

## **Compliance Workshop** October 10, 2024

### **Operator Certification Update** *“Understanding OEPA/WPI Needs to Know”*

*Curtis L. Truss Jr, OTCO Executive Director*

## Ohio Department of Health

First written exams were given on November 3, 1939

136 Water Works Applicants

136 Sewage Works Applicants

Five locations throughout Ohio

Class “D” certificates were given orally.  
Written Examinations – 1 hour to take.

# Operator Training Update



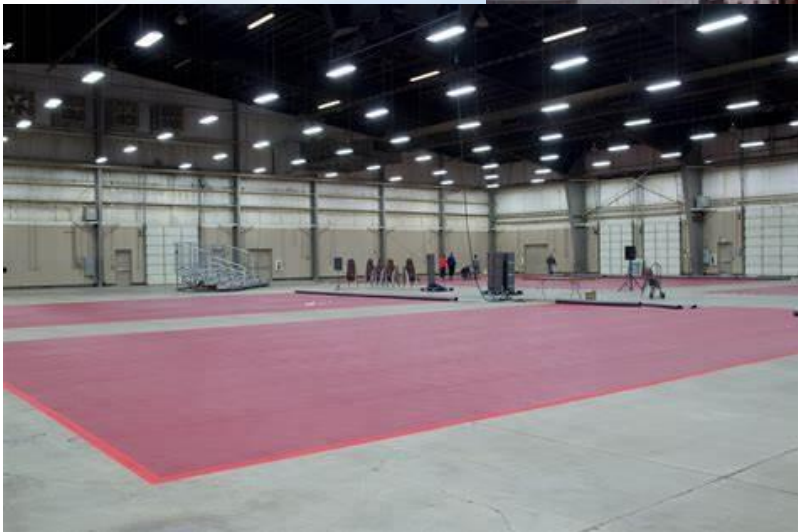
## 1964 Ohio EPA Advisory Board Held Exams



# Operator Training Update



1964 Ohio EPA Advisory Board Held Exams  
May of 2023 Last Paper & Pencil Exam (59 years)



# Operator Training Update



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## About Water Professionals International

### Introduction

Water Professionals International (WPI) is an established and influential organization within the water and wastewater sector serving its membership since 1972. The WPI association provides a voice for international certification issues and is a tool for building lifelong professional relationships.

Innovation is integral at WPI. To continue improving the organization's effectiveness, executive staff and volunteer leadership decided to implement a strategic planning process for the development of a research-based, strategic plan for WPI to use in the creation of future objectives and implementation tactics to ensure continuous improvement of WPI's existing products and services.



**WPI Voluntary  
Certification Process >**

# Operator Training Update



## Third-Party Exam Providers

As an alternative to Ohio EPA's paper and pencil examination, Ohio EPA has approved the Water Professionals International (WPI), formerly the Association of Boards of Certification (ABC), as an approved examination provider. Operators may now choose to take WPI examinations and then seek Ohio certification for all levels of certification except Class IV.

Ensure you meet the requirements prior to taking the Class III exam. Operator-in-Training is not available at the Class III level.

Third-party exams can be taken in Ohio or any other location around the country. Ohio testing locations: Cleveland; Cincinnati; Columbus; Akron; Cambridge; Troy; and Toledo. Locations are subject to change, please [click here](#) to find current and out-of-state testing locations.

- [Schedule an Examination through WPI](#)
- [WPI's Ohio EPA information page](#) — Study material for the WPI exam can be found in the orange box on the left side.
- [Apply for certification after passing a third-party examination](#) — Ensure you have met the experience requirements prior to applying. No refunds will be awarded for the \$45 application review fee.
- [Ohio EPA and WPI exam equivalency chart](#)

## WPI/ABC Need To Know Criteria

Please note that the title on WPI's Need to Know Criteria may be a different exam level than the Ohio EPA certification you are seeking. When you are applying through WPI's provider, once you select Ohio EPA certification, you will select the Ohio EPA certificate level you are seeking and the appropriate WPI test is selected.

