to read "Daniel Milk".

Signature

Chairman, Board of County Commissioners

6-4-02

Date

SANITARY CODE

MORRIS COUNTY, KANSAS

CHAPTER 1

ADMINISTRATIVE PROCEDURES

SECTION 1-1.0 AUTHORITY AND POLICY

- 1-1.1 Legal Authority. This code is adopted under the authority granted to the Board of County Commissioners by K.S.A. 19-3701 et. seq. or K.S.A. 12-3301 et. seq., as amended.
- 1-1.2 Declaration of Finding and Policy. The Commissioners find that the provision of adequate and reasonable control over sanitary conditions in the county is necessary and desirable. A sanitary code establishes standards to eliminate and/or prevent the development of environmental conditions that are hazardous to health and safety, and promotes the economical and planned development of the land and water resources of the county. For these reasons and objectives, it will be the policy of the Board of County Commissioners to adopt, and amend when necessary, a sanitary code for the regulation of practices that affect the environment and public health and safety.
- 1-1.3 Purpose. The purpose and intent of this chapter is to prescribe the administrative procedures to be followed in administering this sanitary code or any amendments thereto.
- 1-1.4 Title. This code shall be known and referred to as the Morris County Sanitary Code.
- 1-1.5 Applicability. The procedures prescribed in this chapter shall be followed in administering this code and any amendments thereto.
- 1-1.6 Effective Date. This code shall become effective September 6, 1994. *Amended* _____.

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APR 29 2002

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SECTION 1-2.0 DEFINITIONS

The following words, terms and phrases appear in more than one chapter of this code and thus have general application and usage. Words, terms, and phrases appropriate or applicable to specific chapters within this code may be found in that particular chapter.

- 1-2.1 Administrative Agency means the entity authorized to administer and implement the provisions of this code. The Administrative Agency for Morris County is designated as the Morris County Board of County Commissioners.
- 1-2.2 Administrative Rules means those rules contained in chapter one of this sanitary code which prescribe general procedures to be followed in the administration of the sanitary code adopted by the county.
- 1-2.3 Authorized Representative means any person or agency who is designated by the Administrative Agency to administer this code.
- 1-2.4 Board of County Commissioners means the Board of County Commissioners of Morris County, Kansas.
- 1-2.5 Board of Health means the Morris County Board of Health. (K.S.A. 65-201)
- 1-2.6 Hearing Officer means an individual, appointed by the Administrative Agency, to hear appeals from decisions relating to the administration of this code.
- 1-2.7 Person means an individual, corporation, partnership, association, state, or political subdivision thereof, federal, state agency, municipality, commission, or interstate body or other legal entity recognized by law as the subject of rights and duties.
- 1-2.8 Premise means any lot, or tract of land and all buildings, structures, or facilities located thereon.
- 1-2.9 State Department means the Kansas Department of Health and Environment.

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SECTION 1-3.0 ADMINISTRATIVE POWERS AND PROCEDURES

1-3.1 Right of Entry. Authorized Representatives of the Administrative Agency shall have the power and authority to inspect premises for compliance with the Morris County Sanitary Code as granted under K.S.A 65-159.

1-3.2 Permit and License.

1-3.2.1 Application for Permits and Licenses. Every person required by this sanitary code to obtain a permit or license shall make application for such permit or license to the Authorized Representative.

1-3.2.2 Issuance of Permit or License. After receipt of an application as required by this code, the Authorized Representative shall begin such investigation as deemed necessary to determine whether the permit or license should be issued or denied, and shall issue or deny the permit or license within thirty (30) days of such receipt. If the permit or license is denied, the Authorized Representative shall send the applicant a written notice and state the reasons for rejection. The person performing the work authorized by the permit shall notify the authorized representative as to when the work is ready for inspection. Such notification shall be given not less than (1) business day before the work is to be inspected. Any emergency work, pertaining to the Sanitary Code, completed in evenings, weekends or holidays must be reported to the authorized representative the following business day.

1-3.2.3 Permit Nontransferable. No permit or license required by this sanitary code shall be transferable, nor shall any fees required and paid therefore be refundable.

1-3.2.4 Permit Revocation. All permits are subject to revocation for reasons of noncompliance or misrepresentation.

1-3.2.5 Standard Fees. The Administrative Agency shall establish a schedule of fees for all permits and licenses required by the code, and said fees shall be paid into the Authorized Representative. The Authorized Representative shall not process any application for a permit or license until the required fee has been paid.

1-3.3 Notices, Orders, Appeals.

1-3.3.1 Notice of Violations. When the Administrative Agency determines that there has been a violation of any provision of this code, notice of such violation shall be issued to the person responsible. The notice shall:

- a. be in writing;

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APR 29 2002

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- b. include a statement of why the notice is being issued;
- c. Allow a reasonable period of time for performance of any work required by the notice; and,
- d. be properly served upon the owner or agent.

Such notice shall be deemed properly served when a copy has been sent by certified mail to the last known address of the owner or agent.

1-3.3.2 Appeal for Hearing. Any person aggrieved by any notice or order issued by the Administrative Agency or Authorized Representative under the provisions of this sanitary code may request, and shall be granted, a hearing on the matter before the Hearing Officer; provided such person shall file with the administrative Agency, within ten (10) working days after the date of issuance of the notice or order, a written petition requesting a hearing and setting forth the grounds upon which the request is made. Except in the case of Emergency Orders as defined in Section 1-3.3.4, the filing of the request for a hearing shall operate as a stay of the notice or order. Upon receipt of such petition, the Administrative Agency shall set a time and place for such hearing and shall give the petitioner written notice thereof. At such hearing, the petitioner shall be given an opportunity to show why such notice or order should be modified or withdrawn. The hearing shall be commenced no later than ten (10) working days after the date on which the petition was filed; provided, that upon request of the petitioner, the Administrative Agency may postpone the hearing for a reasonable time beyond such ten-day period, when in the Agency's judgement the petitioner has submitted justifiable reason for such postponement.

1-3.3.3 Report of Hearing. Within ten (10) working days after such a hearing, the Hearing Officer shall submit the findings of the hearing to the petitioner. The findings shall include a recommendation that the order be sustained, modified, or withdrawn. The Administrative Agency shall consider the report and issue an order confirming, modifying or withdrawing the notice or order, and shall notify the petitioner in the same manner as is provided for in Sec. 1-3.3.1.

