

The Clarifier

OCTOBER 2005

Examination Results Show Little Change

You all know how stressful the examinations can be. The basic classes have to be endured, then long hours of study, then the worrying, then the day of the exam more worry... at last the exam is over and you passed...or not. Well, for the past several years, exams have been taken by thousands of operators and those wishing to become operators. Below is a brief summary of the number of exams given in each year since 1999, and the associated passing rates for those exams. An interesting point to note is that in December of 2003, math formulas were included in each exam administered, but the passing rates did not increase as a result.

	<u>1999</u>	<u>2000</u>	<u>2001-2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Exams Taken	1736	1790	1966	2111	1878	934
Exams Passed	1069	1130	1297	1280	1186	596
%Passing	62	63	66	61	63	64

The information presented is for all certification types and represents the average passing rate for the year. Individual certifications do show variations in excess of those shown here. For example, the passing rate for Collections Grade 2 ranges from 36% to 96% over the timeframe studied. The certification which has had the worst passing rate overall is WW Grade 3 at 28% and the best is Animal Waste- B at 90 %.

How do I apply for the Examination ?

Every 3 months, it's exam time and every operator wishing to take an exam must complete and submit an application form. The form is available online at <http://h2o.enr.state.nc.us/tacu/examapp.html> and must be filled out properly and completely to be accepted. Every exam cycle, the forms come in to the Technical Assistance and Certification Unit for review and some are in better shape than others. The following paragraphs will address the process of applying to take the exam.

1. Name, address and personal information.

Please make sure your name, address and social security number are legible and correct. This information is used to track your application and all information regarding your certifications.

2. Attach Certificate of Completion from required school.

Probably one of the most common deficiencies with applications. It is a requirement of the application process that a Certificate be included, indicating that the required training program has been successfully completed. There are only a few cases where an application will be accepted prior to completion of the school. And filling in the required school information on the form is NOT a substitute for attaching the Certificate! Please, Attach the Certificate! If you don't have a copy of the certificate, check with your training provider.



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Technical Assistance Case Success

Facility Details

Technical assistance was given at a facility that is permitted at 0.2 MGD. The facility's NPDES limits are 30 mg/l BOD and 30 mg/l Total Suspended Solids. The plant consists of preliminary treatment, extended aeration basin, aerobic digestion, and UV disinfection. The operator called to request a technical assistance visit. He reported a very turbid effluent, with a pH in the low 6's, (alkalinity supplements were being added). BOD, fecal coliform, and TSS were exceeding limits for the month. Visual observation of the plant indicated that the aeration basin mixed liquor looked very thin, but the lab tests indicated a reading of 4000 mg/l with ammonia nitrogen very low. The D.O. of the basin was 6 mg/l and the foam on the basin appeared normal. The aeration basin has three floating aerators to provide air for the basin and all were operating full time. The clarifiers were discolored/turbid with the settleability near zero, because there was no floc formation. Microscopic examination of the activated sludge revealed pieces of organisms, but whole organisms were hard to find.

Recommendations

1. Turn air off until the D.O. in the aeration basin reaches 1.0 mg/l.

It took approximately 24 hours for this to occur.

2. Only operate the number of aerators to maintain the oxygen level of 1 mg/l.
3. Install timers to control the operation of the aerators (facility is only staffed during the day).

Conclusions & Results

Excessive aeration along with the long detention time in the basin was causing the floc to shear. Operating the basin at a minimal oxygen level kept the nitrifiers from lowering the pH and allowed denitrification to occur, raising the pH, so alkalinity adjustment was no longer needed. **Permit compliance was regained within 10 days.**

The story above is just one of many examples of technical assistance provided by the Wastewater Treatment Plant Consultants with the Division of Water Quality. There are presently 7 staff positions designated as "Consultants", 3 of which are filled at this time. The Regional Offices in Fayetteville, Washington and Wilmington each have consultants on staff, Mooresville and Winston Salem share a consultant. The position in Asheville is currently vacant. These individuals are available for consultation, free of charge to any NPDES facility in the State. They are all highly qualified, Grade 4 WW certified with countless years of experience in both domestic and industrial facilities. Even though the staff is currently spread fairly thin, technical assistance continues to be provided. If you need technical assistance and either don't know who to call or your region does not have a consultant, please call the Technical Assistance & Certification Unit at 919.733.0026 and speak with Jerry Rimmer to arrange a visit from one of the consultants. Remember, this service is provided free of charge and is available just by requesting it.

