

TEXAS COMMISSION on ENVIRONMENTAL QUALITY



UPDATING CHAPTER 217

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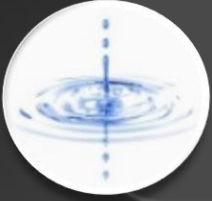
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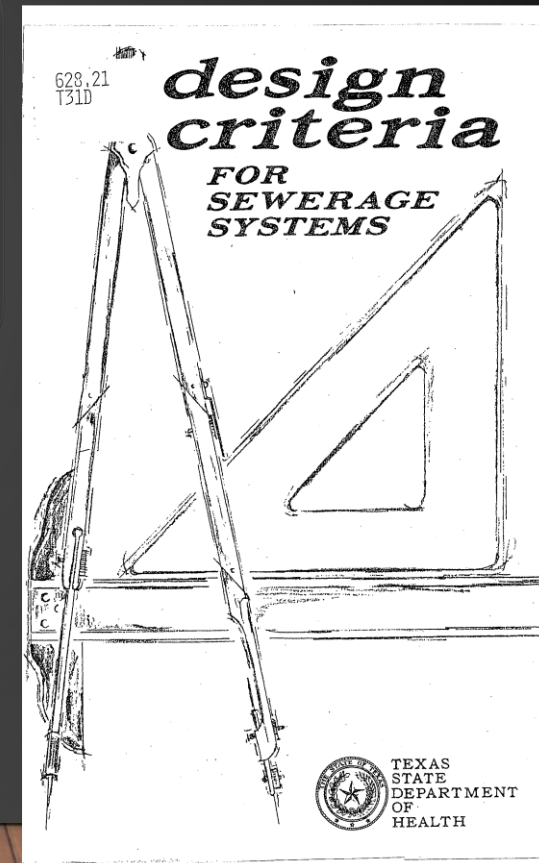
HISTORY OF MAJOR CHANGES OF THE WASTEWATER TREATMENT DESIGN CRITERIA IN TEXAS



The first consolidated design criteria was adopted by Texas State Department of Health on 9/18/1950.



This document was revised on 9/11/1961, 9/18/1968, 9/13/1970, 9/1/1974, 6/1/1981, 4/20/1990, 8/28/2008, 12/8/2015, 2024?



STRUCTURE FOR CHAPTER 217

- Subchapter A Administrative Provisions
- Subchapter B Design Bases
- Subchapter C Conventional Collection System
- Subchapter D Alternative Sewer Collection System
- Subchapter E Preliminary Treatment Units
- Subchapter F Activated Sludge

STRUCTURE FOR CHAPTER 217

Subchapter G Fixed Film and Filtration

Subchapter H Natural Systems

Subchapter I Subsurface Disposal Designs (New)

Subchapter J Sludge

Subchapter K and L Disinfection

Subchapter M Safety

Subchapter N Reclaimed Water Distribution System
(NEW)

SUBCHAPTER A

Administrative Provisions

Adding and modifying definitions

Adding abbreviation subsection

The owner is responsible for developing an O&M manual with the assistance of an engineer.

The owner must ensure that the O&M includes all information specific ... necessary to ensure efficient and safe operation.

Adding a requirement that the engineer give information about the project (serving tiny homes, serving a subdivision with graywater system, the sizing of the collection system both up and down stream of the project.)

SUBCHAPTER A

Administrative Provisions

The rule grandfathers existing facilities to the rule which was in place at the time of the facility's construction and original plans and specifications approval. This will tell the engineer and the owner of the facility what parts of a plant that will have to meet the latest design criteria during a upgrade or modification.

SUBCHAPTER B

Design Bases

The major change to this subchapter is to allow the design engineer to design the plant based on the annual average flow instead of the max. monthly flow.

The criteria will require the reuse of effluent within the treatment process when ever possible.