# Operator Training Update

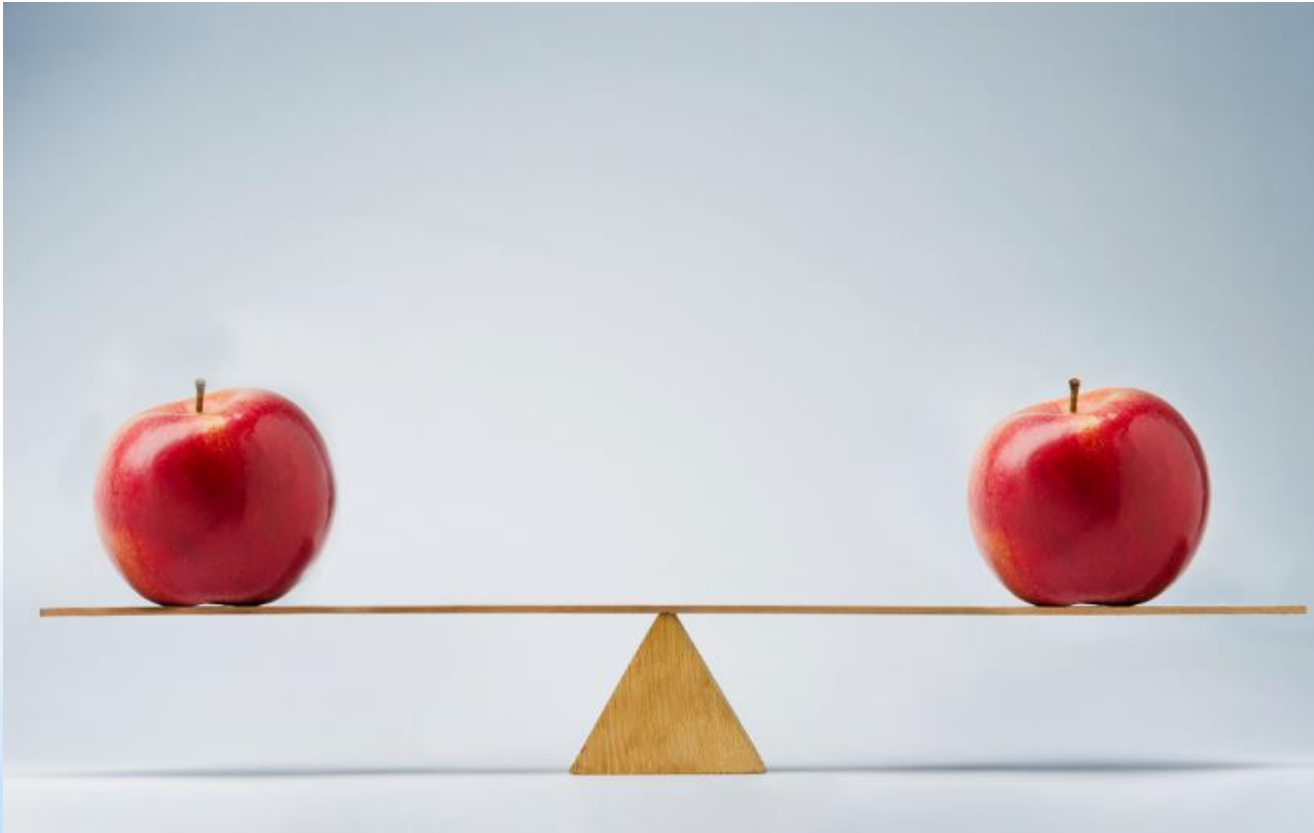


## WPI/ABC Need To Know Criteria

Please note that the title on WPI's Need to Know Criteria may be a different exam level than the Ohio EPA certification you are seeking. When you are applying through WPI's provider, once you select Ohio EPA certification, you will select the Ohio EPA certificate level you are seeking and the appropriate WPI test is selected.

- [Class 1 Water Distribution](#)
- [Class 2 Water Distribution](#)
- [Class A Water Supply](#) (see Drinking Water Class A)
- [Class 1 Water Supply](#)
- [Class 2 Water Supply](#)
- [Class 3 Water Supply](#)
- [Class 1 Wastewater Collection](#)
- [Class 2 Wastewater Collection](#)
- [Class A Wastewater Treatment](#)
- [Class 1 Wastewater Treatment](#)
- [Class 2 Wastewater Treatment](#)
- [Class 3 Wastewater Treatment](#)

# Operator Training Update



# Operator Training Update



## Find current and out-of-state testing locations.

- Instructions to schedule a PSI exam
- Schedule an Examination through WPI
- WPI's Ohio EPA information page — Study r the left side.
- Apply for certification after passing a third-requirements prior to applying. No refunds
- Ohio EPA and WPI exam equivalency chart
- PSI Handbook for Ohio