ORC and Backups to be Updated in DWQ Database

In the next few months, the staff of the Regional offices of DWQ and TACU will be updating records for several hundred facilities that currently have incorrect designations for ORC, Backup ORC or both. This effort will begin with phone calls to the facilities in an attempt to get current designations corrected. If you receive a call, please work closely with the staff, because the next step in the process will involve sending out enforcement letters to those facilities that do not have properly certified operators designated. If you'd like to get ahead of the game, submit an updated ORC Designation Form and give us the current info on your facility. Make certain to have all operators sign the form!

Looking for a little light reading? Well, look no more. The new Needs to Know for both Wastewater and Subsurface Operators are available online at <http://h2o.enr.state.nc.us/tacu/manuals.html>. New wastewater materials will be phased into the June 2006 exam schedule. Subsurface materials will be taught beginning in September 2005 and phased into the March 2006 exam schedule.



Arthur Mouberry Retires

Effective September 1, 2005 Arthur Mouberry, WPCSOCC Chairman, retired from DWQ and the Commission. He is set to begin a new career in municipal planning and management. We wish him well in his new endeavor and send a big THANK YOU for his service to DENR and the WPCSOCC.

Arthur joined DENR/DWQ in 1976 after earning a Bachelor of Science degree in Civil Engineering from North Carolina State University. He is a registered Professional Engineer. His latest position at DWQ was Assistant Director, Division of Water Quality. In this position he was responsible for providing program management and direction for Personnel, Training and Information Management. He was appointed as DENR representative to the WPCSOCC July 2004 and was designated Chairman of the Commission beginning October 2004. Other positions held by Arthur while at DWQ included: Section Chief of the Groundwater Section, Regional Supervisor of the Raleigh Regional Office, Supervisor of Permits & Engineering Unit, Operations Branch Head of the Groundwater Section Enforcement & Emergency Response and Head of the Surface Water Unit, Hydrology & Management Branch with the Division of Water Resources.

Arthur's expertise and guidance will be missed by everyone associated with DWQ, but we are certain he will be an excellent asset to municipalities and the State of North Carolina in the future. We do appreciate his service to WPCSOCC.

His successor will be named soon and will join WPCSOCC as soon as an appointment is announced. In the interim, C.L.Gobble, Vice Chairman of WPCSOCC, will serve as Chairman.

2005 WPCSOCC Appointments

Appointments to serve the WPCSOCC beginning 2005 have been announced and the new appointees have been welcomed to the Commission. Please let these new appointees know how much you appreciate them serving as your representative on the Commission. Commissioners reappointed and sworn in at the July Commission meeting are:

Robert Dodson is reappointed for a term effective July 2005 until June 2008 representing Certified Operators. Mr. Dodson has spent nearly 22 years in water and wastewater management and the last ten years in his current position as Superintendent of Treatment Plants for the City of Durham. He is the ORC for the South Durham Water Reclamation Facility. Prior to this, he was a lab technician and plant operator in the Durham Water Resources Department.

Mr. Dodson is certified by the NC-WPCSOCC as a Grade IV Wastewater Operator, Land Application Operator and a Subsurface System Operator. He is also a member of the AWWA/WEA (Water Environment Federation) and NC Professional Wastewater Operators Association. He has received many awards throughout his career including the Wilbur E. Long, Jr.-Operator of the Year Award and the Water Environment Federation William D. Hatfield Award.

He was first sworn into membership on the WPCSOCC July 2000 and reappointed for a full term in July 2002. Mr. Dodson has been an active and involved member of the WPCSOCC. He was recommended by Bill Ross, Secretary of DENR for reappointment for another three year term on the WPCSOCC and approved by the EMC in May before being sworn in at the July Commission Meeting.

