

October 7, 2019

Linh Kieu
Bureau of Safe Drinking Water
Nevada Division of Environmental Protection
901 South Stewart, Suite 4001
Carson City, NV 89701

Dear Mr. Kieu,

Enclosed you will find the Water Treatment and Water Distribution Summary Reports for the certification examinations that took place on September 19, 2019 at various sites throughout the State.

The individual results have been sent in a separate email to you and Max Sosa. Should you have any questions or need further information, please contact me at 909.291.2100 or by email genriquez@ca-nv-awwa.org. You are also welcome to contact Steven Garner, Certification Manager at 916.889.8465 or by email sgarner@ca-nv-awwa.org.

Sincerely,



Gina Enriquez
Certification Specialist
CA-NV AWWA

cc: Max Sosa
Rachel Weingart
Yan Zhang
Will Raymond
Steven Garner

Examination Summary Reports

September 2019 Examinations

Prepared for
Bureau of Safe Drinking Water, Nevada Division of Environmental Protection

Prepared By
California – Nevada Section of the American Water Works Association
October 7, 2019

Overall Exam Results

Exam Analysis Pass/Failure Rate

Water Distribution - Entire State:

26 Passed the Exam
18 Failed the Exam

Water Treatment - Entire State:

18 Passed the Exam
05 Failed the Exam

By Region:

Northern NV: 23 Testers

Passing Rate of 61%
Failure Rate of 39%

By Region:

Northern NV: 11 Testers

Passing Rate of 82%
Failure Rate of 18%

Southern NV: 21 Testers

Passing Rate of 57%
Failure Rate of 43%

Southern NV: 12 Testers

Passing Rate of 75%
Failure Rate of 25%

Analysis Pass/Failure Rate by Grade Level/Discipline

Water Distribution - Entire State:

26 Passed the Exam
18 Failed the Exam

Water Treatment - Entire State:

18 Passed the Exam
05 Failed the Exam

By Discipline Pass/Failure:

Distribution Grade 1 (D1)

11 Passed
03 Failed

Distribution Grade 2 (D2)

11 Passed
06 Failed

Distribution Grade 3 (D3)

03 Passed
06 Failed

Distribution Grade 4 (D4)

01 Passed
03 Failed

By Discipline Pass/Failure:

Treatment Grade 1 (T1)

14 Passed
01 Failed

Treatment Grade 2 (T2)

03 Passed
01 Failed

Treatment Grade 3 (T3)

01 Passed
02 Failed

Treatment Grade 4 (T4)

00 Passed
01 Failed

DISTRIBUTION OPERATOR CERTIFICATION

The Topics Identified Below Had a "Partial Mastering" Rate of More Than 20%

Grade I – Distribution

- Install Equipment
- Perform Maintenance
- Perform Security, Safety & Admin
- Operate Equipment
- Monitor, Evaluate & Adjust Disinfection

Grade II – Distribution

- Perform Security, Safety & Admin
- Monitor, Evaluate & Adjust Disinfection
- System Information / Components
- Install Equipment
- Perform Maintenance
- Operate Equipment
- Laboratory Analysis

Grade III – Distribution

- Perform Maintenance
- Perform Security, Safety & Admin
- System Information / Components
- Monitor, Evaluate & Adjust Disinfection
- Operate Equipment
- Laboratory Analysis

Grade IV – Distribution

- Perform Maintenance
- Laboratory Analysis
- Operate Equipment
- Monitor, Evaluate & Adjust Disinfection
- Perform Security, Safety & Admin
- Install Equipment
- System Information / Components

Treatment Operator Certification

The Topics Identified Below Had a "Partial Mastering" Rate of More Than 20%

Grade I – Treatment

- Laboratory Analyses
- Comply w/Drinking Water Regs
- Evaluate Characteristics of Source Water

Grade II – Treatment

- Laboratory Analyses
- Monitor, Evaluate & Adjust Treatment
- Perform Security, Safety, & Administration
- Comply w/Drinking Water Regs
- Operate & Maintain Equipment

Grade III – Treatment

- Evaluate Characteristics of Source Water
- Monitor, Evaluate & Adjust Treatment
- Laboratory Analyses
- Operate & Maintain Equipment
- Perform Security, Safety, & Administration
- Comply w/Drinking Water Regs

Grade IV – Treatment

- Operate & Maintain Equipment
- Monitor, Evaluate & Adjust Treatment
- Laboratory Analyses
- Perform Security, Safety, & Administration