**Environmental  
Protection  
Agency**



### Ohio EPA/WPI Professional Operator Exam Equivalency Chart\*

Ohio EPA Certificate		WPI Examination	
<u>Distribution</u>			
Water Distribution	1	=	Water Distribution 1
Water Distribution	2	=	Water Distribution 3
<u>Water Supply</u>			
Water Supply	A	=	Very Small Water System VSWS
Water Supply	1	=	Water Supply 1
Water Supply	2	=	Water Supply 3
Water Supply	3	=	Water Supply 4
<u>Wastewater Collection</u>			
Wastewater Collection	1	=	Wastewater Collection 2
Wastewater Collection	2	=	Wastewater Collection 4
<u>Wastewater Treatment</u>			
Wastewater Treatment	A	=	Small Wastewater Treatment A
Wastewater Treatment	A	=	Wastewater Treatment 1
Wastewater Treatment	1	=	Wastewater Treatment 2
Wastewater Treatment	2	=	Wastewater Treatment 3
Wastewater Treatment	3	=	Wastewater Treatment 4

\*When signing up for exams through WPI (formerly ABC), a candidate is asked to select a program (Water/Wastewater) and then a program (Ohio EPA). Once the candidate has chosen Ohio EPA, the examination choices are automatically aligned with the reference chart above so the candidate should select the Ohio EPA examination they wish to take. (e.g. Ohio EPA Water Supply Class 1 examination).

**Distribution**

<b>Water Distribution</b>	<b>1</b>	<b>=</b>	<b>Water Distribution</b>	<b>1</b>
<b>Water Distribution</b>	<b>2</b>	<b>=</b>	<b>Water Distribution</b>	<b>3</b>

**Water Supply**

<b>Water Supply</b>	<b>A</b>	<b>=</b>	<b>Very Small Water System</b>	<b>VSWS</b>
<b>Water Supply</b>	<b>1</b>	<b>=</b>	<b>Water Supply</b>	<b>1</b>
<b>Water Supply</b>	<b>2</b>	<b>=</b>	<b>Water Supply</b>	<b>3</b>
<b>Water Supply</b>	<b>3</b>	<b>=</b>	<b>Water Supply</b>	<b>4</b>

**Wastewater Collection**

<b>Wastewater Collection</b>	<b>1</b>	<b>=</b>	<b>Wastewater Collection</b>	<b>2</b>
<b>Wastewater Collection</b>	<b>2</b>	<b>=</b>	<b>Wastewater Collection</b>	<b>4</b>


**Wastewater Treatment**

<b>Wastewater Treatment</b>	<b>A</b>	<b>=</b>	<b>Small Wastewater Treatment</b>	<b>A</b>
<b>Wastewater Treatment</b>	<b>A</b>	<b>=</b>	<b>Wastewater Treatment</b>	<b>1</b>
<b>Wastewater Treatment</b>	<b>1</b>	<b>=</b>	<b>Wastewater Treatment</b>	<b>2</b>
<b>Wastewater Treatment</b>	<b>2</b>	<b>=</b>	<b>Wastewater Treatment</b>	<b>3</b>
<b>Wastewater Treatment</b>	<b>3</b>	<b>=</b>	<b>Wastewater Treatment</b>	<b>4</b>

