

NORTH CAROLINA WATER TREATMENT FACILITY OPERATORS CERTIFICATION BOARD
 Rating Values for Classification & Reclassification of Water Treatment Systems (15A NCAC 18D .0203 - .0205)

SYSTEM NAME: _____ **PWSID:** _____ **DATE:** _____

PWSS Region: _____ **Type (CWS, NTNC, TNC):** _____ **New or Changed Class (N-C-NO):** _____

System Treatment Classification (A, B, C, D): _____ **Source (Surface or Well):** _____

Class C (1-50 points), Class B (51-110 points), Class A (over 110 points) **Purchase (Y/N):** _____
 Class D-Well for non-community systems with hypochlorite solution as the only treatment applied to the water.

Distribution System Classification (A,B,C,D): _____ (Greater of treatment vs. service connection/fire protection class)

Service Connections: _____ **Fire Protection (Y/N):** _____
 Class D (100 or fewer service connections, no fire protection), Class C (101 to 1,000 service connections, no fire protection)
 Class B (1,001 to 3,300 connections, no fire protection or ≤ 1,000 connections with fire protection), Class A (>3,300 connections)

Cross-Connection-Control Classification Required (Y/N): _____
 (Five or more testable backflow prevention assemblies required within the distribution system)

<u>PARAMETER</u>	<u>RATING VALUE</u>	<u>POINTS</u>
(1) Surface Water Source		
(A) flowing stream-----	5	_____
(B) flowing stream with impoundments-----	7	_____
(C) raw water treatment (CuSO4, etc.)-----	3	_____
(2) Ground Water Source		
(A) first five wells-----	5	_____
(B) add 1point per 5 wells or fraction thereof over 5-----	1	_____
(3) Coagulation		
(A) aluminum sulfate, ferric chloride, etc.-----	10	_____
(B) polymer-----	5	_____
(4) Mixing		
(A) baffle-----	2	_____
(B) mechanical-----	4	_____
(C) air-----	3	_____
(5) Oxidation (pre-treatment)		
(A) ClO ₂ -----	5	_____
(B) ozone-----	5	_____
(C) KMnO ₄ -----	3	_____
(D) Cl ₂ -----	3	_____
(6) Carbon Treatment-----	2	_____
(7) Aeration		
(A) mechanical draft-----	3	_____
(B) coke tray/splash tray-----	2	_____
(C) diffused-----	3	_____
(D) packed tower (VOC reduction)-----	10	_____
(8) pH Adjustment (primary)		
(A) caustic NaOH-----	10	_____
(B) lime/ soda ash-----	3	_____
(C) acid (H ₂ SO ₄ , HCl, etc.)-----	10	_____
(9) Sedimentation		
(A) standard rate-----	5	_____
(B) tube settlers-----	3	_____
(C) upflow-----	8	_____
(D) pulsators and plates, etc. -----	5	_____
(10) Contact Tank-----	1	_____
(11) Filtration		
(A) pressure		
(i) sand/ anthracite-----	8	_____
(ii) synthetic media (birm)-----	8	_____
(iii) granular activated carbon (GAC)-----	10	_____
(B) gravity		
(i) sand-----	10	_____
(ii) anthracite (mixed)/ GAC-----	12	_____
(iii) with surface wash or air scour-----	2	_____
(C) membrane (microfiltration, ultrafiltration) -----	10	_____
(12) Ion Exchange		
(A) softener, Na cycle-----	5	_____
(B) softener, H cycle-----	7	_____
(C) Fe and Mn (greensand)-----	10	_____
(D) mixed bed or split stream-----	12	_____

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<u>PARAMETER</u>	<u>RATING VALUE</u>	<u>POINTS</u>
(13) Lime Softening		
(A) spiractors-----	10	_____
(B) clarifier with coagulation-----	12	_____
(C) fuel burner (recarbonation)-----	5	_____
(14) Phosphate (sequestering agent)-----	5	_____
(15) Stabilization		
(A) acid feed-----	10	_____
(B) phosphate-----	2	_____
(C) caustic (NaOH)-----	10	_____
(D) lime/ soda ash-----	3	_____
(E) contact units (calcifier, etc.)-----	5	_____
(16) Reverse Osmosis, Nanofiltration, Electrodialysis-----	15	_____
(17) Disinfection		
(A) gas Cl ₂ -----	10	_____
(B) hypochlorite solution-----	7	_____
(C) ClO ₂ (chlorine dioxide)-----	13	_____
(D) ozone-----	13	_____
(E) ammonia and Cl ₂ -----	12	_____
(F) ultraviolet light (uv)-----	5	_____
(18) Fluoridation		
(A) saturator-----	8	_____
(B) dry feed-----	8	_____
(C) solution (acid)-----	10	_____
(19) Pumping		
(A) raw-----	3	_____
(B) intermediate-----	1	_____
(C) finished-----	3	_____
(D) system booster-----	2	_____
(20) Storage		
(A) raw-----	1	_____
(B) treated ground level tank-----	1	_____
(C) elevated in system (each extra tank 1 pt)-----	2	_____
(D) hydropneumatic-----	2	_____
(21) Population Served		
1 point per 1,000 persons served-----	50 max.	_____
(22) Plant Capacity		
1 point per 1 MGD capacity-----	25 max.	_____
(23) On-Site Quality Control		
(A) bacteriological		
(i) MPN/MF-----	5	_____
(ii) HPC-----	2	_____
(iii) MMO-MUG (Colilert)-----	2	_____
(B) pH		
(i) meter-----	2	_____
(ii) test kit-----	1	_____
(C) flouride		
(i) meter-----	3	_____
(ii) colorimetric-----	3	_____
(D) chlorine		
(i) titrator-----	3	_____
(ii) colorimeter/ spec.-----	2	_____
(iii) test kit-----	1	_____
(E) iron-----	1	_____
(F) hardness-----	1	_____
(G) alkalinity-----	1	_____
(H) turbidity-----	1	_____
(I) manganese-----	1	_____
(J) others (1 pt. Each)-----	1	_____
(K) A.A. Spec, or G.C. Unit-----	5 each	_____

Signature: _____

Total Points

(Printed Name: _____, _____ RO/PWSS)