

National Tribal Drinking Water Operator Certification Program





National Tribal Drinking Water Operator Certification Program

Certified drinking water operators are essential to providing safe drinking water and protecting public health of Tribal communities. To assist in achieving the goals of maintaining a safe public drinking water supply and protecting public health, the Environmental Protection Agency (EPA) has established the voluntary National Tribal Drinking Water Operator Certification Program for personnel operating public drinking water systems in Indian Country.

The intent of the program is to protect public health by providing a flexible and meaningful certification opportunity for water system operators.

Through this program, once certain education, experience and examination requirements are met and exams are passed, drinking water personnel in Indian Country will have the ability to obtain certification as:

- Very Small Water System Operator,
- Class I-IV Water Treatment Operator and/or,
- Class I-IV Water Distribution Operator

Although certification is voluntary, regulations promulgated under the Safe Drinking Water Act require that qualified personnel operate public water systems. Additionally, the 1998 EPA Drinking Water Infrastructure Grant Tribal Set-Aside (DWIG-TSA) Program Guidance specifies that any system to be assisted with DWIG-TSA funds must be operated by adequately trained and certified operators.

As of fiscal year 2011, EPA began to require Tribes to have, or agree to obtain, an operator certified under an EPA approved program as a grant condition. Operator certification provided by a State with an approved operator certification program meets the requirements of,

- The National Tribal Drinking Water Operator Certification Program, and
- DWIG-TSA eligibility condition of having a certified operator.

Certification through the National Tribal Drinking Water Operator Certification Program enables operators to demonstrate that they are qualified professionals with the skills, knowledge, education and experience to deliver safe drinking water to the public.

If you are interested in obtaining certification through the National Tribal Drinking Water Operator Certification Program, complete the enclosed application.

This document includes,

- Instructions for completing the application,
- Education and experience requirements for the various certification levels

It is important that you complete all sections of the application, submit the requested documentation, and provide the required signatures. Applications that are not completed fully and/or do not include the required documentation and signatures will not be approved.

Operator training for certification may be available through EPA's regional offices or other federal and state agencies as well as private entities. Contact your EPA regional office for more information on training opportunities, if you have already received water treatment or water distribution certification from another organization, or if you have any questions concerning completion of the application. Telephone numbers for EPA regional offices are listed below.

EPA Region 1: (617) 918-1559
EPA Region 2: (212) 637-3838
EPA Region 4: (404) 562-9845

EPA Region 5: (312) 886-0259
EPA Region 6: (214) 665-6706
EPA Region 7: (913) 551-7410

EPA Region 8: (303) 312-6243
EPA Region 9: (415) 972-3549
EPA Region 10: (206) 553-6917

General Instructions

1. Complete all sections of the application fully and accurately. Except where signatures are required. Please print clearly.
2. In order to be certified, you must pass a certification exam and meet all education and experience requirements for the class level for which you are applying. Except for the Very Small Water Systems (VSWS) certification, all certification levels are sequential, meaning you must first be certified at the Class 1 level followed by the Class 2, 3 and 4. If you are already certified by another entity and wish to be certified by the EPA National Tribal Drinking Water Operator Certification Program, you must begin testing at the beginning of this sequence. The education and experience requirements for each class level and allowable substitutions can be found in the section "Water Treatment and Distribution Certification Requirements."
3. You must complete a separate application for each type of certificate you wish to receive.
4. Certificates are valid for three years. After three years, you may renew your certificate by submitting documentation showing you have taken the required number of continuing education contact hours for your level of certification as outlined under "Renewal Requirements."
5. Your EPA Regional office will notify you of your application status and any further steps that you will need to take in order to become certified. Please allow four to six weeks for processing before contacting your EPA Regional office.
6. Your application will be processed by the University of New Mexico's Southwest Environmental Finance Center (UNM-SWEFC).

Please mail completed application to:

National Tribal Opcert Coordinator
SWEFC/Civil Engineering Dept.
MSC01 1070, 1 University of New Mexico
Albuquerque, NM 87131

If mailed by FEDEX ground or UPS, please use the following address:

National Tribal Opcert Coordinator
SWEFC/UNM Civil Engineering Dept.
210 University Blvd NE, Room 3020
MSC01 1070 Albuquerque, NM 87131.