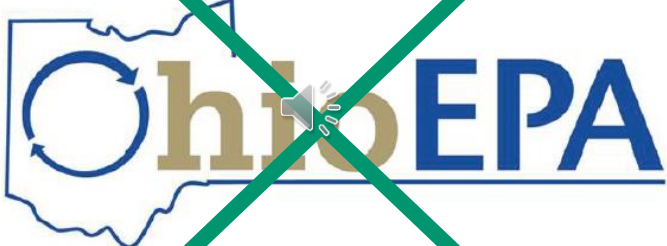

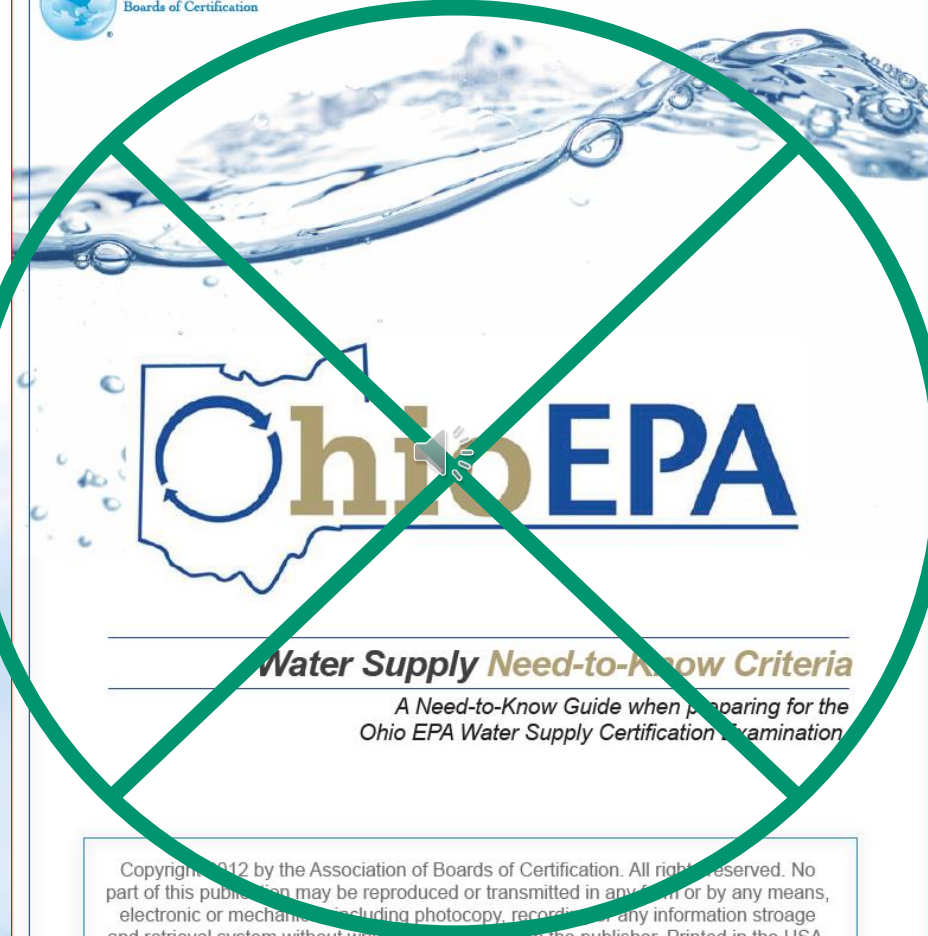
# Operator Training Update



Approved Exam Provider

 **ABC**  
Association of  
Boards of Certification

Office of Fiscal Administration  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
P: (614) 644-2752 F: (614) 644-2909



**Water Supply *Need-to-Know* Criteria**  
*A Need-to-Know Guide when preparing for the  
Ohio EPA Water Supply Certification Examination*

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This was developed solely by the Association of Boards of Certification (ABC) for the Ohio EPA.

# NEED-TO-KNOW CRITERIA

## Water Distribution Operator Class I

A Need-to-Know Guide when preparing for the:

**ABC Water Distribution Operator Class I Certification Exam**

## WPI/ABC Need To Know Criteria

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- [Class 1 Water Distribution](#)
- [Class 2 Water Distribution](#)
- [Class A Water Supply](#) (see Drinking Water Class A)
- [Class 1 Water Supply](#)
- [Class 2 Water Supply](#)
- [Class 3 Water Supply](#)
- [Class 1 Wastewater Collection](#)
- [Class 2 Wastewater Collection](#)
- [Class A Wastewater Treatment](#)
- [Class 1 Wastewater Treatment](#)
- [Class 2 Wastewater Treatment](#)
- [Class 3 Wastewater Treatment](#)

# Operator Training Update



## OEPA Water Distribution I = WPI II

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
25	Distribution System Components	 10  15  0
24	Equipment Installation, Operation, & Maintenance	 10  14  0
27	Disinfection Monitoring, Evaluation, Adjustment, & Laboratory Analysis/ Interpretation	 19  8  0
24	Security, Safety, Administrative Procedures, & Public Interactions	 10  14  0
100*	Total	 49  51  0

THIS EXAM INCLUDES

8

calculation questions
















\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

# Operator Training Update



## OEPA Water Distribution II = WPI III

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
26	Distribution System Components	 5  16  5
24	Equipment Installation, Operation, & Maintenance	 10  12  2
27	Disinfection Monitoring, Evaluation, Adjustment, & Laboratory Analysis/ Interpretation	 11  14  2
23	Security, Safety, Administrative Procedures, & Public Interactions	 7  14  2
100*	Total	 33  56  11

THIS EXAM  
INCLUDES

**12**  
calculation  
questions



















\*Your exam may contain up to 10 extra  
unscored pre-test questions  
(see *Before You Dive In* for more details).