George H. Pettus is reappointed for a term effective July 2005 until June 2008 representing Certified Animal System Operators. Pettus is the Environmental Manager for Maxwell Foods, Inc. He serves on the Environmental Committee for the National Pork Board and is a Certified Assessor for the On Farm Odor/Environmental Assistance Program. He is on the Executive Committee and the Board of Directors for the North Carolina Pork Council and serves on the Technical and Environmental Task Force committee. He is a State Certified Technical Specialist in WUP, RUSLE and PLAT. He has worked in the design, engineering and management of livestock waste management systems for over 15 years and currently oversees environmental compliance and waste management for over 250 facilities.

He continues to serve on multiple Governor-appointed State stakeholder committees assisting DENR in developing non-discharge rules for CAFO's, State General Permits, NPDES permits, chronic rainfall, .0200 rules and other pertinent rules and regulations.

The 2001 recipient of the Wilbur E. Long, Jr. Operator of the Year Award, Pettus is a Certified Animal Waste Management System Operator and has served as an Instructor for Animal Waste Management Operator Certification.

Mr. Pettus is an active member of Pine Forest United Methodist Church where he serves as the Finance Chairman, a member of the Board of Trustees and Administrative Council, teaches Sunday School and sings in the Praise and Worship Band.

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New appointees to be sworn in at October Meeting

Gale D. Howell, Jr. appointment for term effective July 2005 until June 2008 as the Industrial Operator representative. Mr. Gale D. Howell, Jr. has twenty (20) years experience in management and operation of wastewater treatment programs at various levels. He is experienced in dealing with environmental and safety regulations at the federal, state and local levels, including being certified as an instructor in compliance of these regulations. He is currently serving as Operator in Responsible Charge (ORC) at two wastewater treatment facilities in NC.

United Chemi-con Inc., Lansing, NC, currently employs Mr. Howell as Environmental/Safety Manager. He is responsible for compliance with federal, state and local regulations regarding air and water pollution, solid waste management and chemical release prevention. He also manages training programs for 275 employees in environmental and health & safety areas. He has held this position for seven (7) years. His previous experience includes nine (9) years as Superintendent of Public Utilities for the Town of West Jefferson and four (4) years as Superintendent of the Town of West Jefferson Wastewater Treatment Facility. He also has four (4) years experience with Hydro Management Services, Inc. as Operations Specialist giving technical and operational support for water and wastewater treatment plants throughout NC.

He is certified by WPCSOCC as Grade IV Biological and Grade II Collections System Operator. He is certified by NC Water Facility Operators Certification Board as C-Well, B-Surface and B-Distribution Operator and holds AWWA Voluntary Certifications in Grade C- Water Distribution Operator and Grade C-Meter Technician.

Mr. Howell serves as Wastewater Instructor at Caldwell Community College and Instructor for NC Physical/Chemical Operator School. He also serves as Captain in the West Jefferson Fire Department.

Mr. Howell served in the US Army and was an Infantry Squad Leader. He received a BS Degree from Appalachian State University in 1982.

Troy M. Perkins was appointed for a term effective July 2005 until June 2006 as the Collection Systems representative. He replaces **Frankie Buck** who resigned his appointment effective April 2005.

Troy is the Water Resources Systems Superintendent of the Greenville Utilities (GUC) Collection and Distribution System. As Superintendent since 2003, he is responsible for overseeing the operations and maintenance of 404 miles of sanitary sewer mains and 550 miles of potable water mains. He was employed by GUC in 1990 as the TV (Inflow/Infiltration) Inspection Crew Leader. In his 15 years of service with GUC he has served as a construction inspector, engineering assistant, and a Systems Supervisor of the Distribution and Collection System. He has served as the ORC for the sanitary sewer collection system since 2002 and the ORC of the water distribution system since 2003.

Mr. Perkins is certified by the NC-WPCSOCC as a Grade IV Collections System Operator. He is a current member of the NCAWWA/WEA and the AWWA/WEF. He is a member of the NC-AWWA/WEA Collection and Distribution School committee and teaches at the Collection and Distribution Schools. He serves as the coordinator for the Grade IV Collections School.

Mr. Perkins is a graduate of East Carolina University with a B.S. degree in Political Science. He is an active member of the St. James United Methodist Church where he has served on the Administrative Board and other various committees. He is also a head coach for the Pitt County Girls Softball League and is a coach for a girls traveling softball team, the Carolina Slammers. He has also coached and been an assistant coach for the Pitt County Community Schools and Recreation soccer, volleyball, and basketball programs.