1-3.3.4 Emergency Orders. Whenever the Administrative Agency finds that an emergency exists which requires immediate action to protect the public, the Administrative Agency may issue an order reciting the existence of such an emergency, and specifying action to be taken to meet the emergency. Such an order shall be effective immediately. Any person to whom such an order is directed shall comply immediately.

1-3.4 Records.

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APR 29 2002

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1-3.4.1 Permit Application. Applications for permits or licenses required by this code shall be filed with the Authorized Representative.

1-3.4.2 Official Actions. A written record of all official actions taken on applications for permits and licenses required by this sanitary code shall be kept on file with the Administrative Agency or Authorized Representative.

1-3.4.3 Proceedings of Hearings. The proceedings of all hearings, including findings and decisions of the Hearing Officer, and a copy of every notice and order thereto shall be filed with the Administrative Agency. Transcripts of the proceedings of hearings need not be transcribed unless a judicial review of the decision is sought.

1-3.5 General Provisions.

1-3.5.1 Enforcement Procedure. It shall be the duty of the County Attorney to prosecute any person who violates any provision of this code. It shall be the responsibility of the Administrative Agency or the Authorized Representative to file in a timely manner with the County Attorney all reports concerning alleged violations of this code.

1-3.5.2 Penalties. In addition to, and independently of, the enforcement procedures provided in section 1-3.5.1, any violation of any provision of an environmental code shall be deemed to be a misdemeanor and upon conviction punishable by a fine not to exceed two hundred dollars (\$200) for each offense. Each day's violation shall constitute a separate offense.

1-3.5.3 Disclaimer of Liability. This code and other sanitary codes adopted shall not be construed or interpreted as imposing upon the county or its officials, employees, or authorized representatives (1) any liability or responsibility for damages to any property, or (2) any warranty that any system, installation or portion thereof that is constructed or repaired under permits and inspections required by the sanitary code will function properly.

1-3.5.4 Separability. If any clause, sentence, paragraph, section or subsection of this code shall for any reason be adjudged by any court of competent jurisdiction to be unconstitutional and invalid, such judgement shall not affect, repeal or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or subsection found to be unconstitutional and invalid.

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APR 29 2002

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SANITARY CODE

MORRIS COUNTY, KANSAS

CHAPTER 2

ON-SITE WASTEWATER MANAGEMENT

SECTION 2-1.0 PURPOSE AND INTENT

Sewage is a potential source of disease and water pollution, and a hazard to the health, safety, and welfare of the public. It is the purpose of this chapter to provide minimum standards for the location, design, construction, maintenance and use of on-site wastewater systems, and the removal and disposal of materials from such facilities within the legal boundaries of Morris County.

SECTION 2-2.0 APPLICABILITY

The provisions of this chapter shall apply to all unincorporated areas in Morris County Kansas which will be used for domestic purposes. Any incorporated city with Morris County may adopt by proper proceedings this sanitary code.

SECTION 2-3.0 DEFINITIONS

- 2-3.1 Beneficial use means the use of water for any of the following purposes: agricultural water supply; aquatic life; domestic water supply; groundwater recharge; industrial water supply; recreation.
- 2-3.2 Domestic Wastewater means wastewater originating primarily from kitchen, bathroom and laundry sources, including waste from food preparation, dishwashing, garbage grinding, toilets, baths, showers, and sinks.
- 2-3.3 Non-domestic Wastewater means automotive grease, oil, antifreeze or toxic or hazardous waste from a commercial or manufacturing business or waste other than domestic waste.
- 2-3.4 Nuisance means conditions or activities on properties both public and private, which have or threaten to have a detrimental effect on the environment or the health of the public.
- 2-3.5 Private Wastewater System means any system that is not required to hold a Kansas Water Pollution Control Permit pursuant to K.S.A. 1991 Supp.65-171d. This includes wastewater disposal systems which function by

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APR 29 2002

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soil absorption, evaporation, transpiration, holding tanks, or any combination of the above.

- 2-3.6 Sanitary Privy means a facility designed for the disposal of non-water carried wastes from the human body.
- 2-3.7 Sanitary Service means the pumping out and/or removal of sewage, sludge, or human excreta from privies, vaults, septic tanks, or private wastewater disposal systems; and the transportation of such material to a point of final disposal.
- 2-3.8 Seepage Pit means a subsurface excavation, which is filled with rock or gravel and receives effluent from treatment devices.
- 2-3.9 Sewage means any substance that contains any of the waste products or excrement or other discharges from the bodies of human beings or animals or chemical or other wastes from domestic, manufacturing or other forms of industry.
- 2-3.10 Subdivision means any tract of land that is or has been subdivided into two or more lots for the purpose of sale or building development, whether immediate or future, including the streets, alleys, or other portions thereof intended to be dedicated for public use, and any division of lands.
- 2-3.11 Wastewater Systems means any system along with attendant pipes and appurtenances designed and constructed to collect, store, treat, and dispose of domestic, industrial, or commercial waste.
- 2-3.12 Vaults/Holding Tanks means a water-tight receptacle for the retention of sewage either before, during, or after treatment.
- 2-3.13 Cesspool means a drywell that receives untreated sanitary wastes containing human excreta. A drywell is a well completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

SECTION 2-4.0 PROHIBITED PRACTICES

2-4.1 Use of existing wastewater systems. Private wastewater systems existing prior to the adoption of this code are exempt from meeting the requirements of this code unless the existing wastewater system poses a hazard to waters of the state or public health as referred to in Section 2-4.2 provisions A, C, D and/or E.

2-4.2 Use of Nonapproved Private Systems. No person shall use, or cause to be

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APR 29 2002

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used, any private wastewater system, or privy constructed after adoption of this sanitary code until it has been inspected and approved by the Authorized Representative or if it:

- a. has been enjoined as a public health nuisance by a court of competent jurisdiction; or,
- b. fails to comply with the provisions of this sanitary code, and written notice thereof has been given by the Administrative Agency; or
- c. discharges onto the surface of the ground, or waters of the state as defined in K.S.A. 65-161 (a) or
- d. receives non-domestic wastewater, causes vector breeding, or produces offensive odors or any condition that is detrimental to health and comfort.
- e. discharges to a cesspool or seepage pit.

2-4.3 Use of Private Wastewater Systems Within 400 feet of Public Sewer. No private wastewater system shall be constructed or reconstructed within 400 feet of an existing public sewer, unless the Administrative Agency finds connection to such a sewer is not feasible and that a private wastewater system, satisfying the purposes and requirements of this code, can be constructed and used on that property.

