



# **ATTENTION: WATER AND WASTEWATER FACILITIES OWNERS, MANAGERS AND OPERATORS**

## **Water and Wastewater Operator Training Survey Results**

This is an amended version of the results from the operator training survey distributed in February 2007 by CET Engineering Services. Please disregard the previous version provided to you. Colors on some of the charts were switched, rendering them inaccurate. This amended version corrects the errors on the charts. Please accept our apologies for the misprinting.

CET thanks the respondents for their participation in the survey and for the information provided. If you have any questions or comments about these survey results, please contact Ray Myers at 1-800-643-8260 or rymers@cet-inc.com.

Overall, there were 146 respondents to the operator training survey from 120 facilities and/or organizations. Operator training is of concern to all licensed operators since requirements have changed under Pennsylvania's Program for Operator Certification, which began with the authorization of the Water and Wastewater Operator's Certification Act (Act 11 of 2002). Operators are now required to secure 15 contact hours per first, 3-year renewal period for Classes A, B and C for water and/or wastewater; 8 contact hours per first, 3-year renewal period for Classes D, E and Grandparented for water and/or wastewater; 4 contact hours per first, 3-year renewal period for Class Dc for water; and 3 contact hours per first, 3-year renewal period for Class Dn for water to maintain their certification.

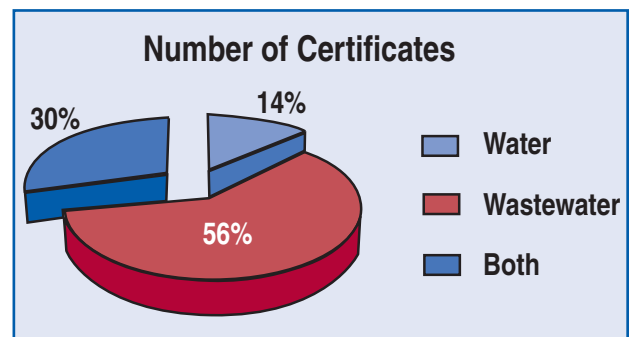
Subsequent 3-year renewal cycles require that operators with Classes A, B and C for water and/or wastewater obtain 30 contact hours of continuing education/training; Classes D, E and Grandparented for water and/or wastewater obtain 15 contact hours; water operators with a Class Dc certification obtain 9 contact hours; and water operators with a Class Dn certification obtain 6 contact hours of continuing education/training.

Only training approved by DEP will count toward the required number of contact hours. DEP maintains a list of all approved training providers on its website. Contact hours may not be carried over to the next 3-year cycle. Failure to meet the continuing education requirements will result in the loss of operator certification.

## **SUMMARY OF SURVEY PARTICIPANTS' RESPONSES AND COMMENTS**

### **1. TYPE OF OPERATOR CERTIFICATE**

Of the 146 respondents, only two (2) persons do not currently have operator licenses. The remaining respondents are categorized as shown on this graph.



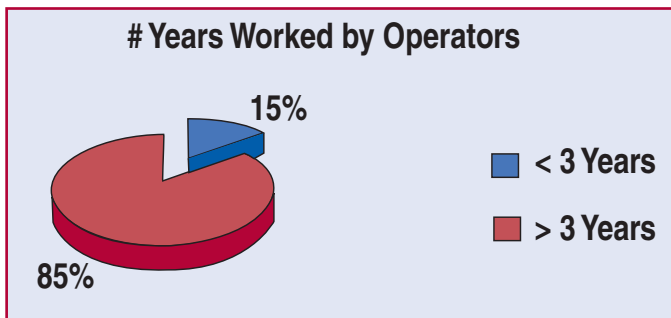
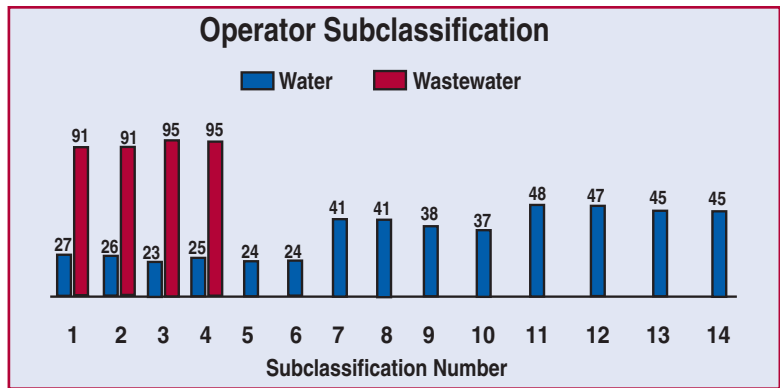
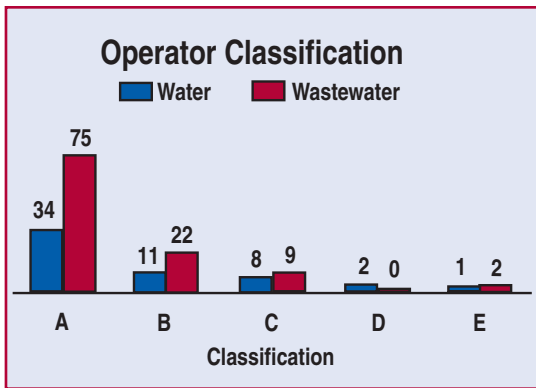
### **2. OPERATOR CERTIFICATION CLASSIFICATION**