MASTERY SUMMARY REPORT
for ABC Water Distribution Class I

Test Name: ABC1264D

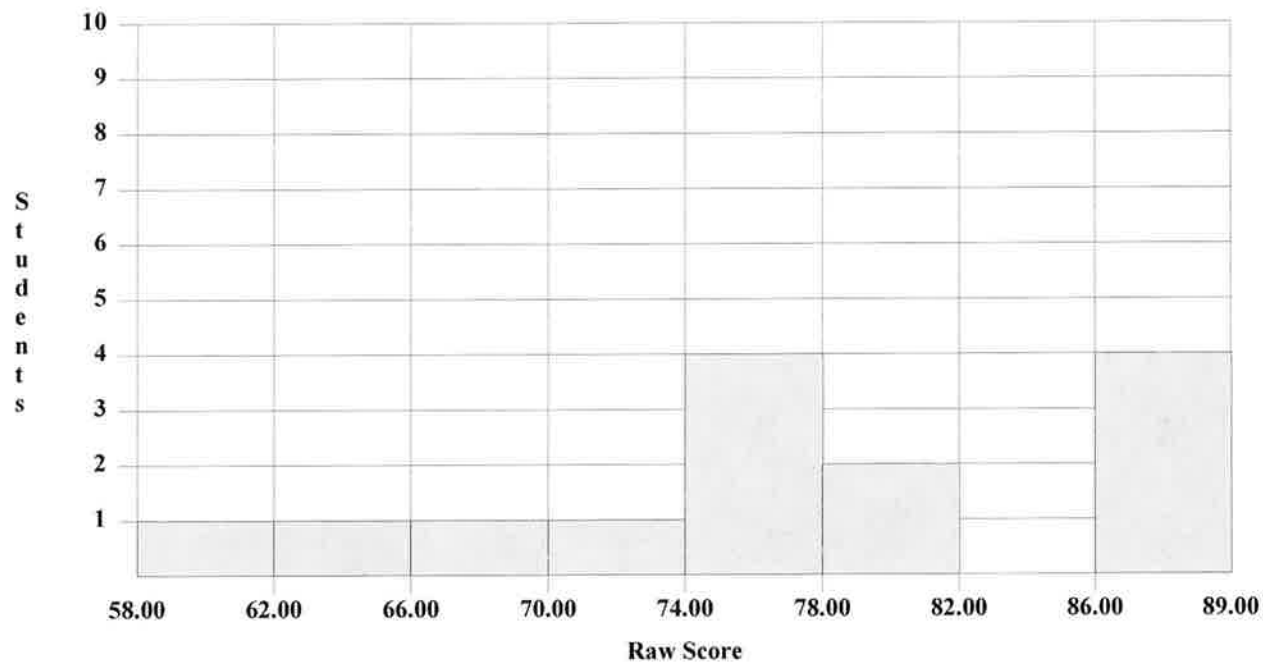
Scoring Date: 10/4/2019

Test version: 0

of Students: 14

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	11	3	0	78.57	21.43	0.00	16.00	16.00	8.00	13.36
Install Equipment	5	8	1	35.71	57.14	7.14	5.00	5.00	1.00	3.07
Perform Maintenance	5	9	0	35.71	64.29	0.00	20.00	19.00	8.00	13.00
Monitor, Eval, & Adjust Disinfection	9	5	0	64.29	35.71	0.00	11.00	10.00	6.00	8.21
Operate Equipment	10	4	0	71.43	28.57	0.00	18.00	16.00	10.00	13.79
System Information/Components	13	1	0	92.86	7.14	0.00	9.00	9.00	6.00	7.71
Laboratory Analysis	12	2	0	85.71	14.29	0.00	21.00	21.00	12.00	17.00

TEST STATISTICS REPORT
ABC Water Distribution Class I Exam
ABC1264D



Test Name:	ABC1264D	
Test Date:	10/12/2012	
Number of Examinees:	14	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	89.00	(89.00)
Lowest Score:	58.00	(58.00)
Median:	76.00	(76.00)
Mean:	76.14	(76.14)
Standard Deviation:	9.44	
Test Reliability:	0.83	
Standard Error of Measurement:	3.86	