2-4.4 Location of Private Wastewater Systems Below Full/Flood Pool. No portion of a private wastewater system shall be located below the flood pool elevation of any reservoir or full pool elevation of any pond, lake, or water supply reservoir.

2-4.5 Location of Private Wastewater Systems Within a 100 Year Flood Plain. No portion of a private wastewater system shall be located within the 100 year flood plain, as established by the Federal Emergency Management Agency, of any stream, river, or water course.

2-4.6 Location of a Private Wastewater System Within 50 feet of a Private Water Well. No portion of a private wastewater system shall be located less than 50 feet from a private water well. No sanitary sewer line, regardless of construction, shall be located less than 50 feet from a private water well or 10 feet from a water line from a private water well. A minimum distance of 100 feet shall be maintained between all potential sources of contamination and all public water supply wells. No sanitary sewer line, regardless of construction, shall be located less than 25 feet from a public water line. Any sewer line that crosses a public water supply line must meet the standards specified in "Policies, General Considerations and Design Requirements of Public Water Supplies in Kansas" as authorized by K.S.A. 65-171h.

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APR 29 2002

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SECTION 2-5.0 REQUIREMENTS FOR PRIVATE WASTEWATER DISPOSAL SYSTEMS

- 2-5.1 Approval of Plans. After adoption of this code no person shall develop or modify any private wastewater system until the plans and specifications for such systems have been approved by the Authorized Representative. References of KDHE Bulletin 4-2 or the most current state standards will be used as a guide by the Authorized Representative in reviewing and approving plans for private wastewater disposal systems. Copies of KDHE Bulletin 4-2 can be obtained from the Authorized Representative upon request.
- 2-5.2 Permit. No person shall construct or modify, or permit to be constructed or modified, any private wastewater system until a permit has been issued by the Authorized Representative. Installation of wastewater systems shall be completed and permit requirements met within 6 months of the permit approval date. This includes the wastewater lagoon fencing requirements as stated in Appendix A. If installation is not completed within the 6 months, the landowner must reapply and submit an additional required permit fee for a time extension of 6 months. If installation is not completed within the extended time, enforcement procedures and penalties provided in sections 1-3.5.1 and 1-3.5.2 shall apply.
- 2-5.3 Suitable Site. No site shall be approved if:
- a. connection to an approved public wastewater system is feasible or the site violates the provisions of Section 2-4.0 of this code; or
 - b. the site contains less than three acres of land exclusive of roads, streets, or other public rights-of-way or easements, or
 - c. the soil, topography, and geology do not meet the requirements set forth in Section 2-6.0.
- 2-5.4 Construction Approval. All private wastewater systems developed or modified after the effective date of this sanitary code must be inspected and approved by the Authorized Representative for compliance with the approved plans. No portion of the system shall be covered or made inaccessible to inspection prior to approval. Minimum construction guidelines must meet KDHE Bulletin 4-2 or current state standards. Additional requirements stated in the Morris County Sanitary Code takes precedence over KDHE 4-2. Specific wastewater lagoon requirements for Morris County are in the attached Appendix A.
- 2-5.5 Proper Maintenance and Operation. All private wastewater systems shall be maintained in good working condition. Whenever the Administrative Agency finds any private wastewater disposal system in violation of this code, the

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APR 29 2002

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owner and/or user shall be ordered to correct the condition.

2-5.6 Waiver. The Administrative Agency shall have the authority to grant exceptions when reliable information is provided which can justify the exception and which will still protect the beneficial uses of the waters of the state and not create a nuisance.

SECTION 2-6.0 MINIMUM STANDARDS FOR SOIL TOPOGRAPHY AND GEOLOGY
No private wastewater system shall be constructed on any lot of any size unless minimum standards for soil, topography and geology as established in KDHE Bulletin 4-2 are met.

SECTION 2-7.0 REQUIREMENTS FOR PRIVIES

2-7.1 Approval of Plans. No person shall construct or modify any privy until the plans and specifications for the proposed construction and/or modification have been approved by the Authorized Representative. Privies shall not be constructed where other means of wastewater treatment acceptable under this code can be made available to the site.

2-7.2 Approval of Construction. No person shall use, or make available for use, any newly constructed or modified privy until the construction has been inspected and approved by the Authorized Representative for compliance with approved plans.

2-7.3 Proper Maintenance. No person shall use, or offer for use, any privy that is not maintained in a clean sanitary condition.

2-7.4 Vault Required. A watertight vault shall be provided in lieu of the standard pit.

2-7.5 Location of a Privy Within 100 feet of a well. No privy shall be installed less than 100 feet from an existing well with much greater distances recommended.

SECTION 2-8.0 SANITARY SERVICES

2-8.1 Minimum Standards for Sanitary Service Equipment. All equipment used for rendering of sanitary service shall be of watertight construction and maintained in good working condition. This ensures that all materials removed from private wastewater disposal systems or privies will be transported to an approved point of disposal without spillage of waste.

2-8.2 Approved Septage Disposal Methods. All septage shall be disposed of using one of the following methods:

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APR 29 2002

Kansas Department of
Health and Environment

- a. The most desirable method is disposal of septage at a municipal wastewater treatment plant. Septage haulers shall submit a written and signed agreement between the hauler and the plant indicating the amount of septage that the plant agrees to accept annually by the hauler.
- b. Land application of septage also is an acceptable method.
- c. Other methods which are approved by the State Department and the Administrative Agency.

2-8.3 Restrictions To Land Application of Septage

All land application of septage shall be:

- a. limited to less than 30,000 gallons of septage per acre per year;
- b. stabilized with lime to reduce pathogens and vector attraction;
- c. incorporated into the soil within twenty-four (24) hours of application or applied to a nitrogen consuming crop;
- d. prohibited from parks and recreational areas;
- e. prohibited from land used for cultivation of edible plants;
- f. limited to sites where the ground water table is greater than four (4) feet below the ground surface.
- g. separated by at least 200 feet between land application sites and any surface water bodies;
- h. prohibited from frozen, snow covered or saturated soil caused by heavy rain or flooding.
- i. prohibited from sites within the ten year flood plain.
- j. applied at least 250 feet from any house.
- k. applied at least 100 feet from property line.
- l. applied at least 25 feet from any private or public water line.