Water and wastewater certifications are classified as follows:

Classifications	Water Systems	Wastewater Systems
A	All systems of any capacity	Systems with unlimited permitted discharge flows
B	Systems serving an average of < 5 MGD	Systems with permitted discharge flow = 5 MGD
C	Systems serving an average of < 1 MGD	Systems with permitted discharge flow = 1 MGD
D	Systems serving an average of < 0.100 MGD	Systems with permitted discharge flow = 0.100 MGD
E	Distribution or consecutive system without treatment	Satellite collection systems with pumping stations

Subclassifications	Water Systems	Wastewater Systems
1	Conventional filtration	Activated sludge
2	Direct filtration	Fixed film
3	Diatomaceous earth filtration	Treatment ponds and lagoons
4	Slow sand filtration	Single entity wastewater collection systems
5	Cartridge or bag filtration	
6	Membrane filtration	
7	Corrosion control and sequestering	
8	Chemical addition	
9	Ion exchange and greensand	
10	Aeration and activated carbon adsorption	
11	Gaseous chlorine disinfection	
12	Non-gaseous chemical disinfection	
13	Ultraviolet disinfection	
14	Ozone disinfection	

Charts are shown below which depict the numbers of classifications and subclassifications for the water and wastewater operators who responded to the survey.

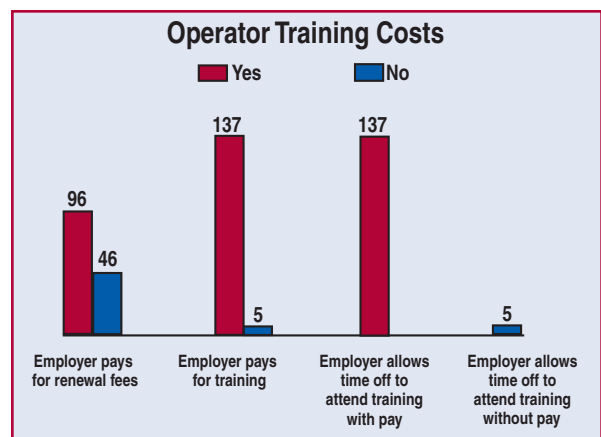


### 3. NUMBER OF YEARS WORKED AS CERTIFIED OPERATOR

This pie chart is self-explanatory and may indicate the lack of new operators entering the water and wastewater fields.

### 4. PAYMENT OF OPERATOR TRAINING COSTS

It is good to know that the majority of employers realize the value of employing a well-trained operator by assuming responsibility for the payment of training and certification fees as well as allowing the operators to take leave from the workplace during the day to attend required operator training sessions with pay. It is not known from this survey if an employer pays for all or a portion of the training costs.

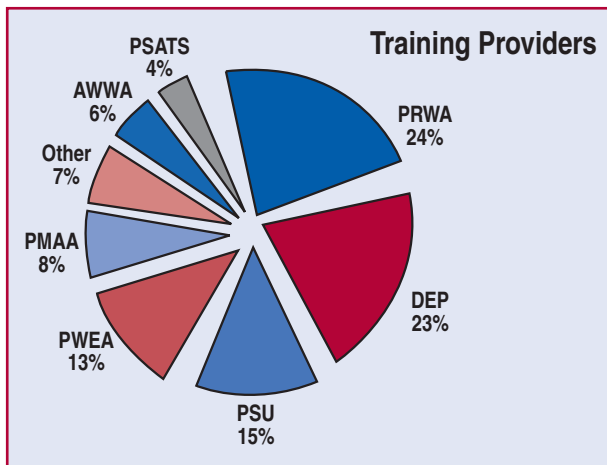


### 5. OPERATOR TRAINING OPPORTUNITIES

Of those persons who responded to this survey question, 112 operators stated that training classes have been available for them to attend. Only 17 persons responded that classes are not readily available for them.