MASTERY SUMMARY REPORT
for ABC Water Distribution Class II

Test Name: ABC1017D

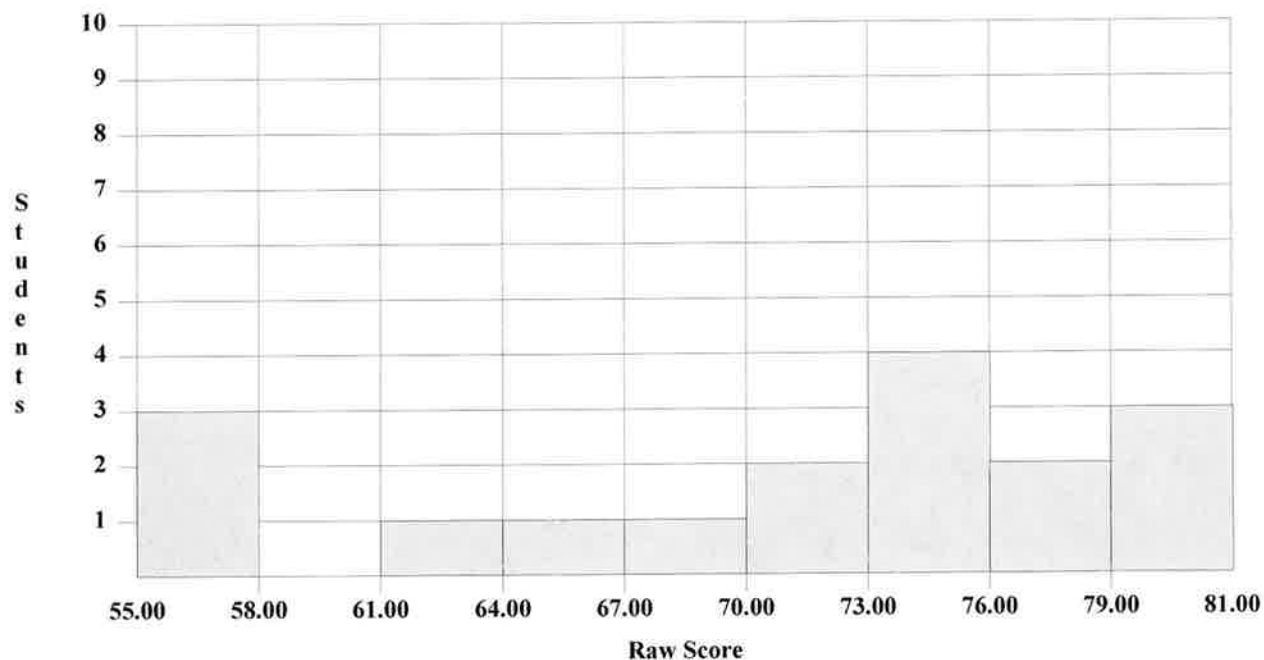
Test version: 0

Scoring Date: 10/4/2019

of Students: 17

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	12	5	0	70.59	29.41	0.00	16.00	14.00	9.00	12.18
Install Equipment	12	5	0	70.59	29.41	0.00	5.00	5.00	2.00	3.71
Perform Maintenance	10	7	0	58.82	41.18	0.00	20.00	18.00	10.00	14.12
Monitor, Eval, & Adjust Disinfection	9	7	1	52.94	41.18	5.88	11.00	10.00	0.00	7.06
Operate Equipment	10	7	0	58.82	41.18	0.00	18.00	16.00	9.00	12.94
System Information/Components	4	9	4	23.53	52.94	23.53	9.00	9.00	3.00	5.24
Laboratory Analysis	10	7	0	58.82	41.18	0.00	21.00	18.00	12.00	15.24

TEST STATISTICS REPORT
ABC Water Distribution Class II Exam
ABC1017D



Test Name:	ABC1017D	
Test Date:	10/12/2012	
Number of Examinees:	17	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	81.00	(81.00)
Lowest Score:	55.00	(55.00)
Median:	73.00	(73.00)
Mean:	70.47	(70.47)
Standard Deviation:	8.67	
Test Reliability:	0.77	
Standard Error of Measurement:	4.17	

