

Texas Commission on Environmental Quality Chapter 217 Design Criteria Stakeholder Meeting

November 19, 2020 @ 1:30 p.m.
Via MS Teams Live Event

Meeting Summary

Welcome and Introductions

Louis C. Herrin, III, P.E.

Chapter 217 Update Timeline

Louis C. Herrin, III, P.E.

- Kick-off Meeting – November 2020
- Comments and/or Proposed Changes due – January 15, 2021
- Draft Memo with Proposed Changes – February 2021
- Start revisions and meet with Stakeholders on Sections of the rules – March-June 2021
- Draft rule with preamble and fiscal note – July 2021
- Draft rules to the Commission for permission to publish in the Texas Register – August 2021
- Public Hearing on Draft Rules – October 2021
- Adoption of Rules – March 2022

History of Major Changes to Design Criteria in Texas

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- The first consolidated design criteria was adopted by Texas State Department of Health on 09/18/1950
- This document was revised on 09/11/1961, 09/18/1968, 09/13/1970, 09/01/1974, 06/01/1981, 04/20/1990, 08/28/2008, and 12/08/2015

Emergency Power Requirements for Critical Components

Paul Brochi, P.E.

- Critical Treatment units
 - Dependent of treatment system type
 - Aeration (partial or full)
 - Disinfection
 - Pumping

Collection Systems, Subchapters C and D

Paul Brochi, P.E.

- Piping Updates
 - New pipe technologies
 - Review of force mains pressure requirements
- Lift Station
 - Active volume
 - Emergency storage
- Editorial Corrections
- No changes to separation distances

Activated Sludge System, Subchapter F

Paul Brochi, P.E.

- Overview of Possible Updates
 - Primary Clarifiers
 - Weir loading
 - Dependent
 - Use of primary clarifier
 - Size of clarifier
 - Treatment following clarifiers
 - Possible alternate design standards
 - Surface loading criteria
 - Peak flow usage
 - Aeration Basins
 - Updating loading criteria
 - Verbiage corrections
 - Possible aeration piping updates
 - Reviewing Diffuser Correction factors and depths
 - Sequencing Batch Reactors (SBRs)
 - Peak flow usage
 - Decanter design: ADF versus PDF
 - Basin sizing: ADF versus PDF
 - Membrane Bio-Reactors (MBRs)
 - Membrane Types and Technologies
 - Peak flow usage
 - Flux Rates
 - At ADF
 - At PDF
 - Design Standards
 - Volume Flux Design Methodology
 - Possible exclusion of this design method
 - Dependent of number of plants designed using this method
 - Merits of maintaining method
 - Do we need to change it?

Updating 217.163 Advanced Nutrient Removal

Baltazar Lucero-Ramirez, P.E.

- Need of Update
 - With more plants getting Total Phosphorus (TP) and Total Nitrogen (TN) requirements in their permits we have been asked to update the design requirements for these types of plants including basin DO requirements, sizing requirements, chemical addition, and etc.
- Expanded Requirements
 - Sizing Requirements
 - DO Limits
 - Chemical Requirements
 - Other Requirements
- Biological Phosphorus Removal
 - Common Process Configurations
 - Process Design Requirements
 - Influent Wastewater Characteristics
 - Anaerobic zone design

- Aerobic zone design
 - Aeration system design
 - Operational Factors
 - Chemical Addition Requirements
- Biological Nitrogen Removal
 - Common Process Configurations
 - Process Design Requirements
 - Influent wastewater characteristics
 - SRT
 - DO concentration range
 - Specific Denitrification Rate (Anoxic Zone)
 - MLSS Concentration, Alkalinity, Temperature
 - Mixing Requirements
 - Internal Recycle and RAS Recycle Ratios

Natural Treatment Systems, Subchapter H

Paul Brochi, P.E.

- Probable Changes
 - 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 40 mil thickness for synthetic liner
 - Remove ambiguities
 - Other updates as needed, determined during review

Updating Disinfection Requirements, Subchapter K & L

Baltazar Lucero-Ramirez, P.E.

- Updating Subchapter K
 - Cl₂ requirements
 - Gaseous Chlorine
 - Sodium Hypochlorite
- Updating Subchapter L
 - Ultraviolet (UV) disinfection
 - Update UV Rules
 - Look into requirements that appear to be too stringent (redundancy requirements)
 - Regrowth issues
- Other disinfection methods
 - Peracetic Acid (PAA)

Subsurface and On-site Disposal, New Subchapter I

Louis C. Herrin, III, P.E.

- Moving Chapter 222 Subchapter D to the new Subchapter I
- Adding treatment and disposal methods to this subchapter are in line with both State and Federal requirements
- Reviewing the existing design criteria for this subchapter to see if they need to be updated

Miscellaneous**Louis C. Herrin, III, P.E.**

- Clarifying the flow measurements requirements for both primary and secondary flow meters and which one is required by rules and which are not

Question & Answer Session

Q & A Session Handout is available at:

https://www.tceq.texas.gov/permitting/wastewater/plans/design_criteria_stakeholder_group.html

Adjournment

To be added to the DCSG stakeholder list for future meetings and correspondence, please email your request to Outreach@tceq.texas.gov with "Chapter 217" in the Subject line.

The meeting will be available after the meeting at <https://www.youtube.com/user/TCEQNews>.