# Operator Training Update



## OEPA Water Supply I = WPI I

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
30	Treatment Process	 12  18  0
13	Laboratory Analysis	 5  8  0
27	Equipment Operation & Maintenance	 11  16  0
10	Source Water Characteristics	 4  6  0
20	Security, Safety, Compliance, & Administrative Procedures	 9  11  0
100*	Total	 41  59  0

THIS EXAM INCLUDES

8

calculation questions

\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

# OEPA Water Supply II = WPI III



## EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
31	Treatment Process	5 18 7
14	Laboratory Analysis	3 7 3
24	Equipment Operation & Maintenance	5 13 5
11	Source Water Characteristics	2 6 2
20	Security, Safety, Compliance, & Administrative Procedures	7 12 5
100*	Total	22 56 22

THIS EXAM INCLUDES

**12**  
calculation questions

\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

# OEPA Water Supply III = WPI IV

## EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
33	Treatment Process	5 19 9
13	Laboratory Analysis	3 7 3
21	Equipment Operation & Maintenance	4 11 6
9	Source Water Characteristics	2 5 2
24	Security, Safety, Compliance, & Administrative Procedures	6 9 9
100*	Total	20 51 29

THIS EXAM INCLUDES

**15**  
calculation questions

\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

## Formula/Conversion Table

Water Treatment, Distribution, & Water Laboratory Exams



$$\text{Alkalinity, mg/L as CaCO}_3 = \frac{(\text{Titrant Volume, mL})(\text{Acid Normality})(50,000)}{\text{Sample Volume, mL}}$$

$$\text{Amps} = \frac{\text{Volts}}{\text{Ohms}}$$

$$\text{Area of Circle}^* = (0.785)(\text{Diameter}^2)$$

$$\text{Area of Circle} = (3.14)(\text{Radius}^2)$$

$$\text{Area of Cone (lateral area)} = (3.14)(\text{Radius})\sqrt{\text{Radius}^2 + \text{Height}^2}$$

$$\text{Area of Cone (total surface area)} = (3.14)(\text{Radius})(\text{Radius} + \sqrt{\text{Radius}^2 + \text{Height}^2})$$

$$\text{Area of Cylinder (total exterior surface area)} = [\text{End \#1 SA}] + [\text{End \#2 SA}] + [(3.14)(\text{Diameter})(\text{Height or Depth})]$$

*Where SA = surface area*

$$\text{Area of Rectangle}^* = (\text{Length})(\text{Width})$$



## Ohio EPA Formula/Conversion Table for Water Supply and Distribution Exams



$$\text{Alkalinity, as mg CaCO}_3/\text{L} = \frac{(\text{Titrant Volume, mL})(\text{Acid Normality})(50,000)}{\text{Sample Volume, mL}}$$

$$\text{Amps} = \frac{\text{Volts}}{\text{Ohms}}$$

$$\text{*Area of Circle} = (.785) (\text{Diameter}^2)$$

$$= (\pi) (\text{Radius}^2)$$

$$\text{Area of Cone (lateral area)} = (\pi) (\text{Radius})\sqrt{\text{Radius}^2 + \text{Height}^2}$$

$$\text{Area of Cone (total surface area)} = (\pi) (\text{Radius}) (\text{Radius} + \sqrt{\text{Radius}^2 + \text{Height}^2})$$

$$\text{Area of Cylinder (total exterior surface area)} = [\text{Surface Area of End \#1}] + [\text{Surface Area of End \#2}] + [(\pi) (\text{Diameter}) (\text{Height or Depth})]$$