Water Treatment and Distribution Certification Requirements¹

Very Small Water Systems

- High school diploma or GED*
- Five hours of approved training
- Six months of operating experience*
- Pass Very Small System exam¹ with a minimum score of 70%

Level 1

- High school diploma or GED*
- Ten hours of approved training
- One year of acceptable operating experience*
- Pass Level 1 exam¹ with a minimum score of 70%

Level 2

- High school diploma or GED
- Thirty hours of approved training
- Two years of acceptable operating experience
- Pass Level 1 and 2 exams¹ with a minimum score of 70%

Level 3

- High school diploma or GED and 1 year of post high school education or the equivalent in approved training
- Fifty hours of approved training
- Five years of acceptable operating experience
- Pass Level 1, 2 and 3 exams¹ with a minimum score of 70%

Level 4

- High school diploma or GED and 2 years of post high school education or the equivalent in approved training
- Eighty hours of approved training
- Six years of acceptable operating experience of which at least 1½ years must have occurred after obtaining a Level 3 Certificate.
- Pass Level 1, 2, 3 and 4 exams¹ with a minimum score of 70%

*Operator In Training (OIT)

Operator In Training (OIT): An operator who does not meet the education and/or experience criteria may apply for OIT certification and must take and pass an exam at the appropriate certification level. This option is only available for VSWS and Class 1 levels. Operators who hold an OIT certification must complete a basic operator course and fulfill the renewal continuing education requirements to receive full certification at the time of renewal after three years. Operators that have completed the OIT program are eligible for higher certification levels when they complete the experience and renewal hours

Substitutions

for each level.

¹ Operators who have been approved for examination have six months from the date of eligibility approval to schedule the exam. Applicants who did not pass may retake the exam within six months of the original test date, but no sooner than 30 days after the original test date. Applicants who do not pass the retake exam must submit a new application form.

1. Experience for Education

Experience used to meet the experience requirement may not be reused as substitution for the education requirement.

- For all classes, instruction of environmental control courses may be substituted for the education requirement on the basis of: 10 contact hours = 1 Continuing Education Unit (CEU). Credit will be given only once for each course instructed.
- For VSWS, no substitution of education shall be permitted.
- For Class Level 1 - 4, experience can be substituted for education without limit as follows:
 - 1 year experience = 2 years grade school education
 - 1 year experience = 1 year high school education
- For Class Level 3 operators, a maximum of 1 year of DRC² experience in a Class Level 2 or higher position may be substituted for 45.0 CEUs of post-high school education.
- For Class Level 4 operators, a maximum of 2 years of DRC² experience in a Class Level 3 or higher position may be substituted for 90.0 CEUs of post-high school education.

2. Education for Experience

Education used as substitution for experience must be formal post-high school education in the environmental control field, engineering or related science. Education used as substitution for experience may not be reused to meet the education requirement.

- For VSWS and Class Level 1, no substitution of education for experience is allowed.
- For Class Level 2, a maximum of 67.5 CEUs of post-high school education may be substituted for 1.5 years of operating experience.
- For Class Level 3 and 4 operators, a maximum of 90.0 CEUs of post-high school education may be substituted for 2 years of experience.

3. Related Experience

Related experience in another type of environmental control utility, in a related utility division or certification category or allied trade, such as plumbing, may be credited toward the experience requirement. Related experience may only be substituted for up to 50% of the experience requirements.

Accommodations

Accommodations will be made for applicants that require special accommodation due to a disability that may impair ability to take the examination. Applicants must submit a Request for Accommodation Form with the application and provide documentation of the need for a special accommodation. A letter from a physician or a medical specialist knowledgeable of your disability must accompany the completed application. Contact the EPA Regional Tribal Coordinator to request a copy of the Request for Accommodation Form.

Renewal Requirements

To renew a certificate, the certified operator shall have been actively working in the area of certification and completed at least 30 continuing education hours during the previous three-year period. Lapsed certificates may be reinstated within 30 days of the date of expiration. After 30 days, the operator will no longer be certified.

² Direct Responsible Charge (DRC) is active daily on-site technical direction and supervision or active daily on-site accountability of a facility or major segment of a facility.

Water Treatment Plant Classification

Water Treatment Plant Classification

A separate worksheet must be completed for each water treatment plant needed to fulfill the experience requirement of the class for which you are applying. To calculate the point rating of your plant(s), please enter the appropriate values in the blanks provided and add to determine the total point rating of your plant(s).

