



# Texas Commission on Environmental Quality

December 2011

## **Curriculum Guidance for Water and Wastewater Operator Training**

### **ACCEPTABLE TOPICS FOR CONTINUING EDUCATION**

The purpose of this curriculum guidance is to identify the subject matter that is eligible for approval as continuing education for occupational licensing. All training for operator licensing must be reviewed and approved as described in the regulatory guidance document, RG-373: *Approval of Training for Occupational Licensing*. Copies are available on the TCEQ website at <http://www.tceq.state.tx.us/publications/rg/rg-373.html/view>

1. Applicable topics in the following approved operator training courses as taught by approved providers:

(courses in bold = core courses that may be required for initial licenses)

#### Water Operator Licensing Courses

#### **Basic Water Works Operation\***

#### **Groundwater Production**

#### **Surface Water Production**

#### **Water Distribution**

#### **Water Laboratory**

#### **Customer Service Inspector=s Course**

Taste and Odor Control for Municipal Water Systems

Water Sampling and Field Analysis

Water Technology

#### Wastewater Operator Licensing Courses

#### **Basic Wastewater Operations\***

#### **Wastewater Treatment**

#### **Activated Sludge Basics**

#### **Biological Treatment Processes**

#### **Operation of Activated Sludge Plants**

#### **Operation and Maintenance of Package Aeration Plants**

#### **Wastewater Collection**

#### **Wastewater Laboratory**

Wastewater Self-Reporting

Wastewater Sampling and Field Analysis

Anaerobic Digestion

Wastewater Technology

Both

**Pump and Motor Maintenance**

**Valve and Hydrant Maintenance**

**Water Utility Calculations**

**Water Utility Safety**

**Water Utility Management**

**Backflow Prevention Assembly Tester=s Course-** applicable topics

Applied Confined Space Safety

Excavation Safety (Competent Person Training)

Math Basics

Waterborne Pathogens

Identification of Microorganisms in Water and Wastewater

Operations and Maintenance of Chlorinator Systems

Hazardous Waste Operations (40-hour course and 8-hour refresher)

2. Topics in approved correspondence courses from various providers (list available.)

3. Topics in the following textbooks or manuals:

"Manual of Water Utility Operations" - Texas Water Utilities Association, 8th Edition, 1988

"Manual of Wastewater Treatment" - ibid, 6th Edition, 1991

"Manual of Wastewater Collection" - ibid, 6th Edition, 1991

"Water Utilities Management Manual" - ibid, 2nd Edition, 1997

"Manual of Water Utilities Calculations" - ibid, 1st Edition, 1995

"Conducting a Pretreatment Inspection" Manual - ibid, 1st Edition, 1998

4. A topic related to a critical job task identified during a TCEQ job analysis, including:

AA Job/Task Analysis of the Surface Water Treatment Operator Career Field@ - Texas State University at San Marcos, 2010

AJob Analysis of Groundwater Treatment and Water Distribution in Texas@ - Texas State University at San Marcos, 2011

AJob Analysis of Wastewater Treatment and Collection in Texas@ - Southwest Texas State University, SWTSU, 2002

5. Applicable topics addressed in the following chapters Title 30 Texas Administrative Code (the commission=s rules):

Chapter 30 - Occupational Licenses and Registrations

Chapter 217 - Design Criteria for Domestic Wastewater Systems

Chapter 290 - Public Drinking Water

Chapter 291 - Utility Regulations

Chapter 293 - Water Districts

Chapter 294 - Underground Water Management Areas  
Chapter 305 - Consolidated Permits  
Chapter 307 - Texas Surface Water Quality Standards  
Chapter 308 - Criteria and Standards for the National Pollutant Discharge Elimination System  
Chapter 309 - Domestic Wastewater Effluent Limitation and Plant Siting  
Chapter 311 - Watershed Protection  
Chapter 312 - Sludge Use, Disposal, and Transportation  
Chapter 314 - Toxic Pollutant Effluent Standards  
Chapter 315 - Pretreatment Regulations for Existing and New Sources of Pollution  
Chapter 317 - Design Criteria for Sewerage Systems (replaced by Chapter 217)  
Chapter 319 - General Regulations Incorporated into Permits  
Chapter 322 - Community Wastewater Planning  
Chapter 327 - Spill Prevention and Control

OTHER TOPICS WILL BE CONSIDERED ON A CASE-BY-CASE BASIS.

*\*Basic courses not eligible for use in renewing =A= or >B= licenses (30 TAC Chapter 30).*

minor revisions/updates December, 2011