



Water Treatment Purification Plant Criteria Worksheet

331-749 • May 2025

ABC Classification: WTPO

WTP Address & Contact Person		System Name
Plant Name/Source Numbers Add text here		System ID# Add text here
Address Add address here.		
City Add text here	State State	Zip Code +4 (Link to USPS Zip Code Lookup) Zip Code
Phone Number Phone number		Fax Number (If applicable.) Fax number

A groundwater supply with only chlorination is considered a distribution system, not a water treatment facility. The addition of any chemical to a public water supply, other than a disinfectant, will be considered a treatment facility and should use this rating worksheet to determine the classification of the facility.* Unless otherwise noted, give full amount of points in the "Your Plant" box.

**With the exception of unit processes installed to allow in-line fluoridation, in-line chlorination, or chemical addition to inhibit corrosion are not included within the scope of the term "water treatment plant" per WAC 246-292-040(c).*

Example Table

Raw water quality is subject to or has elevated:	Points	Your Plant
Correct: Taste and/or odor levels	3	3
Incorrect: Taste and/or odor levels	3	1

Note: Do not double count. If the plant has two horizontal-flow (rectangular basins), DO NOT give 10 points, give 5 points. If the plant has more than one type of unit for each process, give points once for each unit.

Scoring Instructions

Record the number for your facility to the best of your knowledge in the "Your Facility" column below. DO NOT write in the "Evaluator Score" column. The WTPO evaluator from Washington state's DOH Office of Drinking Water will complete that column.

Item	Points Possible	Your Facility	Evaluator Score
Size			
Design flow average day, or peak month s average day, whichever is larger (1 point per 0.5 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 (20 points maximum allowed)	1 – 20	Your #	
Water Supply Sources (Rating based on public health significance)			
Seawater/saltwater	0	Your #	
Groundwater	0	Your #	
Groundwater under direct influence of surface water (GWI)	8	Your #	
Surface water	10	Your #	
Average Raw Water Quality Variation —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	Your #	
Raw water quality is subject to:			
<ul style="list-style-type: none"> Taste and/or odor for which treatment process adjustments are routinely made 	2	Your #	
<ul style="list-style-type: none"> Color > 15 CU (not due to precipitated metals). See exceptions in note at end of Example Table, page 1. 	3	Your #	
<ul style="list-style-type: none"> Iron or/and manganese > MCL: Fe (2 points), Mn (3 points) (3 points maximum allowed) <ul style="list-style-type: none"> See exceptions in note at end of Example Table, page 1. 	2 – 3	Your #	
<ul style="list-style-type: none"> Algal growths for which treatment process adjustments are routinely made 	3	Your #	
Chemical Treatment/Addition Processes			
Fluoridation	4	Your #	
Disinfection/Oxidation (<i>Note: Points are additive to a maximum of 15 points allowed for this category.</i>) CHECK <u>X</u> ALL THAT APPLY: Chlorination: <ul style="list-style-type: none"> Hypochlorites (5 points) <ul style="list-style-type: none"> If generated on site (add 1 point) Chlorine gas (8 points) Chloramination (10 points) Chlorine dioxide (10 points) Ozonation (10 points) UV Irradiation (2 points) Iodine, Peroxide, or similar (5 points) Potassium permanganate (4 points) [If used with greensand filtration do not give 4 points] 	0 - 15	Your #	
pH adjustment for process control (e.g., pH adjustment aids coagulation)	4	Your #	

Item	Points Possible	Your Facility	Evaluator Score
Stability or Corrosion Control (If the same chemical is used for both Corrosion Control and pH adjustment, count points only once)	4	Your #	
Coagulation/Flocculation & Filter Aid			
Primary coagulant addition	6	Your #	
Coagulant aid/Flocculant chemical addition (in addition to primary coagulant use)	2	Your #	
Flocculation	2	Your #	
Filter aid addition (Non-ionic/anionic polymers)	2	Your #	
Clarification/Sedimentation			
Sedimentation (plain, tube, plate)	4	Your #	
Contact adsorption	6	Your #	
Other clarification processes (air flotation, ballasted clarification, etc.)	6	Your #	
Up-flow clarification ("sludge blanket clarifier") ²	8	Your #	
Filtration			
Granular media filtration (Surface water/GWI) \leq 3 gpm/sq ft	10	Your #	
Granular media filtration (Surface water/GWI) $>$ 3 gpm/sq ft	20	Your #	
Groundwater filtration	6	Your #	
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	Your #	
Diatomaceous earth (pre-coat filtration)	10	Your #	
Cartridge/bag	5	Your #	
Pre-filtration (staged cartridges, pressure sand w/o coagulation, etc.): add one point per stage to maximum of 3 points	1 - 3	Your #	
Slow sand	5	Your #	
Other Treatment Processes			
Aeration	3	Your #	
Air stripping (including diffused air, packed tower aeration)	5	Your #	
Ion-exchange/softening	5	Your #	
Greensand filtration	10	Your #	
Lime-soda ash softening (includes chemical addition, mixing/flocculation/clarification/filtration—do not add points for these processes separately)	20	Your #	
Granular activated carbon filter (do not assign points when included as a bed layer in another filter)	5	Your #	
Powdered activated carbon	2	Your #	
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	Your #	
Reservoir management employing chemical addition	2	Your #	
Electrodialysis	15	Your #	
Other: Certification authority may assign 2 to 15 additional points for processes not listed elsewhere in this document. (Specify) Click or tap here to enter text.	2 - 15	Your #	

Item	Points Possible	Your Facility	Evaluator Score
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	Your #	
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 partial remote operation of plant (2 points) Extensive or total process operation—alarms and shutdown, full remote operation of plant possible (4 points) 	0 - 4	Your #	
	TOTAL	Your Total	

See [WAC 246-292-050](#) for minimum certification requirements.

Class I 30 points or less

Class III 56-75 points

Class II 31-55 points

Class IV 76 points and greater

Form Completed by	Electronic signature: /s/FirstName LastName
Phone	Phone #
Date	Pick Date
Form Evaluated by	Electronic signature: /s/FirstName LastName
Phone	Phone #
Date	Pick Date

Notes

¹Raw water quality is subject to:

- Taste and/or odor 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 algae 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 [Glossary of Water and Wastewater Terms](#), used 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.



To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email doh.information@doh.wa.gov. If in need of translation services, call 1-800-525-0127.