

ATTACHMENT 1

STATE OF NEBRASKA DEPARTMENT OF HEALTH
Division of Drinking Water and Environmental Sanitation

GUIDELINES FOR WATER SYSTEM DESIGN

Introduction

Chapter 71, Article 53, Supp., 1976, the NEBRASKA SAFE DRINKING WATER ACT, requires that plans and specifications for major construction, extension, or alteration of public water supply systems in Nebraska be prepared by a Professional Engineer and reviewed and approved by the Nebraska State Department of Health. These guidelines are established under this authority in conformance with NEBRASKA STATE DEPARTMENT OF HEALTH, RULE 5, REGULATIONS GOVERNING PUBLIC WATER SUPPLY SYSTEMS. The definitions contained in RULE 5 apply to these guidelines.

The Guidelines are intended as a guide to the engineer in the preparation of plans and specifications and will be used as the basis for review by the Department of Health.

Guidelines

The MANUAL OF WATER WELL CONSTRUCTION PRACTICES, published by the United States Environmental Protection Agency, Office of Water Supply; and RECOMMENDED STANDARDS FOR WATER WORKS, 1987 Edition, published by the Great Lakes-Upper Mississippi River Board of State Sanitary Engineers, are hereby adopted by the Nebraska State Department of Health as guidelines for water system design. In the event of discrepancy, the MANUAL OF WATER WELL CONSTRUCTION PRACTICES shall govern.

In addition, the following guidelines concerning the groundwater sources are established:

1. Location. Every well, infiltration line or spring serving or intended to provide water for a public water supply system, insofar as possible, should be located, constructed, or modified in such a manner that neither underground or surface contamination by any biological, chemical or radioactive substance or by the physical property of any substance from any cesspool, privy, septic tank, sub-surface tile system, sewer, drain, pit below ground surface, abandoned well, animal or avian wastes, or any other possible source of pollution can adversely affect such water supply. The minimum recommended horizontal distance in feet separating the well or spring from potential sources of contamination should be as described below. The Department will consider location of wells and springs at closer proximity than the minimum distances below. Approval for such location will be given when circumstances require such location and when, in the opinion of the Director, the engineer demonstrates that such location will not constitute a pollution hazard to the supply.

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<u>CATEGORY</u>	<u>DISTANCE</u>	
	<u>Feet</u>	<u>Meters</u>
Non-Potable Water Well	1,000	300
Sewage Lagoon	1,000	300
Absorption or Disposal Field For Waste	500	150
Cesspool	500	150
Dump	500	150
Feedlot or Feedlot Runoff	500	150
Corral	500	150
Pit Toilet	500	150
Sanitary Landfill	500	150
Chemical or Petroleum Product Storage	500	150
Septic Tank	500	150
Sewage Treatment Plant	500	150
Sewage Wet Well	500	150
Sanitary Sewer Connection	100	30
Sanitary Sewer Manhole	100	30
Sanitary Sewer Line	50	15
Sanitary Sewer Line (Permanently Water Tight)	10	3

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When surface runoff or underground movement from potential sources of contamination may adversely affect the quality of water from such supplies, the distance separating these potential sources of contamination and the well or spring should be greater than that listed in the above schedule .

2. A test hole will be required for all proposed well sites.
3. The annular space shall be grouted to a minimum depth of 10 feet below the ground surface. Grouting to greater depths will be required when warranted by the method of construction or is necessary, in the judgement of the Director, to prevent possible contamination of the well.
4. The following information must be submitted with the plans and specifications or as addendum thereto:
 - a. Test hole driller's logs and reports;
 - b. All sieve analysis and calculations used in gravel pack and screen design. This information shall be submitted prior to the placement of the screen and gravel pack.