



Class #	LT200
Class Name / Short Name	Wastewater Collection Systems Operation and Maintenance / WWCS
Summary	<p>This 16-18-week class is for collection system and Wastewater Treatment Facility operators and personnel who want to learn more about operation and maintenance of Wastewater Collection Systems. Topics such as design, operation, safety, different types of collection systems, lift stations, pump drawdowns, wastewater characteristics, treatment units, maintenance, and basic and applied math will be discussed.</p> <p>This course will help to prepare wastewater and collection system personnel for certification, as well as improve their knowledge and help them to work safely.</p>
KDHE/ABC Credits/Points	54 hours/1.5 points
Target Audience	Any and all personnel involved with wastewater treatment and/or collection systems. There are questions that cover collection systems on the wastewater treatment certification exams also.

Class Description

The long-term Collection Systems class is based on the Collection Systems textbooks from California State University. The class is not only for collection systems operators, but also for wastewater treatment personnel, city superintendents, public works directors, and any other personnel who work with collection systems. The 16-18-week course is taught in the classroom one afternoon a week usually from 1:00 pm - 5:00 pm.

Two major characteristics of the course that set it above other training providers are the *PIT Stops (Personalized Instruction and Training)* and the *Virtual Learning Center (VLC)*. *PIT Stops* are sessions where we will do customized training, either at your facility or somewhere else. *PIT Stops* are not required, but are available to the student who wants to learn more than what is taught in the classroom. The *Virtual Learning Center* is an online portal that provides students access to their grades and other supplemental material. It is also the place where the student will take tests and will communicate with the instructor and other students. There is no charge for *PIT Stops* or the *Virtual Learning Center*—they are included in the price of the course.

The course is worth 1.5 points or 54 hours for KDHE (and ABC) certification. You must also meet other requirements to take a certification exam. We cannot offer these as part of the course - KDHE and ABC are in charge of certifications in Kansas. However,



Smoke testing the collection system during a PIT Stop

we work closely with them. This

(Continued on page 3)



PIT Stops

Personalized Instruction and Training

One of the features of WWWATER training is the *PIT Stop*. These are usually day-long opportunities, and are great for the student who wants to go “above and beyond” normal classroom activities. PIT Stops give you the possibility for customized, individual learning experiences that are as varied as you make them! They give you actual hands-on experience while under the guidance and instruction of the teacher. They are a great way for timid students, or those that are new to the



A sewer camera in a manhole during a PIT Stop

industry, to learn new things and have questions answered in a “safe” environment—a one-on-one situation.

PIT Stops usually occur at your place of work, but can be used for such things as visiting other plants to get better acquainted with different treatment processes, or to see how similar processes are operated. This gives you access to other facilities and operators, and gives you a chance to see things “outside of your world”.

(Continued on page 4)

Virtual Learning Center (VLC)

Online grade book and test portal

One of the features of the long term class is the *Virtual Learning Center (VLC)*. It is a website portal that provides an online grade book (access to grades is always available). The VLC will also be the place where you take most of your tests, using any computer that is internet enabled (including tablets and even smartphones!). This opens up numerous possibilities by providing access to tests and grades 24 hours a day, seven days a week, from any computer with internet access.

The VLC also allows you to see your grade instantly upon completion of most tests. Instead of waiting a week while a test gets graded, the results are available instantly; thereby allowing you to study and retake your test much sooner-while the information is still fresh in your mind. The VLC also presents other possibilities, such as multimedia (video, audio, photographs, and charts and tables).

However, the VLC has other strengths beyond just testing and an online grade book. Through forums and other means, there will be opportunities for you to interact not only with the teacher, but with other

classmates as well. Extra, supplemental downloads will be offered also, giving you access to materials not given out in class.

The VLC will also be the place where you receive announcements, such as class cancellations (due to weather or other conditions), and schedule or venue changes. This will be the “go to” area for communication with the class and the instructor, as well as receiving extra information above and beyond that presented in class. This allows students who are separated by many miles access to resources that would otherwise be difficult or impossible to achieve, thereby creating a coherent, unified class structure.



The Virtual Learning Center Main screen

In order to use the VLC, you will need access to a modern computer with a working internet connection as well as an email address that is checked regularly. You will be responsible for creating your own user account, username and password, which you will need in order to access the VLC.

All of the services of the VLC are available at no cost to you!



(Continued from page 1)

course will apply towards KDHE Wastewater Treatment Plant Operators Certification (Small Systems, and Class I-IV) and the ABC Collection Systems exams. Remember that KDHE does not require certification for Wastewater Collection Systems Operators, nor do they give exams for them. However, many municipalities require the certification for employment, and others don't necessarily require it, but it is highly recommended. The Collection Systems Certification is a voluntary certification which is given by the ABC (Association of Boards of Certification), which also certifies water distribution, lab, biosolids and maintenance personnel. KDHE does certify water and wastewater treatment plant operators, and gives exams for water and wastewater operators.

Bring pencils/pens, paper and a calculator. You will receive handouts most weeks during class.

If you have any other questions, please contact WWWATER at the contacts on page 4 or on the website.

Tentative Schedule—this can change and probably will	
Week	Topic
1	Course Introduction, Importance of Collection Systems, Certification, SSOs and CSOs, I&I
2	CS components, appurtenances and flow
3	Math 1
4	Safety 1 (Confined Space and LOTO)
5	Safety 2 (Trenching & Shoring, Street)
6	Lift Stations 1
7	Lift Stations 2
8	Math 2
9	Midterm
10	TV, inspection, cleaning 2, Manhole Rehab and Sewer Rehab
11	Wastewater Treatment
12	Wastewater Treatment Facility Tour
13	Computers-record-keeping, data, etc
14	Collection System Tour and/or Wastewater Treatment Facility Tour 2
15	Review
16	Finals
This schedule is TENTATIVE, and may change as necessary.	



(Continued from page 2)

One of the most common PIT Stops, and one that is highly recommended, is the “*Plant Familiarization Tour*”. The goal of this PIT Stop is for you to become more familiar with your facility and equipment. This gives the Instructor a chance to see where you need help and to give you the knowledge you need about how your plant and its equipment works.

Other popular PIT Stops are: math, calculating wetwell drawdown and pump output, using pump

curves, learning proper sampling techniques, performing lab tests, smoke testing the collection systems, lift stations, lesson and course help, and more.

“ Dale always spent the necessary time to cover our concerns, and other issues so that I could understand them and apply them to my work.”

PIT Stops occur during the week and are scheduled by you and the Instructor, and must be approved in advance.

Although it is your responsibility to supply any parts, materials, tools or equipment needed, all of the services of the PIT Stop are available at no cost to you!

Some Testimonials from Students:

- Dale has a passion for teaching and spreading knowledge to others. You can see this easily in his mannerism alone.
- I will sign up for any classes he is teaching in the future. His knowledge and effort is A+. You can see when you don't understand something or not grabbing the concept that he wants you to understand.

How to register

1. Follow the link below to go to the Long-term Class page on the website, or use any app that can read QR codes and scan the QR code below.
 - Be sure to read all information—especially the information in red—before proceeding.
2. Click on the link of the appropriate Class Title. This takes you to the “*At A Glance*” page for your chosen class.
3. Next, double-check the information (like the class title, dates and location) to be sure you have chosen the correct one.
4. Then click on the appropriate link to register and pay

Links:

Long-term class info: <http://www.wwwater.org/longterm.html>

Website: <http://www.wwwater.org>

Email: dale@wwwater.org

Dale Vanderhoof
(620) 241-4618



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