Increasing the upper level the $\text{NH}_3\text{-N}$ to 90 mg/l

SUBCHAPTER B

Design Bases

- Emergency Power for Critical Components
- Critical Treatment units
 - Dependent of treatment system type
 - Aeration (partial or full)
 - Disinfection
 - Pumping – no unauthorized discharges
 - Keep flow moving – avoid septic conditions

SUBCHAPTER C

Conventional Collection Systems

Reclaimed Water Sections are being move to the new Subchapter N

Piping Updates

New pipe technologies

Review of force mains pressure requirements

Change the piping slope requirements

Lift Station

Active volume

Emergency storage

SUBCHAPTER D

Alternative Sewer Collection Systems

- Minor changes to this chapter mainly to the pipe requirements and to vacuum system

SUBCHAPTER E

- **Preliminary Treatment Units**
- Weir loading rates
 - Dependent
 - use of primary clarifier
 - Size of clarifier
 - Treatment following clarifiers
 - Possible alternative design standards
- Surface loading criteria
- Peak flow usage
- EQ Basin, Grit Chamber minor updates

SUBCHAPTER F

Activated Sludge

Updating the SBR and MBR design from
ADF to PDF

Biological Nitrogen Removal

Biological Phosphorus Removal

Phosphorus Removal by Chemical
Addition

SUBCHAPTER G

Fixed Film Filtration

No major updated to this subchapter

SUBCHAPTER H

Natural System

Align Section of 217.203 to agree with 30 TAC 309.13(d)

For impoundments overlying recharge zones of major
or minor aquifers

Require soil liner of **3 ft. thickness**

Require 10^{-7} permeability

minimum 60 mil thickness for synthetic liner

Revising the requirements for a pond in a pond (new
name for integrated facultative lagoons)

SUBCHAPTER I

Subsurface Disposal Designs

Updating the surface drip dispersal design

Adding low pressure dosing design requirements

SUBCHAPTER J

Sludge

Changes to anaerobic digester, heat stabilization, sludge drying.

Clarifying the different requirements for land application and land filling of sludge.

SUBCHAPTERS K & L

Disinfection

Updating Subchapter K: CL2 Requirements

Gaseous Chlorine

Sodium Hypochlorite

Adding PAA requirements

Updating Subchapter L: UV Disinfection

Update UV Rules

Regrowth Issues

SUBCHAPTER M

Safety

Updating the security audit requirements

Updating the requirements to make sure all points within the facility that may maintenance is accessible

SUBCHAPTER N

Reclaimed Water Distribution System

Reclaimed Water System Changes

- Pressure Planes

- Distribution System Design

- Looping and Dead-End Flushing

- Supplying Additional Chlorination

To ensure no issues arise from dead water

To account for possible new uses or requirements

- Fire flow

- Residential watering

- Third line

SUBCHAPTER N

Reclaimed Water Distribution System

Minimum reclaimed water line sizing - dependent number of service connections

Minimum pressure at each connection – as previously stated

Air release devices required where possible

- Same as wastewater force mains

- Topography

- Air release device installation must preclude contaminant intrusion

SUBCHAPTER N

Reclaimed Water Distribution System

- Maintain effective recirculation of water with minimal dead ends
- Flush valves and discharge piping installed at dead-ends
- Dead end flushing on regular intervals
- Dead-end and other mains flushed as needed
- All flush water must be sent to sanitary sewers

SUBCHAPTER N

Reclaimed Water Distribution System

Maintain water type and quality to each user

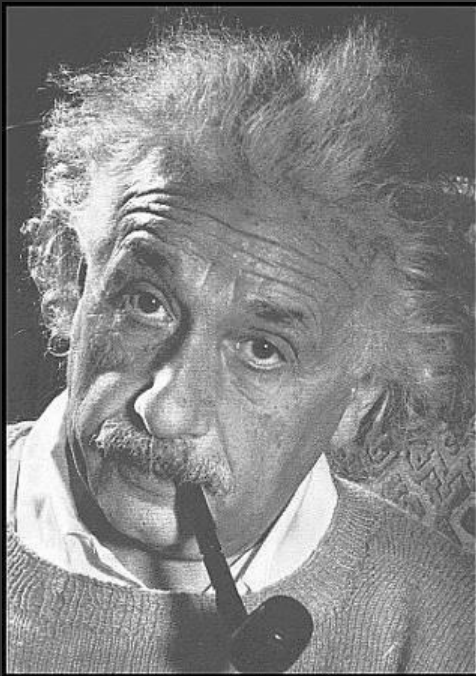
Perform testing throughout entire distribution system

Additional chlorination injection

as needed throughout distribution system

Ensure required chlorine residual continually met

QUESTIONS OR COMMENTS?



In life...

questions are guaranteed

answers are not

THANK YOU,

IF YOU NEED FOR INFORMATION ABOUT THESE RULES CONTACT:

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