Very Small Water Systems³ (VSWS) and Water Treatment plant classification is based on the following point system:

VSWS ³	30 points or less and a maximum population of 500 persons
Level 1.....	30 points or less
Level 2.....	31 - 55 points
Level 3.....	56 - 75 points
Level 4.....	76 points and greater

³VSWS means a community public water system that serves 500 persons or less or a non-community public water system and has no treatment other than disinfection or has only treatment which does not require any chemical treatment, process adjustment, backwashing or media regeneration by an operator (e.g., calcium carbonate filters, granular activated carbon filters, cartridge filters, ion exchangers).

Water Distribution System Classification

A separate worksheet must be completed for each distribution system needed to fulfill the experience requirement of the class for which you are applying. Class level for distribution systems is based on the population served and system characteristics as follows:

Level 1.....	Population 3,300 or less; Distribution Storage; Hypochlorination
Level 2.....	Population 3,301 to 10,000; Gaseous and other chlorine disinfectant; Pressure zones greater than 5; Recycled water distribution; System is blending sources to meet MCL
Level 3-4.....	Population > 10,000; Distribution system complexity

Application Steps

1. Provide contact information under "General Information".
2. Review certification requirements and select the type and level of certification for which you wish to apply.
3. If applicable, indicate your current level of certification. Be sure to include a copy of your certification with your application material.
4. Indicate your level of education. Provide a copy of your high school diploma or GED or post high school degree.
If applying for the Level 3 or 4, a transcript of your post high school education must also be included with the application material.
5. Provide information about your current job duties. Be sure to obtain the required signature verifying your employment (section VI).
6. Provide information about other positions you have held that would be applicable to meeting the work experience certification requirements.
7. Sign acknowledgment and date application.
8. Complete Plant and/or Distribution Classification worksheet(s).
9. Complete exam site preference form.

National Tribal Drinking Water Certification Program Application for Certification

Complete all sections fully and accurately. • Provide a copy of your current certificate, if applicable, as requested in section III. •Provide documentation of your education as requested in section IV. •Acquire necessary signatures in sections VI and VII. •Complete the Plant/System Classification Worksheet for each water treatment facility or distribution system that you have been employed. •Complete the Exam Site Preference form.

I. GENERAL INFORMATION: <i>(Please type or print)</i>			
<i>First Name</i>	<i>M.I.</i>	<i>Last Name</i>	
<i>Mailing address (number and street)</i>			
<i>City</i>	<i>State</i>	<i>Zip</i>	
<i>Work telephone number</i> ()		<i>Home or cell telephone number</i> ()	
<i>Email</i>		<i>Fax</i> ()	
<i>Tribe Name</i>		<i>EPA Region Number</i>	

II. APPLICATION: TYPE AND LEVEL: <i>Indicate type and class level of certification for which you are applying. Please review education and experience requirements prior to making your selection</i>	
<i>Application type</i> Very Small Water Systems..... <input type="checkbox"/> Water Treatment Operator..... <input type="checkbox"/> Water Distribution Operator..... <input type="checkbox"/>	<i>Class level of certification (Not applicable for Very Small Water Systems)</i> Level 1..... <input type="checkbox"/> Level 2..... <input type="checkbox"/> Level 3..... <input type="checkbox"/> Level 4..... <input type="checkbox"/>

III. CURRENT LEVEL OF CERTIFICATION: <i>If you are currently certified, include a copy of your current license/certificate and submit with your application.</i>	
Are you currently certified in Water Treatment or Distribution? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Type of certification:	Certification class/level:
Name of certifying agency:	
Certificate number:	Expiration date:

IV. EDUCATION: <i>Check each level of education you have completed. Provide a copy of your diploma verifying the highest level of education obtained. For Class III and IV, a copy of your transcript or certificates of courses completed beyond the High School level must also be provided.</i>	
<i>Education level</i>	
High School Diploma..... <input type="checkbox"/>	Associates Degree (2 year degree)..... <input type="checkbox"/>
GED or Equivalent..... <input type="checkbox"/>	BS/BA Degree (4 year degree)..... <input type="checkbox"/>
Some College..... <input type="checkbox"/>	Graduate degree <input type="checkbox"/>