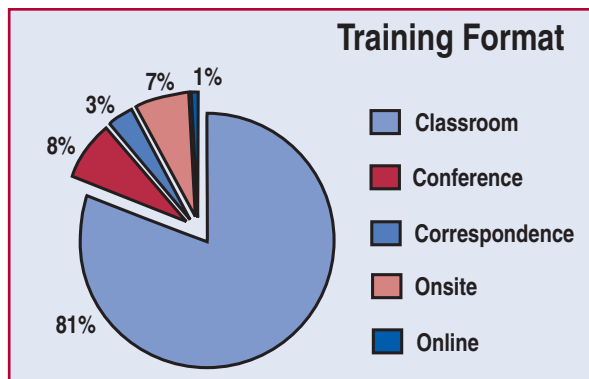
DEP maintains a list of approved training providers and classes on their website at the following URL: [www.depweb.state.pa.us/operatorcenter/](http://www.depweb.state.pa.us/operatorcenter/)

The choice of training providers by survey respondents is provided in the pie chart to the left. The “Other” category includes private entities such as other trade associations, PA One Call, safety and environmental consulting firms, and correspondence courses.

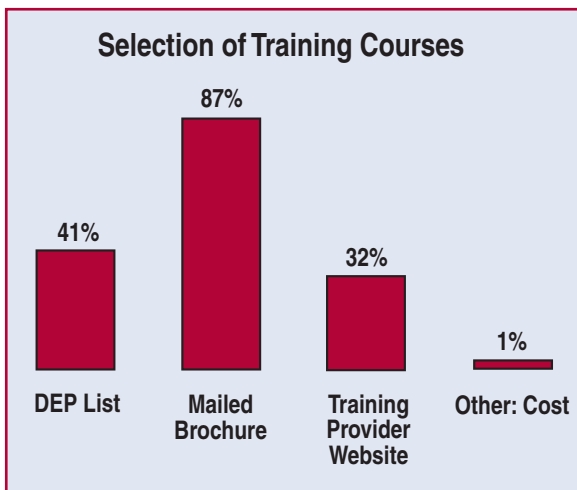


### 6. PREFERRED TRAINING FORMAT

The pie chart to the right shows the preference of most operators who answered this survey question. It appears that an offsite classroom situation is most conducive to training needs. Classroom training lends itself to more open discussion and one-on-one learning experiences. One respondent noted that networking opportunities are important during training sessions to share experiences and problems.



### Selection of Training Courses

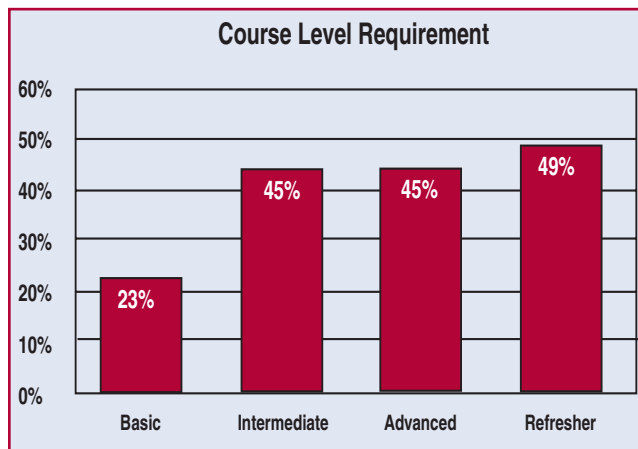


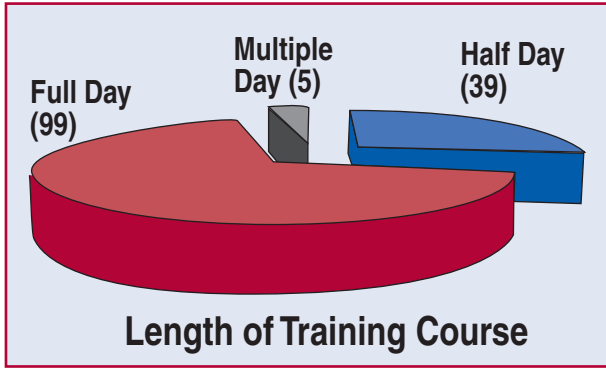
### 7. SELECTION OF TRAINING COURSES

The majority of operators prefer to receive mailings describing upcoming training courses. Many such mailings are provided by trade organizations and other groups who are DEP-approved Training Providers.

### 8. COURSE LEVEL OF TRAINING COURSES

As noted on the bar chart to the right, fewer operators appear to be interested in basic training courses, which again may be indicative of the level of operator experience in the water and wastewater field in Pennsylvania. One respondent noted that many of the classes he has attended are too basic and he is taking the same courses over and over just to obtain his continuing education requirements.



