

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**WATER**

CFS:TEB

1 of 2

APPR:JFS:LML:03-13-18  
FHWAAPPR:03-14-18

**Delete section 911, on page 814 of the Standard Specifications for Construction, in its entirety and replace with the following:**

**911.01. General Requirements.** Water must be clean, clear, and free of oil, salt, acid, alkali, organic matter, chlorides, or other deleterious material.

**911.02. Turf, Turf Establishment, and Landscape Plants.** Provide water for turf, turf establishment, and landscape plants from a potable or non-potable water source approved by the Engineer. Use irrigation quality water, free of elements harmful to plant growth.

**911.03. Mixing or Curing Concrete, Mortar, Grout, and Other Cementitious Products.** Potable water, from sources approved by the State Department of Public Health or equivalent approved by the Engineer, is acceptable without testing.

Surface water from sources including, but not limited to ditches, lakes, ponds, quarries, rivers, streams, wetlands, and other similar untreated sources, is prohibited for mixing or curing concrete, mortar, grout, and other cementitious products. Stationary concrete batch plants may use surface water if the facility has established at least a 5-year history of producing consistent concrete products meeting the required specifications. Stationary concrete batch plants using surface water are required to meet the non-potable water sampling and testing requirements.

Non-potable must meet the requirements of Table 911-1. Do not use non-potable water unless approved by the Engineer. Test non-potable water prior to use, once per month (once per six months for stationary concrete batch plants), thereafter, and at any time the water source may be deemed out of compliance due to changing site conditions, as determined by the Engineer. Water must be sampled and tested by a qualified independent testing laboratory, having no association with the supply or production of materials produced by that concrete facility, at the expense of the Contractor. Submit test results to the Engineer for approval prior to use, and within 3 days of completion of testing. If water fails to meet the requirements of this specification, immediately suspend use of water source, bring water into compliance, and retest. Do not resume use of the water source until approved by the Engineer.

<b>Table 911-1 Non-Potable Water Requirements</b>		
<b>Property</b>	<b>Test Method</b>	<b>Specifications</b>
Total Solids (TS)	<i>ASTM C 1602</i>	≤0.30%
Total Organic Content/Carbon (TOC)	<i>SM 2540 E</i>	≤0.05%
Alkalinity-Acidity (pH)	<i>ASTM D 1067</i>	5.5 - 8.5
Chloride (CL <sup>-</sup> )	<i>ASTM D 512</i>	≤0.05%
Time of Setting	<i>ASTM C 1602</i>	-1:00 hours to +1:30 hours of control
7-Day Compressive Strength	<i>ASTM C 1602</i>	≥90% of control