MASTERY SUMMARY REPORT
for ABC Water Distribution Class III

Test Name: ABC1018D

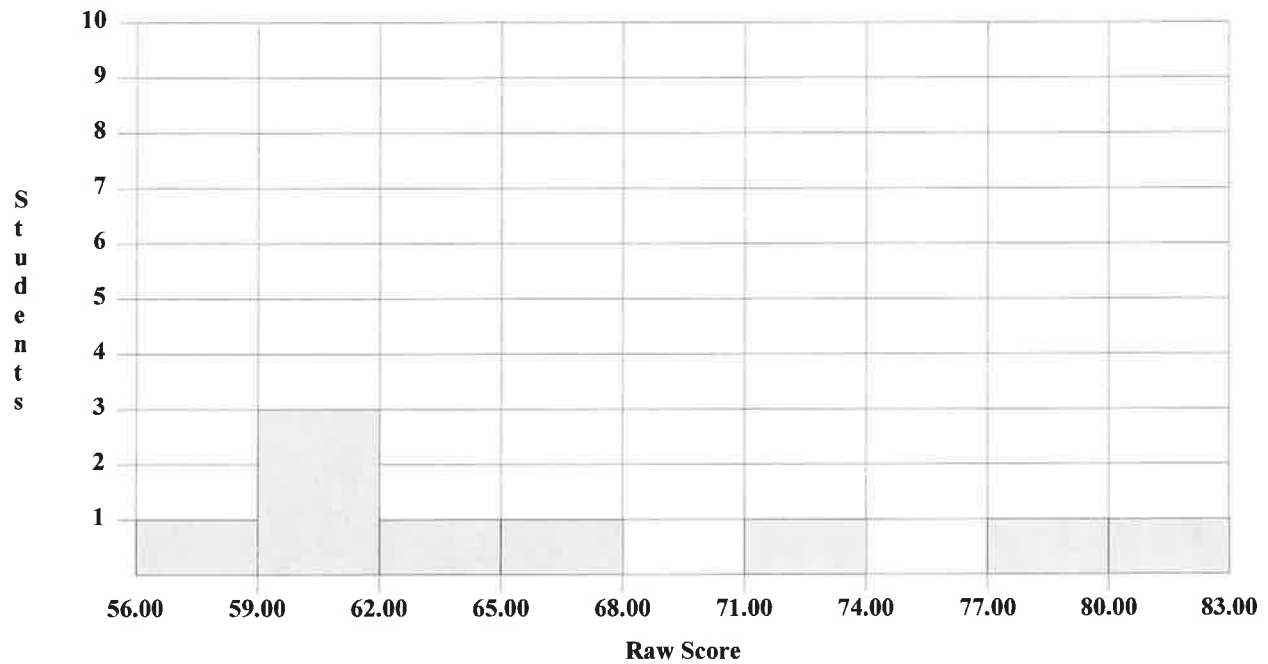
Test version: 0

Scoring Date: 10/4/2019

of Students: 9

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	5	4	0	55.56	44.44	0.00	17.00	14.00	7.00	11.33
Install Equipment	7	1	1	77.78	11.11	11.11	5.00	5.00	1.00	3.78
Perform Maintenance	6	3	0	66.67	33.33	0.00	20.00	19.00	10.00	14.44
Monitor, Eval, & Adjust Disinfection	5	4	0	55.56	44.44	0.00	10.00	8.00	4.00	6.33
Operate Equipment	2	7	0	22.22	77.78	0.00	18.00	14.00	9.00	11.22
System Information/Components	1	8	0	11.11	88.89	0.00	9.00	7.00	4.00	5.11
Laboratory Analysis	4	5	0	44.44	55.56	0.00	21.00	19.00	10.00	14.22

TEST STATISTICS REPORT
ABC Water Distribution Class III Exam
ABC1018D



Test Name:	ABC1018D	
Test Date:	10/12/2012	
Number of Examinees:	9	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	80.00	(80.00)
Lowest Score:	56.00	(56.00)
Median:	64.00	(64.00)
Mean:	66.44	(66.44)
Standard Deviation:	8.57	
Test Reliability:	0.76	
Standard Error of Measurement:	4.24	