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V. EMPLOYMENT HISTORY: <i>List current position first. List only jobs in water/wastewater treatment, water distribution, wastewater collection, water/wastewater lab or allied trade such as plumbing.</i>			
CURRENT EMPLOYMENT			
<i>Utility/Company Name:</i>		<i>Type of Utility: (if applicable)</i>	
		<input type="checkbox"/> Water Treatment _____ (PWSID) <input type="checkbox"/> Distribution _____ (No. of people system serves) <input type="checkbox"/> Wastewater Treatment <input type="checkbox"/> Collection System	
<i>Tribe Name: (If applicable)</i>		<i>Supervisor's name:</i>	
		<i>Supervisor's telephone number:</i>	
<i>Job Title:</i>	<i>Hours per week</i>	<i>Dates employed in position:</i>	<i>Start date:</i>
			<i>End date:</i>
<i>Job Duties: (If available, provide a copy of your job description; otherwise describe job duties below. Please be specific.)</i>			
<i>Did your job duties require you to be in direct responsible charge (DRC)? (DRC is active daily on-site supervision, or accountability of a facility or major segment of the Facility).</i>			<i>Start date of DRC:</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No			<i>End date of DRC:</i>
PREVIOUS EMPLOYMENT			
<i>Utility/Company Name:</i>		<i>Type of Utility: (if applicable)</i>	
		<input type="checkbox"/> Water Treatment _____ (PWSID) <input type="checkbox"/> Distribution _____ (No. of people system serves) <input type="checkbox"/> Wastewater Treatment <input type="checkbox"/> Collection System	
<i>Tribe Name: (If applicable)</i>		<i>Supervisor's name:</i>	
		<i>Supervisor's telephone number:</i>	
<i>Job Title:</i>	<i>Hours</i>	<i>Dates employed in position:</i>	<i>Start date:</i>
			<i>End date:</i>
<i>Job Duties: (If available, provide a copy of your job description; otherwise describe job duties below. Please be specific.)</i>			
<i>Did your job duties require you to be in direct responsible charge (DRC)? (DRC is active daily on-site technical direction, supervision, or accountability of a facility or major segment of the Facility).</i>			<i>Start date of DRC:</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No			<i>End date of DRC:</i>

V. EMPLOYMENT HISTORY (CONTINUED): List only jobs in water/wastewater treatment, water distribution, wastewater collection, water/wastewater lab or allied trade such as plumbing.

PREVIOUS EMPLOYMENT

Utility/Company Name:	Type of Utility: (if applicable) <input type="checkbox"/> Water Treatment _____ (PWSID) <input type="checkbox"/> Distribution _____ (No. of people system serves) <input type="checkbox"/> Wastewater Treatment <input type="checkbox"/> Collection System
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Tribe Name: (If applicable)	Supervisor's name:
	Supervisor's telephone number:

Job Title:	Hours per week	Dates employed in position:	Start date:
			End date:

Job Duties: (If available, provide a copy of your job description; otherwise describe job duties below. Please be specific.)

Did your job duties require you to be in direct responsible charge (DRC)? (DRC is active daily on-site technical direction, supervision, or accountability of a facility or major segment of the Facility). <input type="checkbox"/> Yes <input type="checkbox"/> No	Start date of DRC:
	End date of DRC:

PREVIOUS EMPLOYMENT

Utility Company Name:	Type of Utility: (if applicable) <input type="checkbox"/> Water Treatment _____ (PWSID) <input type="checkbox"/> Distribution _____ (No. of people system serves) <input type="checkbox"/> Wastewater Treatment <input type="checkbox"/> Collection System
-----------------------	--

Tribe Name: (If applicable)	Supervisor's name:
	Supervisor's telephone number:

Job Title:	Hours	Dates employed in position:	Start date:
			End date:

Job Duties: (If available, provide a copy of your job description; otherwise describe job duties below. Please be specific.)

Did your job duties require you to be in direct responsible charge (DRC)? (DRC is active daily on-site technical or accountability of a facility or major segment of the Facility). <div style="text-align: center;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </div>	Start date of DRC:
	End date of DRC:

COPY THIS PAGE IF ADDITIONAL SPACE IS NEEDED TO REPORT EMPLOYMENT HISTORY

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VI. VERIFICATION OF WORK EMPLOYMENT: *This section is to be completed by your current supervisor or facility superintendent or Human Resources Department.*

I, _____ acknowledge that the dates of employment and job duties as described in section V under "Current Employment" are accurate to the best of my knowledge for _____.

I am responsible for the supervision and/or hiring of this individual and I am aware of his daily job duties.

