Carrollton Environmental Services

The StormWater Reader

June 2016

The "Health" of Carrollton's Creeks

Carrollton takes pride in its beautiful communities, parks and creeks. But have you ever wondered about the "health" of these resources? How does a city determine the health of its creeks? In Carrollton, we implemented a surface water monitoring program.

Surface Water Quality Monitoring

The monitoring program was designed to: develop a baseline water quality data; document changes in water quality over time; and screen for potential water quality problems. In addition, it can also be used as an assessment tool for the effectiveness of the city's Storm Water Management Program in its goal of reducing stormwater pollution to the maximum extent practicable.

The city has 18 monitoring locations in the six creeks flowing through the city limits: Indian Creek, Furneaux Creek, Dudley Branch, Hutton Branch, Valwood Improvement Channel and Cooks Branch. Twice a year, Environmental Quality staff conduct field observations, physical, and chemical measurements at each monitoring location. The field observations, include checking for oil sheen on the water, trash in the water, odor to the water, and any wildlife present in the water. The physical and chemical measurements include pH, dissolved oxygen, conductivity, turbidity, water temperature, total phosphates and nitrates. The test results are then used to calculate the water quality index at each location.

Water Quality Index

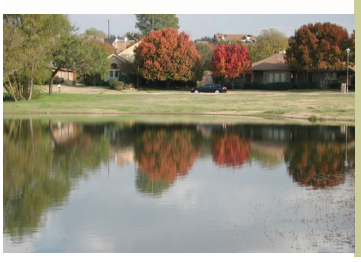
The water quality index provides a single grade for the water quality at each surface water monitoring location based on water quality parameters. While this cannot tell the whole story of the water quality, it can provide practical indicator of water quality for the city and the public.

Water Quality Legend

90-100	Excellent
70-90	Medium
50-70	Good
25-50	Poor
0-25	Very Poor

Did You Know?

The "health" of a creek can change in an instant based on what people discharge to the creek.

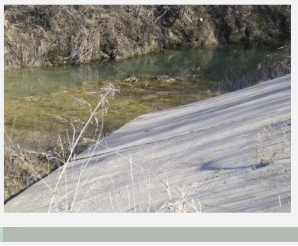


Water Quality Index for Our Creeks

Over the last 6 years, Environmental Services has sampled each location twelve times (once in winter and the other in summer). In addition to possible stormwater pollution, the water quality may change with temperature, time of year, rainfall amounts and other factors. The monitoring program suggests that the water quality of our creeks is good to excellent. The water quality index for each location is as follows:

Indian Creek

IC1—average—81	Winter average—87	Summer average—75
IC2—average—86	Winter average—89	Summer average—83



Dudley Branch

DB1—average—80	Winter average—87	Summer average—73
DB2—average—80	Winter average—82	Summer average—79
DB3—average—78	Winter average—78	Summer average—79

Furneaux Creek

FC1—average—83	Winter average—87	Summer average—78
FC2—average—88	Winter average—91	Summer average—85
FC3—average—87	Winter average—92	Summer average—83
FC4—average—88	Winter average—91	Summer average—86
FC5—average—89	Winter average—90	Summer average—88

Hutton Branch

HB1—average—87	Winter average—91	Summer average—84
HB2—average—87	Winter average—87	Summer average—87
HB3—average—83	Winter average—89	Summer average—78
HB4—average—90	Winter average—91	Summer average—89
HB5—average—89	Winter average—90	Summer average—88

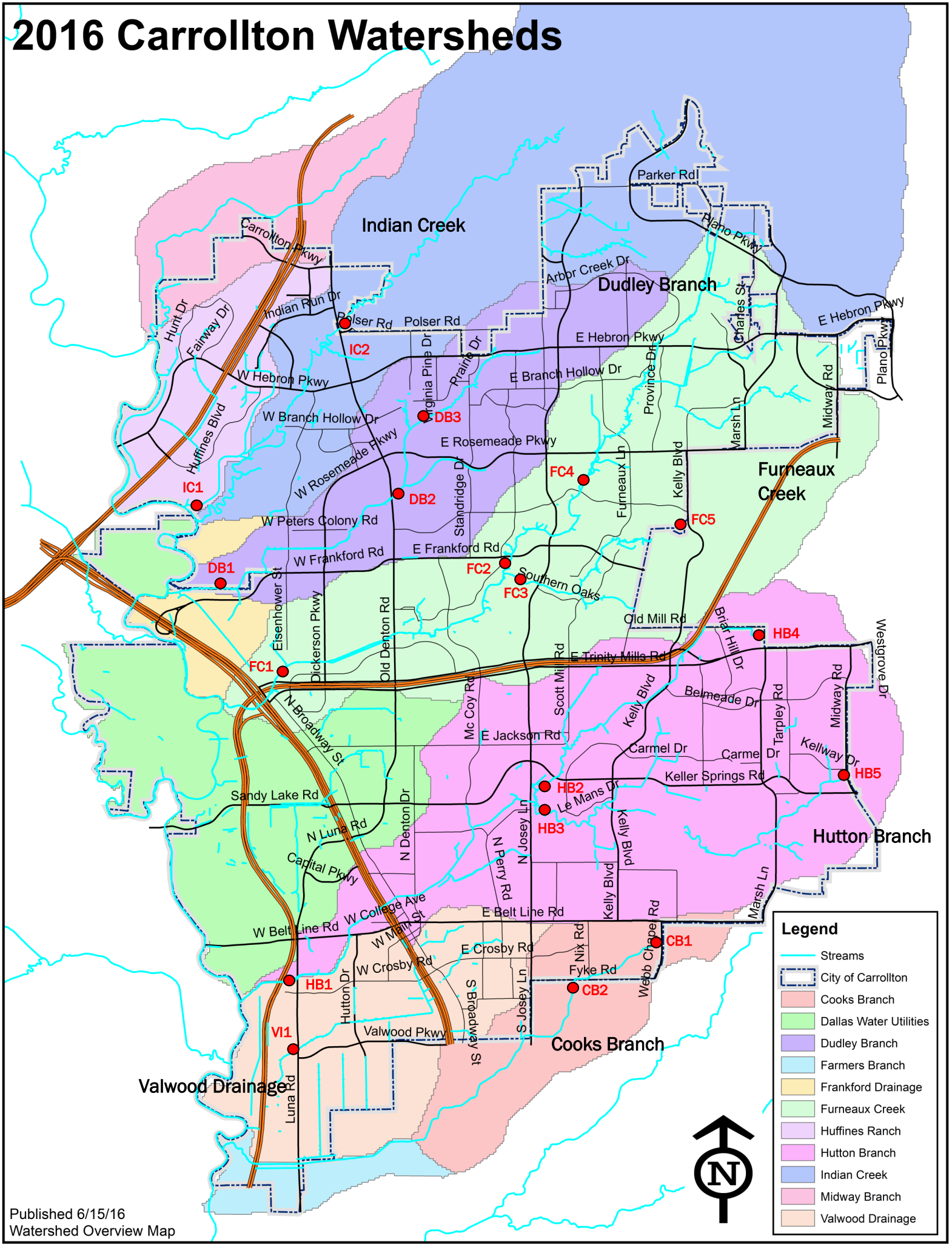
Cooks Branch

CB1—average—84	Winter average—94	Summer average—74
CB2—average—88	Winter average—87	Summer average—89

Valwood Improvement Channel

VI1—average—72	Winter average—75	Summer average—70

2016 Carrollton Watersheds



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Watershed Overview Map