MASTERY SUMMARY REPORT
for ABC Water Distribution Class IV

Test Name: ABC1019D

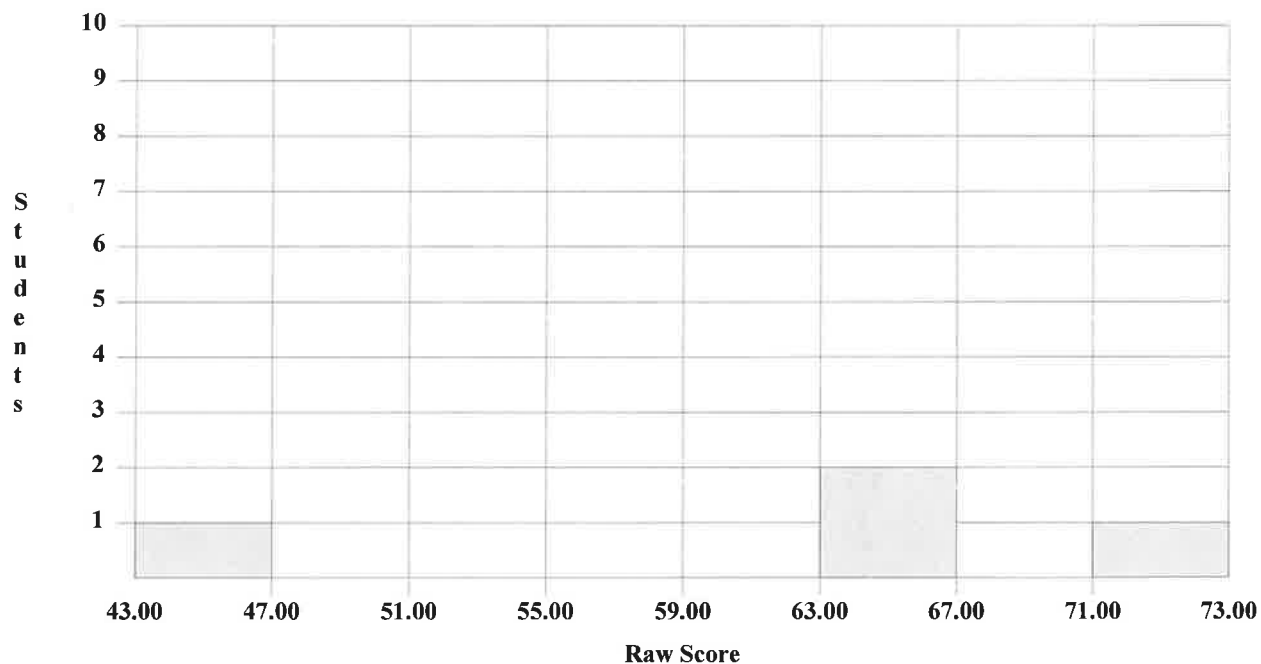
Test version: 0

Scoring Date: 10/4/2019

of Students: 4

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	2	2	0	50.00	50.00	0.00	17.00	15.00	10.00	12.25
Install Equipment	0	3	1	0.00	75.00	25.00	5.00	3.00	1.00	2.25
Perform Maintenance	2	2	0	50.00	50.00	0.00	21.00	18.00	9.00	14.00
Monitor, Eval, & Adjust Disinfection	2	1	1	50.00	25.00	25.00	10.00	8.00	3.00	6.00
Operate Equipment	0	4	0	0.00	100.00	0.00	18.00	12.00	8.00	10.25
System Information/Components	1	2	1	25.00	50.00	25.00	9.00	9.00	2.00	5.75
Laboratory Analysis	1	2	1	25.00	50.00	25.00	20.00	14.00	7.00	11.00

TEST STATISTICS REPORT
ABC Water Distribution Class IV Exam
ABC1019D



Test Name:	ABC1019D	
Test Date:	10/12/2012	
Number of Examinees:	4	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	73.00	(73.00)
Lowest Score:	43.00	(43.00)
Median:	65.00	(65.00)
Mean:	61.50	(61.50)
Standard Deviation:	12.90	
Test Reliability:	0.89	
Standard Error of Measurement:	4.36	