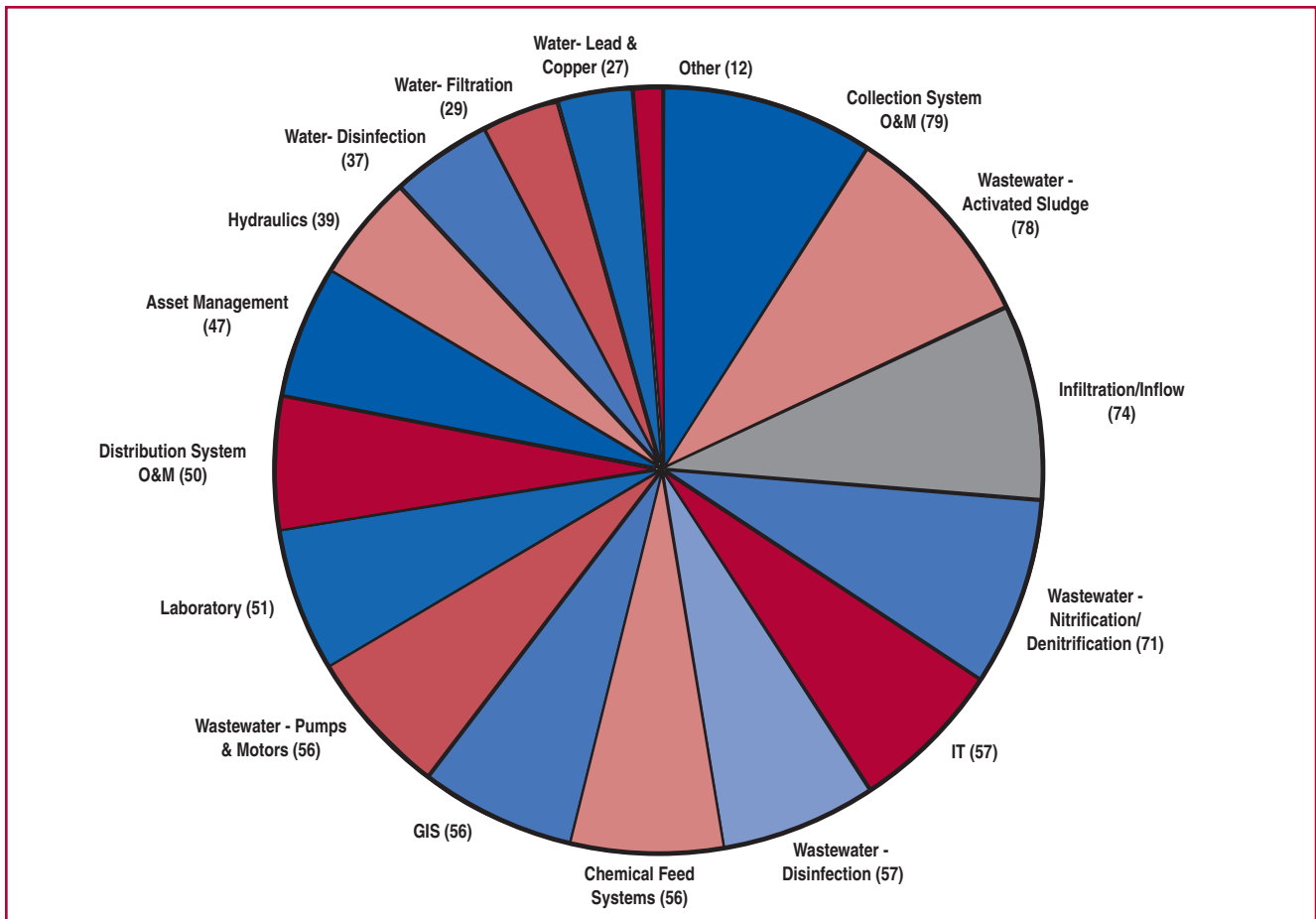


### 9. PREFERRED LENGTH OF TRAINING COURSES

To make it more worthwhile for the operator who has to drive more than 30 miles to a training class, for instance, it makes sense to have a full day of training, which appears (based on the number of respondents indicated on the chart to the left) to be the preference for most survey respondents. It may also be easier to schedule operators for their shifts if they are away for a full day versus a partial day. One respondent noted that a full day should consist of a minimum of 8 credit hours of training because of the travel involved and the time spent away from the workplace.

### 10. OPERATOR TRAINING NEEDS

Survey respondents were asked to check off all of the training courses that they may interested in participating in. The pie chart below shows the number of interested respondents for each training course listed on the survey. Several respondents included a few additional categories, which are reflected under "Other." Examples of the "Other" category include safety, security and emergency response; electrical; cross connection control and back-flow prevention; sludge management; uniform construction code; and valves, fittings, couplings, adapters and restrainers. Wastewater collection systems and wastewater treatment plant operations appear to be the most prevalent needs of those who responded to the survey.



If there are other issues that you would like surveyed, please contact CET Engineering Services.

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