Supervisor/ Facility Superintendent signature

Job position

Date

Telephone number

VII. ACKNOWLEDGEMENT: *To be completed by applicant. Read following statement and sign and date if in agreement.*

I, the undersigned, acknowledge that I am the named applicant submitting this application for certification and that all information provided in this application is true and correct to the best of my knowledge. I understand that any misrepresentations may result in ineligibility for certification or revocation of certification if granted. I consent to the investigation of the information I have provided in order to verify my qualifications for certification. By signing below, I give the Association of Boards of Certification (ABC) and Applied Measurement Professional (AMP) the right to report test results to the Environmental Protection Agency (EPA) for the purposes of evaluating certification eligibility. I also waive all claims and agree to indemnify and hold harmless the EPA, ABC, and AMP for any action taken pursuant to the rules and standards set by EPA with regard to my application, the ABC examination and/or my certification except claims based on gross negligence or lack of good faith.

Applicant signature

Date

Please direct questions about the EPA Tribal Operator Certification Program to your EPA regional office:

EPA Region 1: (617) 918-1559

EPA Region 5: (312) 886-0259

EPA Region 8: (303) 312-6243

EPA Region 2: (212) 637-3838

EPA Region 6: (214) 665-6706

EPA Region 9: (415) 972-3549

EPA Region 4: (404) 562-9845

EPA Region 7: (913) 551-7410

EPA Region 10: (206) 553-6917

Please mail your completed application package to:

National Tribal Opcert Coordinator
SWEFC/Civil Engineering Department
MSC01 1070, 1 University of New Mexico
Albuquerque, NM 87131

If mailing by FEDEX ground or UPS, please use the following address

National Tribal Opcert Coordinator
SWEFC/UNM Civil Engineering Dept.
210 University Blvd NE, Room 3020
MSC01 1070 Albuquerque, NM 87131.

Plant Point Rating Worksheet-Water Treatment Facilities

EPA will classify all community and non-transient noncommunity treatment facilities in Indian country using the plant rating worksheet below. Regions may increase classification of treatment based on other system characteristics or treatment needs. **Copy and complete this worksheet for each water treatment facility that you have been employed.**

A water system with a groundwater supply and only (non-gaseous) chlorination is considered a distribution system, not a water treatment facility. A water system with the addition of any chemical to a public water supply other than for chlorination shall be considered a treatment facility and should use this rating worksheet to determine the classification of the facility. Each unit process should have points assigned only once.

Employment and Facility Information			
Facility	Plant Name		
	Street		
	City	State	Zip
Supervisor	Name		Title
	Phone	Email	
Dates employed as an operator at this facility		Start date	End date
Is this treatment facility in Indian country? <i>Yes</i> <i>No</i>			

Item	Points Possible	Your Plant
Size (1 point minimum to 20 point maximum)		
Design flow average day, or peak month's average day, whichever is larger (1 point per 0.5 Millions of Gallons per Day (MGD). Round up.) Design flow: Consider this to be the design capacity of the plant. Examples: 9.2 MGD = 19 points 4.7 MGD = 10 points	1 - 20	
Water Supply Sources (Rating based on public health significance)		
Seawater/saltwater	0	
Groundwater	0	
Groundwater under direct influence of surface water (GWI)	8	
Surface water	10	
<u>Average Raw Water Quality Variation (0 to 10 point maximum).</u> Applies to all sources (surface and groundwater). Key is the effect on treatment process changes that would be necessary to achieve optimized performance. <ul style="list-style-type: none"> • Little or no variation - no treatment provided except disinfection (0 points) • Minor variation - e.g., "high quality" surface source appropriate for slow sand filtration (1 point) • Moderate variation in chemical feed, dosage changes made: monthly (2 points), weekly (3 points), or daily (4 points) • Variation significant enough to require pronounced and/or very frequent changes (5 points) • Severe variation - source subject to non-point discharges, agricultural/urban storm runoff, flooding (7 points) • Raw water quality subject to agricultural or municipal waste point source discharges (8 points) • Raw water quality subject to industrial waste pollution (10 points) 	0 - 10	
Raw water quality is subject to:		
• Taste and/or odor for which treatment process adjustments are routinely made ¹	2	