SECTION 2-9.0 REQUIREMENTS FOR SUBDIVISION DEVELOPMENT

After adoption of this code no person shall develop any subdivision until the plans and specifications for on-site wastewater management have been approved by the Administrative Agency.

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MORRIS COUNTY, KANSAS

CHAPTER 3

NONPUBLIC WATER SUPPLIES

SECTION 3-1.0 PURPOSE AND INTENT

The provisions of this chapter are for the purpose of regulating and controlling the development, maintenance, and use of all water supplies other than Public Water Supplies in Morris County, Kansas, in order that public health will be protected and the contamination and pollution of the water resources of the county will be prevented.

SECTION 3-2.0 APPLICABILITY

The provisions of this chapter shall apply to all unincorporated areas in Morris County. Any incorporated city within Morris County can adopt by proper proceedings this sanitary code.

SECTION 3-3.0 DEFINITIONS

3-3.1 Public Water Supply means a system that has at least ten service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

3-3.2 Nonpublic Water Supply means all water supplies not meeting the definition of Public Water Supply.

3-3.3 Domestic Water means water primarily for kitchen, bathroom and laundry use, including water used for food preparation, dishwashing, baths, showers, and sinks.

SECTION 3-4.0 REQUIREMENTS FOR NONPUBLIC WATER SUPPLIES

3-4.1 Permit. No person shall develop, or use any modified or newly constructed nonpublic water supply until a permit has been obtained from the Authorized Representative.

3-4.2 Approved Plans. No permit to develop a nonpublic water supply subject to regulations of this code shall be issued until the plans have been approved by the Authorized Representative. References approved by State Department

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shall be used as a guide by the Administrative Agency or Authorized Representative in reviewing and approving plans for non-public water supply systems.

- 3-4.3 Nonpublic Water Supplies Which Serve Four to Nine Service Connections. All nonpublic water supplies which serve four to nine service connections shall:
- a. mechanically chlorinate the water delivered to the connections; and
 - b. test for bacteriological quality at least every three months; and,
 - c. maintain logs to verify chlorine residuals and bacteriological quality for a period of at least one year.

3-4.4 Disinfection of Nonpublic Water Supplies Testing Positive for Coliform Bacteria. Nonpublic water supplies testing positive for coliform bacteria shall be disinfected in accordance to Kansas Water Well Regulations noted in Article 12- Kansas Groundwater Exploration and Protection Act and Article 30 - Water Well Contractors License; Water Well Construction and Abandonment.

SECTION 3-5.0 MINIMUM STANDARDS FOR GROUNDWATER SUPPLIES

- 3-5.1 Location. All wells used as sources of water for non-public water supplies shall be separated from the specified sources of pollution by distances equal to or greater than those shown in Table 1. Such distances may be increased by the Administrative Agency to provide assurance that the well will not be contaminated.

Table 1

Minimum Separation Distance Between Nonpublic Water Supply Wells and Sources of Pollution

<u>Source of Pollution</u>	<u>Minimum Separation</u>	<u>Recommended Separation</u>
Subsurface absorption field for septic tank effluent.....	50 feet*	≥ 100 feet
Pit privy.....	100 feet*	≥ 100 feet
Septic tank.....	50 feet*	≥ 100 feet
Barnyards, stables, manure piles, animal pens, etc.....	50 feet*	≥ 100 feet

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Streams, lakes and ponds.....	50 feet*	≥ 50 feet
Sewer lines, not constructed of cast iron or other equally watertight construction.....	50 feet*	≥ 100 feet
Sewer lines constructed of cast iron or other equally watertight construction.....	10 feet*	≥ 10 feet
Property Line.....	25 feet	> 25 feet

* As required by K.A.R. 28-10-101

3-5.2 Construction and Enforcement. Well construction and the enforcement of this section of the environmental code shall be regulated in accordance with K.A.R. 28-30-1 through 28-30-10 et seq. as amended.

SECTION 3-6.0 REQUIREMENTS FOR SUBDIVISION DEVELOPMENT

After adoption of this code no person shall develop any subdivision until the plans and specifications for water supply provision and/or protection have been approved by the Administrative Agency.

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APPENDIX A

WASTEWATER LAGOON SYSTEMS

Introduction:

The design criteria and construction standards contained herein are for the purpose of regulating and controlling the location, construction, maintenance and protection of wastewater lagoon systems used for private onsite domestic waste disposal. These requirements are intended to carry out the provisions set forth in Kansas Administrative Regulations (K.A.R.) 28-5-2 to 28-5-9 and the guidelines established by the Kansas Department of Health and Environment (KDHE) and the Cooperative Extension Service, Kansas Department of Agriculture, Kansas State University, Manhattan, Kansas. When properly designed, installed and maintained, odors from household lagoons are infrequent and visual impacts are minimal.

Lagoon System:

A wastewater lagoon is a small nondischarging pond that receives only domestic waste. This pond has an average operational water depth of three to five feet (5'). All domestic wastewater must be included in the wastewater system including grey water (laundry wastewater and sink wastewater).

Table 1: Minimum Required Distances from a Household Lagoon

Property Line	50 feet
Private or Public Well	100 feet
Pond, perennial stream, or lake	50 feet
Public Water Line	25 feet
Dwelling from which wastewater Comes from	50 feet
Other buildings on same property	10 feet
Public Utility Lines	25 feet

Note: Distances measured from maximum water level.

Lagoon Size:

The lagoon system will be sized and designed considering several factors provided on the permit application and soil evaluation. Table 2 shows wastewater pond designs.

Table 2

<u>Design Size</u>	<u>Water Surface</u>	<u>Bottom</u>	<u>Top</u>	<u>Slope</u>
M35	35'	5'	47'	3:1
M40	40'	10'	52'	3:1
M45	45'	10'	59'	3.5:1
M50	50'	15'	64'	3.5:1

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Sewer Line to Lagoon:

The sewer line from the residence to the lagoon shall be a minimum of a four- (4) inch diameter solid pipe. Schedule 40 or heavier is best, however, under high traffic areas, for example a driveway, Schedule 80 or heavier pipe must be used or the pipe needs to be double encased. All joints will have solvent welded joints.

Minimum slope of the line shall be 1/8 inch per foot (1 foot per 100 feet). The maximum slope shall not exceed 3/8 inch per foot or 3 feet per 100 feet. Sewer line slopes should not vary in order to avoid accumulation of solids in the pipe.