2006 Examination Dates

March 9
June 8
September 14
December 14

Deadline for application is 30 days prior to the exam date!

Applications available online at:

<http://h2o.enr.state.nc.us/tacu/examapp.html>

Water 2030 Operation & Maintenance Task Force Findings

The NC Rural Economic Development Center (NC Rural Center) undertook a project in March 2004, titled "Water 2030" with an initiative of "determining NC's water resource needs for the next 20 years and to explore choices that will ensure North Carolinians, in every part of the State, will have access to ample supplies of clean water." One of the recommendations of Water 2030 was to form a task force to address operation and maintenance concerns discovered during the study. Representatives from public and private utility systems, technical associations, regulatory agencies and consulting firms comprised the task force, which met for 5 months, beginning February 2005.

Operation and Maintenance needs and concerns cover a wide and diverse array of topics. Throughout the course of the task force meetings, however, certain topics surfaced as clear focus items for the group.

1. There is a shortage of qualified system operator candidates.
2. Seasoned operators are retiring or leaving the profession taking valuable system information with them.
3. The perception of a career as a water or wastewater operator needs to be elevated both publicly and within the operators' minds.
4. System owners (governing boards) must recognize the importance of fulfilling O&M needs, regardless of political aversion to rate increases.
5. Consumers must understand what it takes to provide water and wastewater services, in order to understand the need for possible rate increases to meet O&M needs.

Several campaigns were discussed to address each of these focus items. In order of priority as determined by the task force, those campaigns are:

1. Owner Education
2. Consumer Education
3. Leave a Legacy
4. Legacy of Learning
5. Operator Pipeline
6. High School Career Fairs
7. Traveling Road Show

Although there is insufficient space to further expand on this task force and its findings, if you would like further information on Water 2030 and the O&M Task Force, please visit the following site: <http://ncruralcenter.org/water2030/index.html>.

(the information above is used with permission of Water 2030 O&M Task Force facilitator Steve Cavanaugh)

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3. Applicant and Supervisor must sign and certify information is accurate and correct.

Without signatures, we do not have verification that the individuals completing the form (applicant and Supervisor) have read and understand ALL aspects of the process involved with taking the exam. Applications without appropriate signatures will be returned.

4. Ensure renewals are paid in full before submitting application.

If you are already certified and owe any amount on your renewal invoice (including late fees), your application will not be processed. It has been our policy in the past to call the individual and request payments be caught up. This will no longer be the case, as it is time consuming and places the burden for addressing the issue more with the staff than with the operator. Invoices requiring payment will now result in the application being returned to the operator. Once the outstanding payment is resolved, the application may be resubmitted (within the proper time frame) and it will be considered for eligibility.

5. Submit application prior to the 30 day deadline.

Applications must be postmarked at least 30 days prior to the date of the examination. It takes a significant amount of effort to prepare for each exam. Applications are individually reviewed and approved, checks have to be processed, information has to be entered into the data-



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base, exams have to be printed for the correct number of individuals and each person must be notified of the approval or denial of their application. For these reasons, the deadline is set at 30 days prior to the exam date. Any application received that has been postmarked after the deadline will be returned to the individual and may be re-submitted for a later exam date.

6. Enclose appropriate fees.

The examination fee is currently \$85 (other fees are listed on the application form) and must be included with the application. No applications will be processed without proper fees. Your application will be returned if you fail to enclose the proper payment.

7. Group Applications submitted incorrectly

Please note that if a group of applications is submitted by one organization (City, County, Utility Company, etc.) and a problem is found with one or more applications in the package, the entire package may be delayed in processing while the problems are being resolved. Supervisors submitting multiple applications should ensure that all of them are complete, accurate and that the applicants are eligible according to the requirements of the Rules for operator certification.

8. Notification of applicants to take exam

In the event your application is approved for an exam, you will be notified of the approval, in writing at the address on the application. These letters are sent out approximately 2 weeks prior to the exam and include the exam type for which you were granted approval, date, time and location of the exam. Please read the letter carefully in order to insure you are in the right place at the right time to take the exam.

We hope this helps you understand the process of applying for the exam. The best advice we can provide might be to take your time and be sure you fill out the form completely and include all required documentation. If you have questions, please call our office at 919.733.0026 and get clarification from a staff member.



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