Item	Points Possible	Your Plant
<ul style="list-style-type: none"> Color > 15 Color Units (CU) (not due to precipitated metals) - <i>see exceptions in Note 1 at end of table</i>¹ 	3	
<ul style="list-style-type: none"> Iron or/and manganese > Maximum Contaminant Level (MCL): Fe (2 points), Mn (3 points) (3 points maximum allowed) - <i>see exceptions in Note 1 at end of table</i>¹ 	2 - 3	
<ul style="list-style-type: none"> Algal growths for which treatment process adjustments are routinely made¹ 	3	
Chemical Treatment/Addition Processes		
Fluoridation	4	
<p><u>Disinfection/Oxidation</u> (Note: Points are additive to a maximum of 15 points allowed for this category.)</p> <p>CHECK <input checked="" type="checkbox"/> ALL THAT APPLY:</p> <ul style="list-style-type: none"> Chlorination: <ul style="list-style-type: none"> Hypochlorites..... <input type="checkbox"/> (5 points) <ul style="list-style-type: none"> If generated on site..... <input type="checkbox"/> (1 point) Chlorine gas..... <input type="checkbox"/> (8 points) Chloramination..... <input type="checkbox"/> (10 points) Chlorine dioxide..... <input type="checkbox"/> (10 points) Ozonation..... <input type="checkbox"/> (10 points) UV Irradiation..... <input type="checkbox"/> (2 points) Iodine, Peroxide, or similar..... <input type="checkbox"/> (5 points) Potassium permanganate (without greensand filtration)..... <input type="checkbox"/> (4 points) 	0 - 15	
pH adjustment for process control (e.g. pH adjustment aids coagulation)	4	
Stability or Corrosion Control (If the same chemical is used for both Corrosion Control and pH adjustment, count points only once)	4	
Coagulation/Flocculation & Filter Aid		
Primary coagulant addition	6	
Coagulant aid / Flocculant chemical addition (in addition to primary coagulant use)	2	
Flocculation	2	
Filter aid addition (Non-ionic/anionic polymers)	2	
Clarification/Sedimentation		
Sedimentation (plain, tube, plate)	4	
Contact adsorption	6	
Other clarification processes (air flotation, ballasted clarification, etc.)	6	
Upflow clarification ("sludge blanket clarifier") ²	8	
Filtration		
Granular media filtration (Surface water/GWI) ≤ 3 gpm/sq ft	10	
Granular media filtration (Surface water/GWI) > 3 gpm/sq ft	20	
Groundwater filtration	6	
Membrane filtration <ul style="list-style-type: none"> For compliance with a primary regulation (10 points) For compliance with a secondary regulation (6 points) 	6-10	
Diatomaceous earth (pre-coat filtration)	10	

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Item	Points Possible	Your Plant
Cartridge/bag	5	
Pre-filtration (staged cartridges, pressure sand w/o coagulation, etc.): add one point per stage to maximum of 3 points	1 - 3	
Slow sand	5	
Other Treatment Processes		
Aeration	3	
Air stripping (including diffused air, packed tower aeration)	5	
Ion-exchange/softening	5	
Greensand filtration	10	
Lime-soda ash softening (includes: chemical addition, mixing/flocculation/clarification/filtration - do not add points for these processes separately)	20	
Granular activated carbon filter (do not assign points when included as a bed layer in another filter)	5	
Powdered activated carbon	2	
Blending sources with significantly different water quality <ul style="list-style-type: none"> • To achieve MCL compliance (4 points) • For aesthetic reasons (2 points) 	2-4	
Reservoir management employing chemical addition	2	
Electrodialysis	15	
Residuals Disposal		
<ul style="list-style-type: none"> • Discharge to surface, sewer, or equivalent (0 points) • On-site disposal, land application (1 point) • Discharge to lagoon/drying bed, with no recovery/recycling – e.g., downstream outfall (1 point) • Backwash recovery/recycling: discharge to basin or lagoon and then to source (2 points) • Backwash recovery/recycling: discharge to basin or lagoon and then to plant intake (3 points) 	0 - 3	
Facility Characteristics		
Instrumentation - Use of SCADA or similar instrumentation systems to provide data, with: <ul style="list-style-type: none"> • Monitoring/alarm only, no process operation - plant has no automated shutdown capability (0 points) • Limited process operation - e.g., remote shutdown capability (1 point) • Moderate process operation - alarms and shutdown, plus <u>partial</u> remote operation of plant (2 points) • Extensive or total process operation - alarms and shutdown, full remote operation of plant possible (4 points) 	0 - 4	
		Total Points

Notes:

¹ **Raw water quality is subject to:**

- Taste and/or odor (T&O) for which treatment process adjustments are routinely made (2 points): 1) T&O issue has been identified in a pre-design report, etc., 2) a process has been installed to address, and 3) operational control adjustments are made at least seasonally. Do not give points for T&O when there is no specific additional impact on operation. E.g. if a system is already pre-chlorinating for disinfection, give no points for T&O.
- Color > 15 CU (not due to precipitated metals) (3 points) *with following exceptions*. Color will be considered elevated and points assigned when levels exceed 75 Color Units (CU) for conventional filtration, 40 CU for direct filtration, or 15 CU for all other technologies, except reverse osmosis (no points given for color for reverse osmosis).
- Iron and/or manganese > MCL: Fe (2 points), Mn (3 points) (3 points maximum allowed) *with following exceptions*. Iron and manganese levels will be considered elevated and points assigned if they are greater than the MCL, except for applications of manganese greensand filters. For applications of manganese greensand filters, iron and manganese levels will be considered elevated when their combined level exceeds 1.0 mg/L (3 points allowed).
- Algal growths for which treatment process adjustments are routinely made (3 points): Raw water will be considered subject to algal growths when treatment processes are specifically adjusted due to the presence of high levels of algae on at least a weekly basis for at least two months each year.

² **Upflow clarification** ("sludge blanket clarifier") – 8 points – Also known as sludge blanket clarification. Includes such proprietary units as Super-Pulsator. These units include processes for flocculation and sedimentation. Important note: these are not the same as adsorption clarifiers.

Water Treatment Definitions

Definitions reprinted from "Master Glossary of Water and Wastewater Terms," [<http://www.owp.csus.edu/glossary/glossary.php>], with permission from Office of Water Programs, California State University, Sacramento.

Adsorption

The gathering of a gas, liquid, or dissolved substance on the surface or interface zone of another material.

Aeration

The process of adding air to water. Air can be added to water by passing air through water or passing water through air.

Air stripping

A treatment process used to remove dissolved gases and volatile substances from water. Large volumes of air are bubbled through the water being treated to remove (strip out) the dissolved gases and volatile substances.

Chloramination

The application of chlorine and ammonia to water to form chloramines for the purpose of disinfection.

Diatomaceous earth

A fine, siliceous (made of silica) "earth" composed mainly of the skeletal remains of diatoms.

Direct filtration

A method of treating water which consists of the addition of coagulant chemicals, flash mixing, coagulation, minimal flocculation, and filtration. The flocculation facilities may be omitted, but the physical-chemical reactions will occur to some extent. The sedimentation process is omitted.

Electrodialysis

The selective separation of dissolved solids on the basis of electrical charge, by diffusion through a semipermeable membrane across which an electrical potential is imposed.

Reverse osmosis

The application of pressure to a concentrated solution which causes the passage of a liquid from the concentrated solution to a weaker solution across a semipermeable membrane. The membrane allows the passage of the water (solvent) but not the dissolved solids (solutes).

SCADA system

The Supervisory Control And Data Acquisition system is a computer-monitored alarm, response, control and data acquisition system used by drinking water facilities to monitor their operations.

Stabilization

Processes that convert organic materials to a form that resists change. Organic material is stabilized by bacteria which convert the material to gases and other relatively inert substances. Stabilized organic material generally will not give off obnoxious odors.

Plant Point Rating Worksheet-Water Distribution Systems

EPA will classify distribution systems according to population served and system characteristics. EPA Regions may increase classification based on other system characteristics. **Copy and complete this worksheet for each water distribution system that you have been employed.**

Water Distribution System - address and contact person	
System Name	
Supervisor Contact Name and Title	
Supervisor telephone:	
Supervisor Address	
City/State/Zip	
Phone:	Fax:

System Characteristics	Check all that apply	System Level
Population = 3,300 or less	<input type="checkbox"/>	Level I
Distribution storage	<input type="checkbox"/>	Level I
Hypochlorination	<input type="checkbox"/>	Level I
Population=3,301 to 10,000	<input type="checkbox"/>	Level II
Gaseous and other chlorine disinfectant	<input type="checkbox"/>	Level II
Pressure zones greater than 5	<input type="checkbox"/>	Level II
Recycled water distribution	<input type="checkbox"/>	Level II
System is blending sources to meet MCL	<input type="checkbox"/>	Level II
Population > 10,000	<input type="checkbox"/>	Level III
Distribution system complexity ¹	<input type="checkbox"/>	Level II-IV

¹Distribution system complexity=Conditions or characteristics that exist in a distribution system, such as: pressure zones, booster stations, storage tanks, fire protection, chlorination, non-residential consumer, cross connection potential demand variations, size of pipes, total distance of pipes and/or total geographic area that must be considered when classifying the distribution system.