The trench bottom should be undisturbed soil and free of rocks or other material that could rupture the line. Backfill shall be compacted around the sides of the line at least 2 inches over the top of the line. The remainder of the trench shall be filled and mounded over trench to allow for settling.

At least two (2) clean outs shall be provided. One clean out shall be located just outside the house(or inside) and the second shall be located near the lagoon. Additionally, a clean out is highly recommended every 100 feet or at every change in directions of the sewer line. Clean outs may be a "T" or "Y" the same size as the sewer line.

The line should enter below the water surface and at least 18 inches above the bottom and should extend to near the center of the lagoon. The end should be anchored and supported. A splash pad of at least 2 feet X 2 feet must be placed under the pipe outlet location. A splash pad is concrete or flat rock pad and is essential to prevent the disruption of a lagoon seal.

Construction:

Any type of construction equipment may be used to build the wastewater pond. However, it is essential to have firm compaction of the lagoon area and berms. Construction shall not be done when the soil is muddy or excessively soft. Muddy soil is difficult to work and forms clods, which can prevent smoothing of the top of the dike. Excessively dry soil does not allow for proper soil compaction. When a backhoe is used for construction, additional compaction may be necessary for proper compaction.

Topsoil shall be removed from the pond and dike area before beginning the embankment construction and should be stockpiled for later use on the embankment.

Embankment slopes shall not be steeper than 3 feet (horizontal) to 1 foot (vertical).

The slopes shall ensure that the minimum design size of the pond maintains at least two feet of freeboard above the normal functional pond depth of five feet. The top of the slope berm shall have a minimum width of four feet. Surface water shall be diverted from the lagoon by constructing a diversion terrace around the upslope side of the lagoon (when required by the authorized representative).

The pond bottom and embankment surfaces shall be of uniform slope and free of rocks, slope debris, ridges and ruts that may interfere with mowing the embankment.

Topsoil should be replaced on embankment surface once the lagoon is completed. Perennial groundcover is necessary to reduce erosion. Groundcover shall be seeded as soon as it is feasible to plant the desired groundcover choice. A protective straw or hay cover mulch is encouraged to hold the soil and seed in place until the cover is established.

FIGURE 1 depicts a typically constructed wastewater lagoon system.

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Fencing Requirements

The legal liability created by the wastewater lagoon lies entirely with the landowner or resident. To help protect the landowner and resident from liability exposure, the pond area must be fenced. The following fencing requirements are minimum standards. If these standards are not adequate to keep children or animals out of the lagoon area, the landowner is responsible for constructing and maintaining a more restrictive fence that will prevent access to the lagoon.

Fencing diagrams are shown in FIGURES 2 through 5. Fencing material must be a minimum of 4 feet tall and taller is highly recommended. Fence openings shall be no larger than 2"x4" or consist of combination cattle panels or woven wire. Types of acceptable fencing include chain link, welded wire, woven wire, horse panels, or combination cattle panels. The combination cattle panels or woven wire must have smaller opening at the bottom or throughout the fence (2"x4"). When using the combination cattle type panels or woven wire at least one row of barb wire must be placed around the top. If livestock is accessible to the lagoon area all of the fence types should have barb wire around top and the fence must be placed at the bottom of the lagoon berm toe (outside). Without livestock, fence may be placed around the top of the lagoon berm, but cannot be any closer than 2 feet from the inside edge of the top of the embankment. Any type of fence posts may be used, but solid, sturdy corner posts are required or the corners must be securely anchored. Posts placed between the corners cannot be further than 10 ft apart. The fencing material must be flush to the ground at all points. Fence must be maintained properly at all times.

A hung gate of sufficient size (minimum of 4 ft. width and 4 ft. tall) must be located to accommodate the entrance of a mower. This gate must provide the same degree of resistance to entry as the fence. A locked gate is recommended to restrict unauthorized access.

Abandoned Wastewater Lagoons:

Any abandoned wastewater lagoon must have the fence removed, and completely filled in with soil. Abandoned wastewater lagoons are those are no longer required for its original intent. It is at the responsibility of the current landowner to eliminate the abandoned wastewater lagoon.

Maintenance:

In order for a lagoon to work properly, the landowner is responsible for keeping all vegetation shorter than 2 feet high. The landowner must take the means necessary to keep cattails, trees, and tall weeds out of the entire wastewater lagoon. Refer to K-State Research and Extension Water Quality Series Bulletin MF-2290 "Wastewater Pond Operation, Maintenance, and Repair" for detailed information on lagoon maintenance. Copies can be obtained through the local K-State Extension Office.