MASTERY SUMMARY REPORT
for ABC Water Treatment Class I

Test Name: ABC1266W

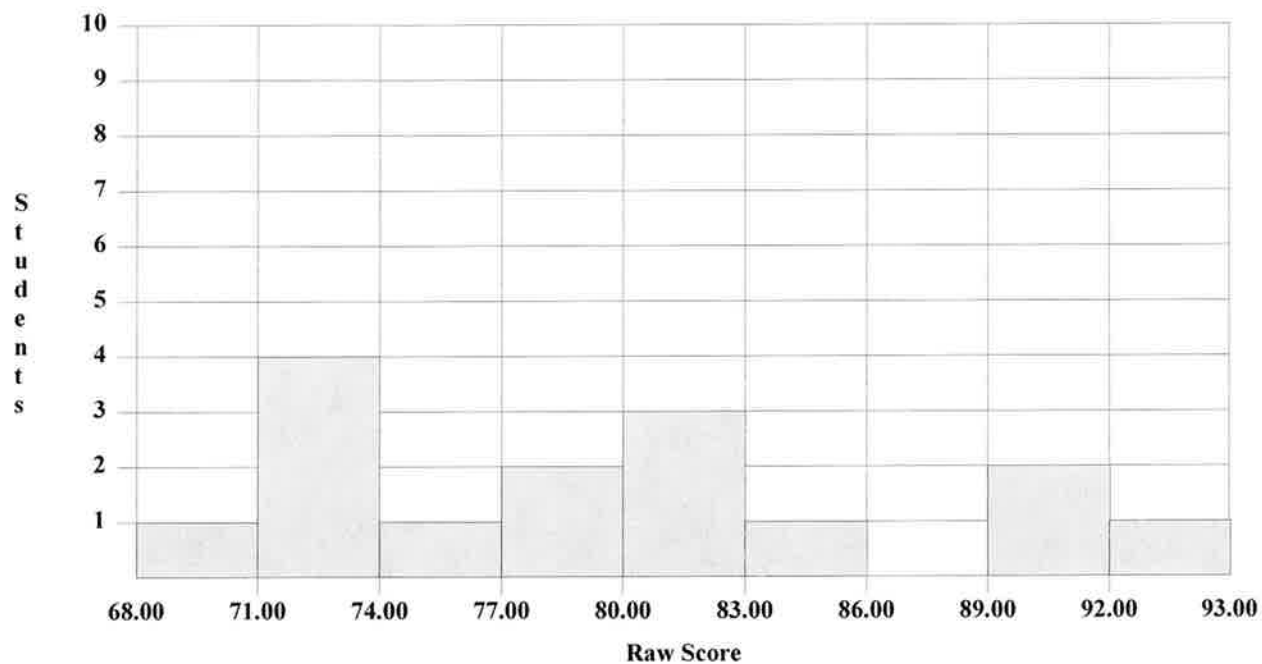
Scoring Date: 10/4/2019

Test version: 0

of Students: 15

# M	Number Mastering	% M	% Mastering	PTS	Possible Points					
# PM	Number Partial Mastering	% PM	% Partial Mastering	HIGH	Highest Points					
# NM	Number Not Mastering	% NM	% Not Mastering	LOW	Lowest Points					
				AVG	Average Points					
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	12	3	0	80.00	20.00	0.00	13.00	13.00	8.00	11.00
Laboratory Analyses	11	4	0	73.33	26.67	0.00	12.00	11.00	6.00	9.40
Comply w/ Drinking Water Regs	9	5	1	60.00	33.33	6.67	12.00	11.00	4.00	8.67
Operate & Maintain Equipment	12	3	0	80.00	20.00	0.00	27.00	25.00	17.00	21.27
Eval Characteristics of Source Water	9	6	0	60.00	40.00	0.00	6.00	6.00	3.00	4.87
Monitor, Eval, & Adjust Treatment	12	3	0	80.00	20.00	0.00	30.00	29.00	20.00	23.93

TEST STATISTICS REPORT
 ABC Water Treatment Class I Exam
 ABC1266W



Test Name:	ABC1266W	
Test Date:	10/12/2012	
Number of Examinees:	15	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	93.00	(93.00)
Lowest Score:	68.00	(68.00)
Median:	78.00	(78.00)
Mean:	79.13	(79.13)
Standard Deviation:	7.64	
Test Reliability:	0.78	
Standard Error of Measurement:	3.60	