$$\text{*Area of Rectangle} = (\text{Length}) (\text{Width})$$

# Operator Training Update



## Formula/Conversion Table

Water Treatment, Distribution, & Water Laboratory Exams



**ABC**  
Association of  
Boards of Certification



**CPO**  
PROFESSIONAL  
OPERATOR

Class A  
Class I  
Class II  
Class III  
Class IV

Class I  
Class II  
Class III  
Class IV

Class I  
Class II  
Class III  
Class IV



















$$5 + 4 + 4 = 13 \text{ Total}$$

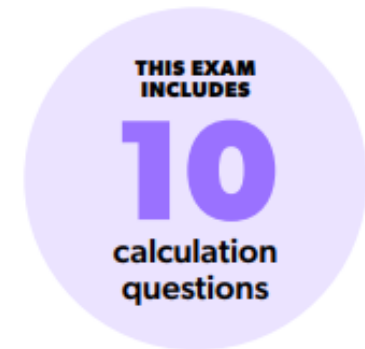
# Operator Training Update



## OEPA Wastewater Collection Systems I = WPI II

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
23	Equipment Operation, Evaluation, & Maintenance	 9  14  0
23	Collection System Operation, Maintenance, & Restoration	 9  14  0
15	Lift Station Operation & Maintenance	 6  9  0
15	Collection System Monitoring, Evaluation, & Adjustment	 6  9  0
24	Security, Safety, & Administrative Procedures	 10  14  0
100	Total	 40  60  0





















\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

# Operator Training Update



## OEPA Wastewater Collection Systems II = WPI IV

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
25	Equipment Operation, Evaluation, & Maintenance	 5  15  5
25	Collection System Operation, Maintenance, & Restoration	 5  15  5
15	Lift Station Operation & Maintenance	 3  7  5
15	Collection System Monitoring, Evaluation, & Adjustment	 3  9  3
20	Security, Safety, & Administrative Procedures	 4  4  12
100*	Total	 20  50  30

THIS EXAM  
INCLUDES

**15**  
calculation  
questions



















\*Your exam may contain up to 10 extra  
unscored pre-test questions  
(see *Before You Dive In* for more details).

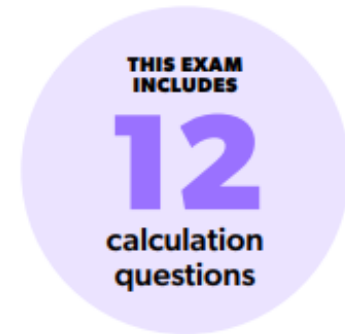
# Operator Training Update



## OEPA Wastewater Treatment I = WP2II

### EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
15	Laboratory Analysis	 3  9  3
20	Equipment Evaluation & Maintenance	 8  9  3
25	Equipment Operation	 5  15  5
30	Treatment Process Monitoring, Evaluation, & Adjustment	 5  10  15
10	Security, Safety, & Administrative Procedures	 6  4  0
100*	Total	 27  47  26



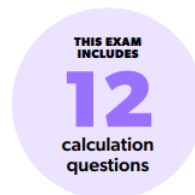
\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

# OEPA Wastewater Treatment II = WPI III



## EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
15	Laboratory Analysis	3 9 3
20	Equipment Evaluation & Maintenance	8 9 3
25	Equipment Operation	5 15 5
30	Treatment Process Monitoring, Evaluation, & Adjustment	5 10 15
10	Security, Safety, & Administrative Procedures	6 4 0
100*	Total	27 47 26



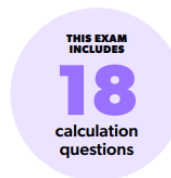
\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

ABC Wastewater Treatment Operator Class II Certification Exam

# OEPA Wastewater Treatment III = WPI IV

## EXAM CONTENT OUTLINE

NUMBER OF QUESTIONS	CONTENT AREA	JOB TASK COMPLEXITY LEVELS
20	Laboratory Analysis	3 10 7
15	Equipment Evaluation & Maintenance	4 6 5
20	Equipment Operation	2 10 8
35	Treatment Process Monitoring, Evaluation, & Adjustment	5 15 15
10	Security, Safety, & Administrative Procedures	2 4 4
100*	Total	16 45 39



\*Your exam may contain up to 10 extra unscored pre-test questions (see *Before You Dive In* for more details).

ABC Wastewater Treatment Operator Class IV Certification Exam

# Operator Training Update



## Formula/Conversion Table

Wastewater Treatment, Collection, Industrial Waste,  
& Wastewater Laboratory Exams



$$\text{Alkalinity, mg/L as CaCO}_3 = \frac{(\text{Titrant Volume, mL})(\text{Acid Normality})(50,000)}{\text{Sample Volume, mL}}$$

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*Where SA = surface area*

# Operator Training Update



## Formula/Conversion Table

Wastewater Treatment, Collection, Industrial Waste,  
& Wastewater Laboratory Exams



Class A	Class I	Class I	Class I
Class I	Class II	Class II	Class II
Class II	Class III	Class III	Class III
Class III	Class IV	Class IV	Class IV
Class IV			

$$5 + 4 + 4 = 13 \text{ Total}$$

# Operator Training Update