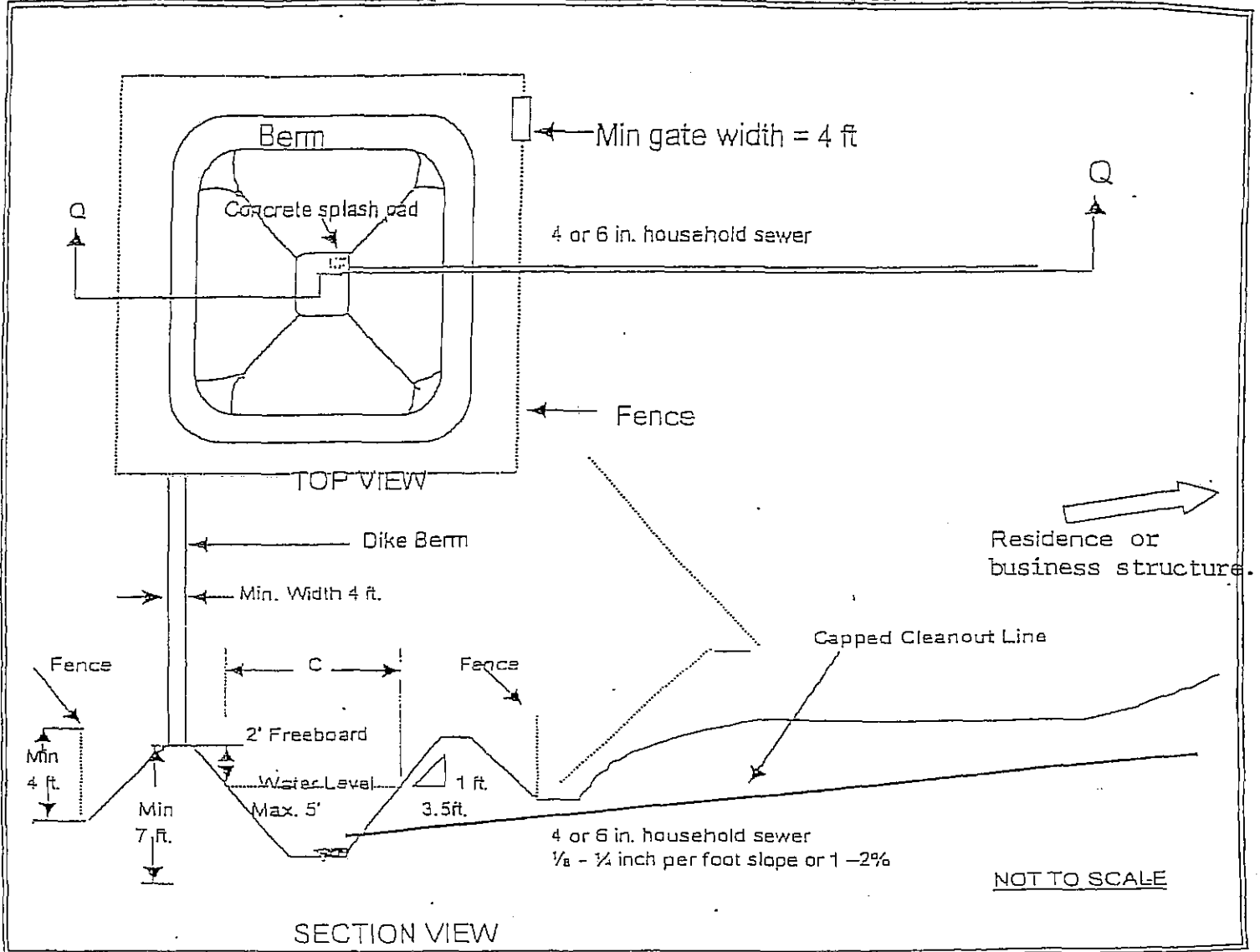
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FIGURE 1: Lagoon System A Typical Constructed Household Lagoon



C=Width at 5' Water Level. This is referred to as the Water Surface in Table 2.
 Q=Pipe outlet, typically at 18" to 24" above bottom of lagoon.

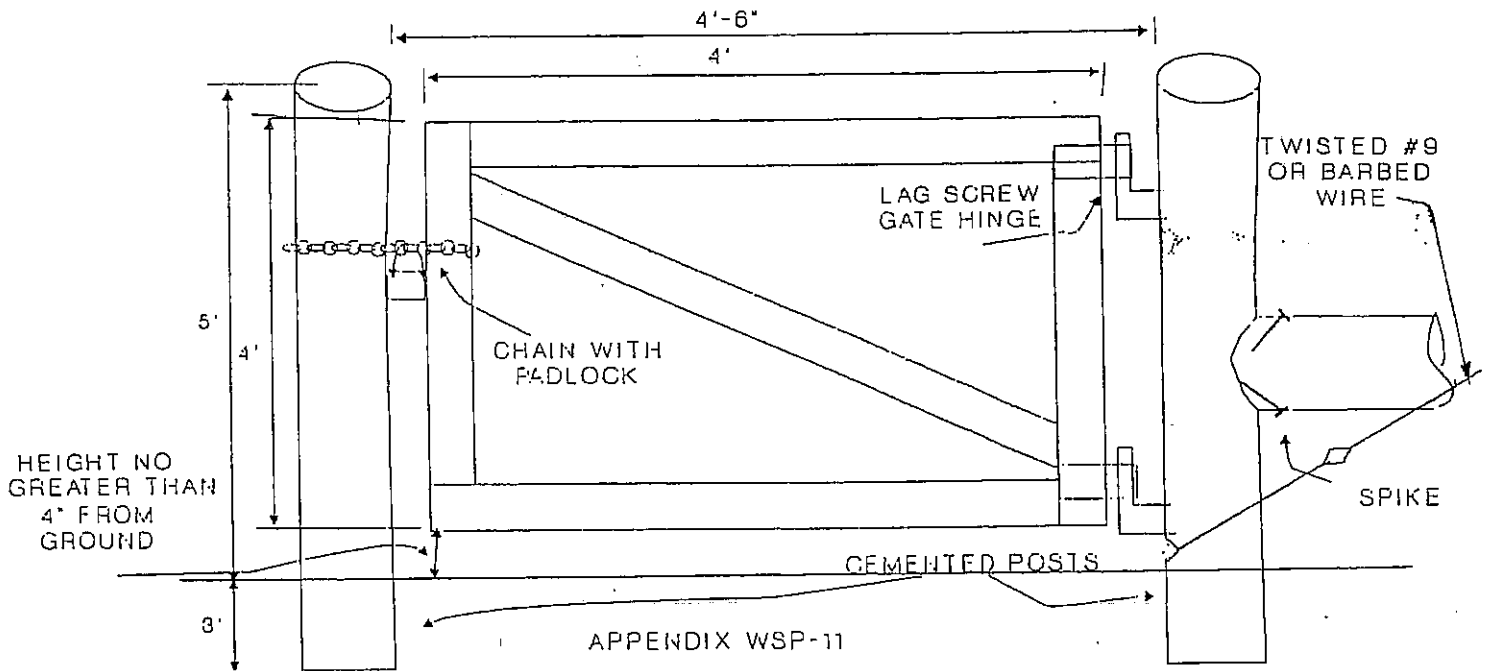
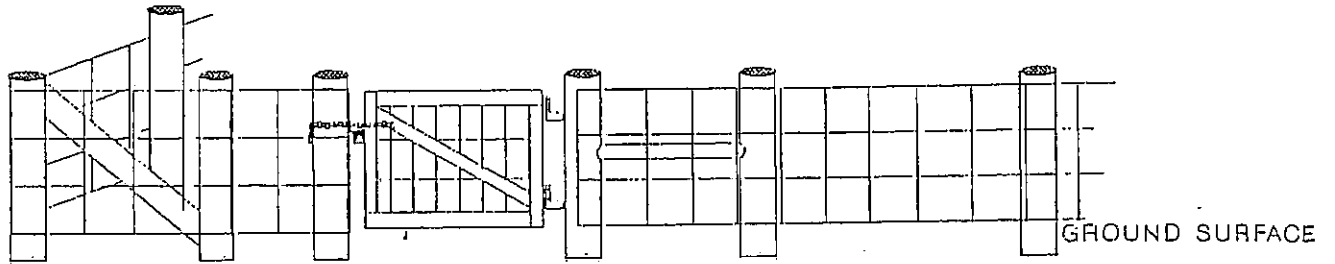
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FIGURE 2