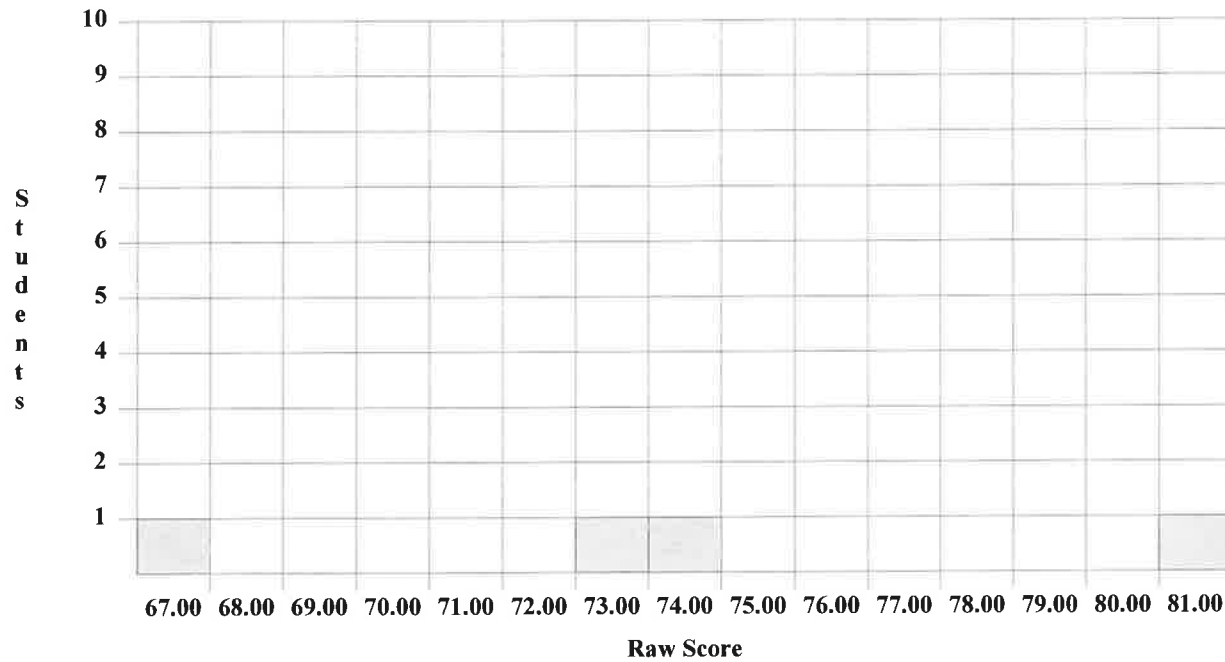
MASTERY SUMMARY REPORT
for ABC Water Treatment Class II

Test Name: ABC1042W
Scoring Date: 10/4/2019

Test version: 0
of Students: 4

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	1	3	0	25.00	75.00	0.00	16.00	13.00	9.00	10.50
Laboratory Analyses	3	1	0	75.00	25.00	0.00	13.00	12.00	9.00	10.75
Comply w/ Drinking Water Regs	3	1	0	75.00	25.00	0.00	12.00	11.00	7.00	9.25
Operate & Maintain Equipment	2	2	0	50.00	50.00	0.00	26.00	23.00	17.00	19.75
Eval Characteristics of Source Water	4	0	0	100.00	0.00	0.00	5.00	5.00	4.00	4.25
Monitor, Eval, & Adjust Treatment	1	3	0	25.00	75.00	0.00	28.00	24.00	16.00	19.25

TEST STATISTICS REPORT
ABC Water Treatment Class II Exam
ABC1042W



Test Name:	ABC1042W	
Test Date:	4/14/2011	
Number of Examinees:	4	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	81.00	(81.00)
Lowest Score:	67.00	(67.00)
Median:	73.50	(73.50)
Mean:	73.75	(73.75)
Standard Deviation:	5.74	
Test Reliability:	0.46	
Standard Error of Measurement:	4.21	