EXAM SITE PREFERENCE: AMP Assessment Centers (As of July, 1, 2015)

Please circle below a test center where you would like to take the certification exam. Once your application has been approved, you will be notified of the procedures for scheduling your certification exam.

- Please check this box if you are unwilling to travel to one of these assessment centers and would like to participate in testing closer to your area. By selecting this option, you understand that your test date will be delayed several months while EPA explores mobile testing options. You also understand that if EPA determines that mobile testing options are not feasible, you will need to travel to one of the AMP assessment centers listed below in order to take the certification exam. Should mobile testing be arranged, please select the time of year that is most convenient for you to test: *(check all that apply)*

 January-March April-June July-September October-December**ALABAMA**Athens
Birmingham
Huntsville
Mobile
Montgomery**ALASKA**

Anchorage

ARIZONAGlendale
Mesa
Tucson**ARKANSAS**Fayetteville
Little Rock**CALIFORNIA**Bakersfield
Chino
Fresno
Glendale
Irvine
La Mesa
Long Beach
Palm Springs
Sacramento
San Diego
San Francisco
San Jose
Santa Maria
Stanton
Upland**COLORADO**Aurora
Grand Junction**CONNECTICUT**Southington
West Haven**DELAWARE**

Wilmington

DISTRICT OF COLUMBIA

Washington

FLORIDACasselberry
Jacksonville
Lakeland
Miami
Ocala
Sarasota
Tallahassee
West Palm Beach**GEORGIA**Decatur
Liburn
Macon
Marietta
Savannah**HAWAII**

Honolulu

IDAHO

Boise

ILLINOISBuffalo Grove
Carbondale
Chicago
Franklin Park
Glen Ellyn
Libertyville
Matteson
Naperville
Rockford
Springfield
Urbana**INDIANA**Evansville
Fort Wayne
Indianapolis
Mishawaka**IOWA**Davenport
Des Moines**KANSAS**Olathe
Wichita**KENTUCKY**Lexington
Louisville**LOUISIANA**Baton Rouge
Metairie
Shreveport**MAINE**

Portland

MARYLAND

Glen Burnie

MASSACHUSETTSFramingham
Holyoke
Saugus**MICHIGAN**Dearborn
Flint
Wyoming**MINNESOTA**Coon Rapids
Duluth**MISSISSIPPI**

Ridgeland

MISSOURIGladstone
Jefferson City
Springfield
St. Louis**MONTANA**Billings
Great Falls
Missoula**NEBRASKA**Bellevue
Lincoln
North Platte
Scottsbluff**NEVADA**Henderson
Reno**NEW HAMPSHIRE**Concord
Manchester
Nashua
Portsmouth**NEW JERSEY**Robbinsville
Wayne**NEW MEXICO**

Albuquerque

NEW YORKAstoria
Clifton Park
Hicksville
New York
Rochester
Selden
White Plains
Whitesboro
Williamsville**NORTH CAROLINA**Charlotte
Raleigh**NORTH DAKOTA**Bismarck
Fargo**OHIO**Brook Park
Cincinnati
Columbus
Toledo**OKLAHOMA**Oklahoma City
Tulsa**OREGON**Bend
Coos Bay
Eugene
Klamath Falls
La Grande
Medford
Portland
Salem**PENNSYLVANIA**Harrisburg
Philadelphia
Pittsburgh
Wyoming**RHODE ISLAND**

Warwick

SOUTH CAROLINAColumbia
Georgetown
Spartanburg**SOUTH DAKOTA**Rapid City
Sioux Falls**TENNESSEE**Chattanooga
Johnson City
Knoxville
Memphis
Nashville**TEXAS**Austin
Dallas
El Paso
Fort Worth
Houston
Lubbock
McAllen
San Antonio
Wichita Falls**UTAH**

Salt Lake City

VERMONT

Burlington

VIRGINIAFredericksburg
Norfolk
Richmond
Roanoke**WASHINGTON**Bellevue
East Wenatchee
Everett
Kennewick
Seattle
Spokane
Tacoma
Vancouver
Yakima**WEST VIRGINIA**

Dunbar

WISCONSINGreen Bay
Pewaukee**WYOMING**Casper
Cheyenne
Green River