FENCING: STANDARD HUNG GATE - "H" STYLE BRACING



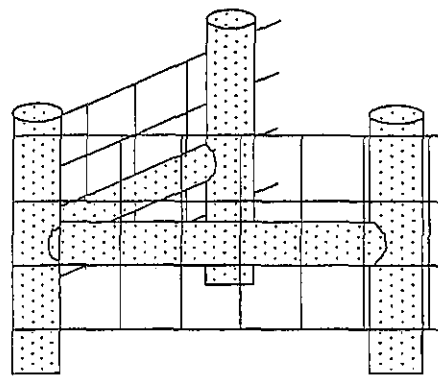
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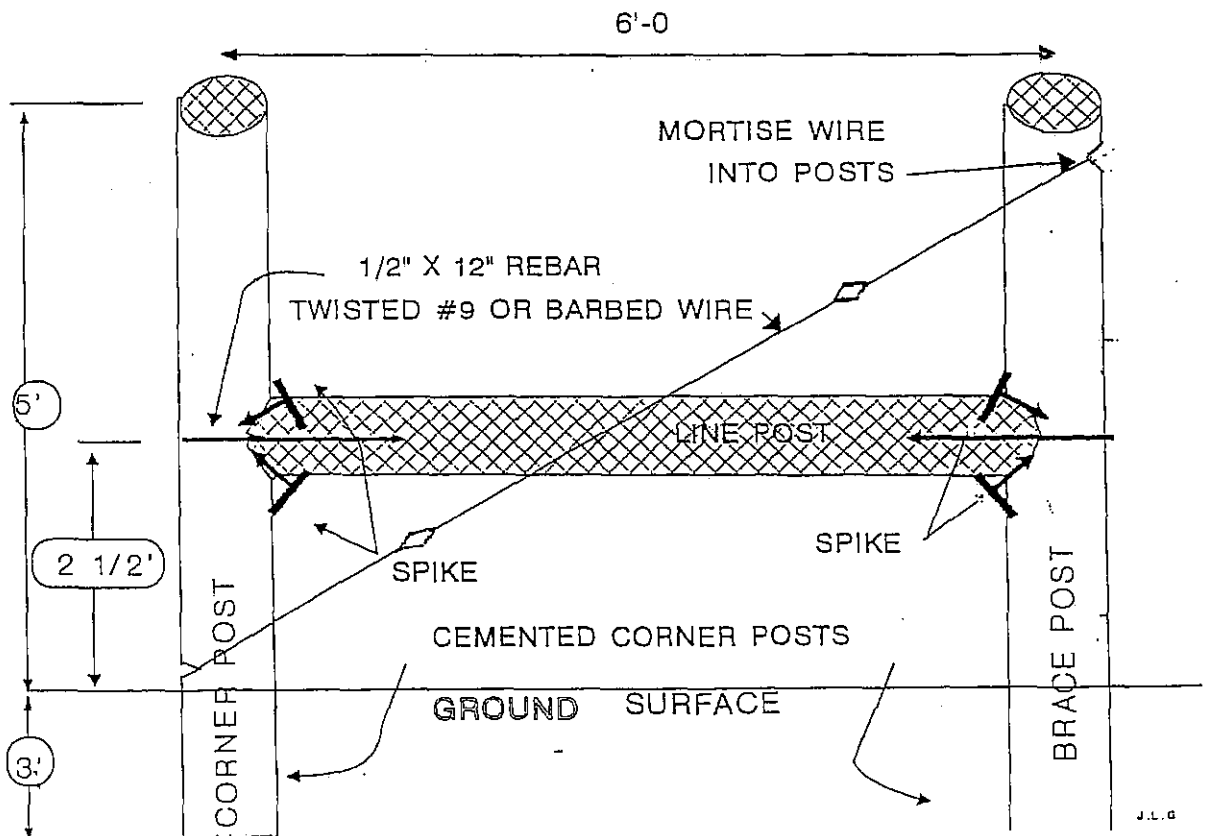
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FIGURE 3

STANDARD BRACING FOR CORNERS - "H" STYLE



2" X 4" WELDED WIRE OR WOVEN WIRE
CHAIN LINK FENCING OR COMBINATION PANEL
POST MATERIAL: OSAGE ORANGE OR STEEL PIPE
PRESSURE TREATED CREOSOTED POST
CORNER POST SIZE: 8'-0" X 5" TOP
LINE POST 6' X 3 1/2" TOP
USE FENCE STAPLES - 1 1/2" LONG
WIRE: #9 OR 4 STRAND TWISTED,
BARBED WIRE