MASTERY SUMMARY REPORT
for ABC Water Treatment Class III

Test Name: ABC1043W

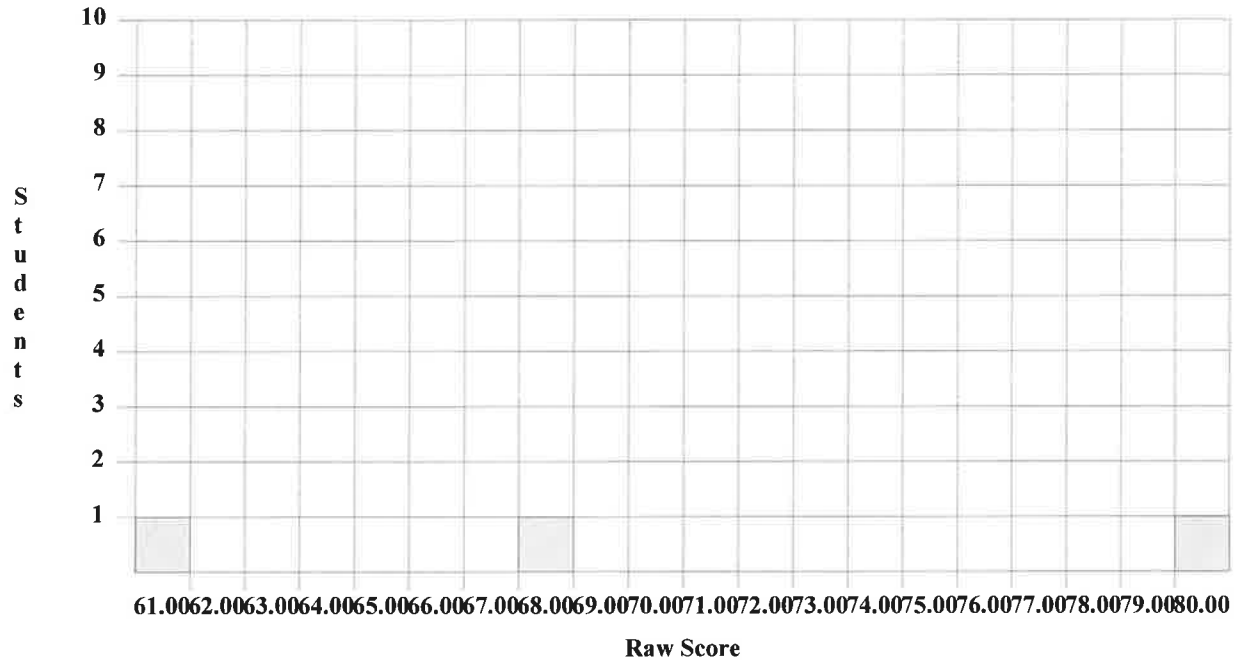
Test version: 0

Scoring Date: 10/4/2019

of Students: 3

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	2	1	0	66.67	33.33	0.00	18.00	14.00	11.00	12.67
Laboratory Analyses	1	2	0	33.33	66.67	0.00	11.00	10.00	6.00	7.67
Comply w/ Drinking Water Regs	2	1	0	66.67	33.33	0.00	11.00	10.00	7.00	8.67
Operate & Maintain Equipment	2	1	0	66.67	33.33	0.00	24.00	19.00	14.00	17.00
Eval Characteristics of Source Water	1	2	0	33.33	66.67	0.00	5.00	4.00	2.00	3.00
Monitor, Eval, & Adjust Treatment	1	2	0	33.33	66.67	0.00	31.00	25.00	18.00	20.67

TEST STATISTICS REPORT
ABC Water Treatment Class III Exam
ABC1043W



Test Name:	ABC1043W	
Test Date:	10/12/2012	
Number of Examinees:	3	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	80.00	(80.00)
Lowest Score:	61.00	(61.00)
Median:	68.00	(68.00)
Mean:	69.67	(69.67)
Standard Deviation:	9.61	
Test Reliability:	0.81	
Standard Error of Measurement:	4.19	

MASTERY SUMMARY REPORT
for ABC Water Treatment Class IV

Test Name: ABC1044W

Test version: 0

Scoring Date: 10/4/2019

of Students: 1

# M	Number Mastering	% M	% Mastering				PTS	Possible Points		
# PM	Number Partial Mastering	% PM	% Partial Mastering				HIGH	Highest Points		
# NM	Number Not Mastering	% NM	% Not Mastering				LOW	Lowest Points		
							AVG	Average Points		
Objective	# M	# PM	# NM	% M	% PM	% NM	PTS	HIGH	LOW	AVG
Perform Security, Safety, & Admin	0	1	0	0.00	100.00	0.00	18.00	10.00	10.00	10.00
Laboratory Analyses	0	1	0	0.00	100.00	0.00	11.00	7.00	7.00	7.00
Comply w/ Drinking Water Regs	1	0	0	100.00	0.00	0.00	10.00	8.00	8.00	8.00
Operate & Maintain Equipment	0	1	0	0.00	100.00	0.00	25.00	14.00	14.00	14.00
Eval Characteristics of Source Water	1	0	0	100.00	0.00	0.00	5.00	5.00	5.00	5.00
Monitor, Eval, & Adjust Treatment	0	1	0	0.00	100.00	0.00	31.00	20.00	20.00	20.00

TEST STATISTICS REPORT
 ABC Water Treatment Class IV Exam
 ABC1044W

10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

S
t
u
d
e
n
t
s

64.00

Raw Score

Test Name:	ABC1044W	
Test Date:	10/12/2012	
Number of Examinees:	1	
Number of Items:	100	
Maximum Possible Points:	100.00	
Highest Score:	64.00	(64.00)
Lowest Score:	64.00	(64.00)
Median:	64.00	(64.00)
Mean:	64.00	(64.00)
Standard Deviation:	-	
Test Reliability:	-	
Standard Error of Measurement:	-	