

**SECTION .0600 - RAW SURFACE WATER FACILITIES****15A NCAC 18C .0601 IMPOUNDMENTS: PRE-SETTLING RESERVOIRS**

(a) Construction of a pre-settling reservoir shall be required if wide and rapid variations in turbidity, bacterial concentrations, or chemical qualities occur, or where the following raw water quality standards are not met: turbidity - 150 NTU, coliform bacteria - 3000/100 ml, fecal coliform bacteria - 300/100 ml, or color - 75 CU. If impoundment of the water supply stream does not or will not provide raw water of acceptable quality, a pre-settling reservoir located outside the watershed or catchment area shall be required.

(b) The Department shall approve alternatives to pre-settling reservoirs if a supplier of water demonstrates that engineered pretreatment providing an additional treatment barrier to low raw water quality will be installed and that the overall designed treatment process will comply with all other applicable requirements of this Subchapter. Pilot plant studies under Rule .0714 of this Subchapter shall be required to demonstrate treatment effectiveness unless operational data demonstrating treatment effectiveness for the variety of water quality that is experienced at the treatment facility are already available.

(c) The Department shall approve capacity increases at existing surface water treatment facilities without addition or up-sizing of pre-settling reservoirs if:

- (1) historical data or full-scale pilot studies demonstrate that the plant will provide treatment in accordance with this Subchapter without additional pre-settling; or
- (2) the use of alternative technology alleviates the need for additional pre-settling.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Readopted Eff. July 1, 2019.

**15A NCAC 18C .0602 RAW WATER INTAKES**

(a) Stream Intakes. The intake structure for unimpounded streams shall be constructed so that it will not be affected by flood water or damaged by floating debris. It shall be located and designed to minimize entrance of sand, silt, fish and debris. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 30 feet per minute or less.

(b) Reservoir Intakes. Where water quality variations affecting the treatment process will occur at different depths of a reservoir, the intake structure shall be constructed with multiple inlets that can be readily opened and closed for selection of the optimum water quality level. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 50 feet per minute or less.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
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Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

**15A NCAC 18C .0603 INTAKE CONDUITS**

The pipes, tunnels, or flumes used for intake conduits shall be designed to conduct water at self-cleaning velocities of at least two feet per second. A screen, accessible for cleaning, shall be provided to protect the pumps.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

**15A NCAC 18C .0604 PUMPS: POWER FACILITIES**

At least two pumping units with necessary check valves, gate valves, piping and appurtenances shall be provided for both raw water and finished water. Auxiliary facilities shall be provided to supply power or to provide other means to satisfy the design minimum water needs of the system.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
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Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November  
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