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FIGURE 4

STANDARD BRACING FOR CORNERS - "N" STYLE

2" X 4" WELDED WIRE OR WOVEN WIRE

CHAIN LINK FENCING OR COMBINATION PANEL

POST MATERIAL: OSAGE ORANGE OR STEEL PIPE

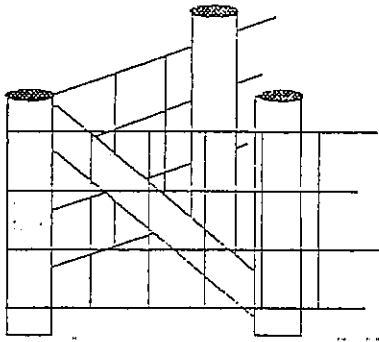
PRESSURE TREATED CREOSOTED POST

CORNER POST SIZE: 8'-0" X 5" TOP

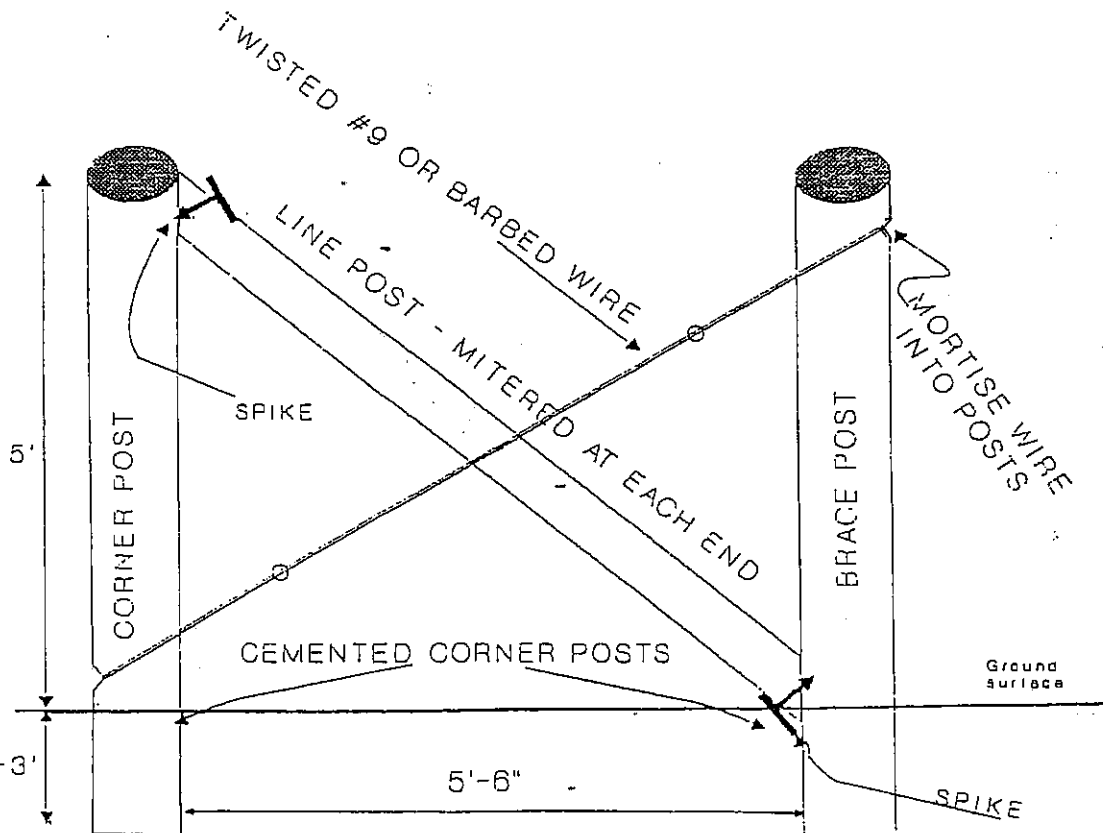
LINE POST 6' X 3 1/2" TOP

USE FENCE STAPLES - 1 1/2" LONG

WIRE: #9 OR 4 STRAND TWISTED,
BARBED WIRE



Ground
surface



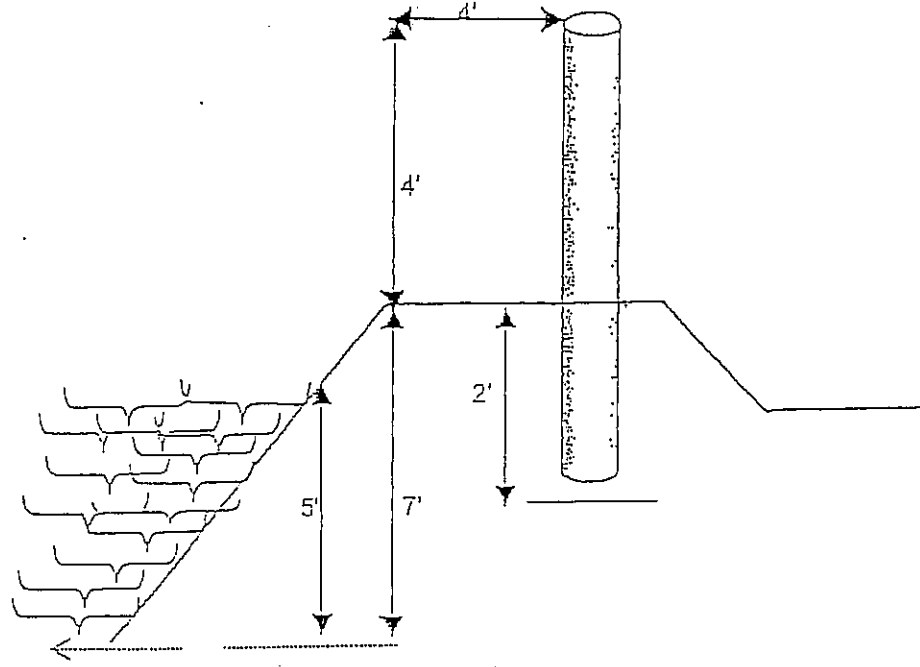
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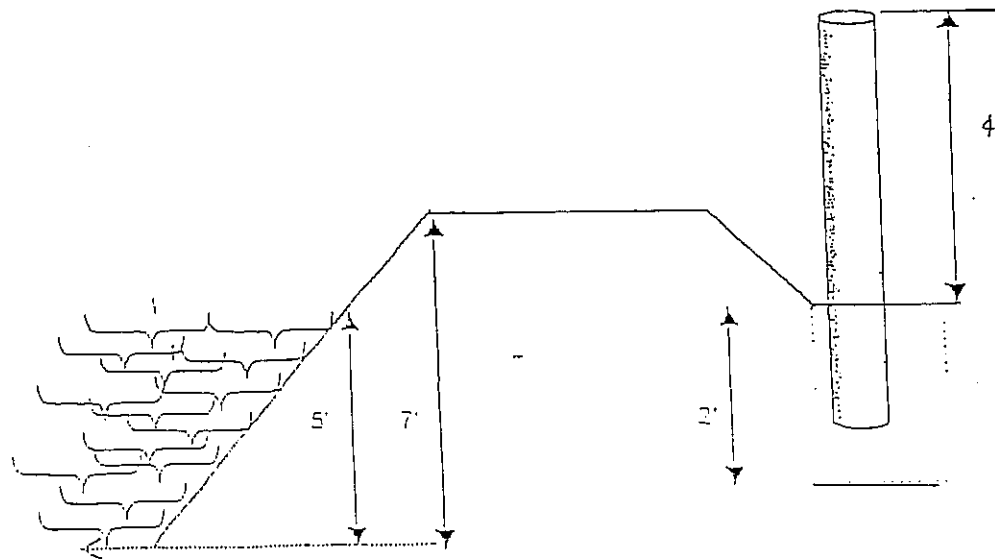
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FIGURE 5

PROPER LOCATION FOR WASTEWATER LAGOON FENCE



No Livestock



Livestock OR No Livestock

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