Photo from July 2012

E. coli Monitoring Results 2011-2012

*For the complete watershed monitoring report, see the Executive Summary at www.CRWP.net

Crane Creek

(S003-009)

The Crane Creek monitoring site is located at CSAH-22, north of NW 50th St., in Clinton Falls, MN in Steele County.

The clarity and appearance of the water in Crane Creek is good. Only after a large rain event would the creek become muddy. The Creek received a Recreational Suitability score as high as 4 following a flood event, but generally was good for recreation (Table 1). Definitions for Appearance and Recreational Suitability are provided in Table 2. *Escherichia coli (E. coli)* data are described further on the following page.

Table 1. *Summary statistics, June – August 2011 and 2012.*

Parameter	Count	Mean	Min	Max
Appearance	15	1.7	1	3
Recreational Suitability	15	2.7	1	4
Clarity (cm)	15	57	6	>100
E. coli 2011 (MPN/100mL)	9	272***	31	>2419.6
E. coli 2012 (MPN/100mL)	6	260***	90.6	727

***90-day geometric mean

Clarity measured by Secchi tube

Table 2. *Appearance and Recreational Suitability score definitions.*

Rating	Appearance Definition	Recreational Suitability Definition
1	Clear – transparent water	Beautiful, could not be better
2	Cloudy – not quite crystal clear; cloudy white, gray or light brown	Very minor aesthetic problems; excellent for body-contact recreation
3	Muddy – cloudy brown due to high sediment levels	Body-contact recreation and aesthetic enjoyment slightly impaired
4	Green – due to algae growth; indicative of excess nutrients released into the stream	Recreation potential and level of enjoyment of the stream substantially reduced (would not swim but boating/canoeing is okay)
5	Muddy and Green – a combination of cloudy brown from high sediment levels and green from algae growth	Swimming and aesthetic enjoyment of the stream nearly impossible.

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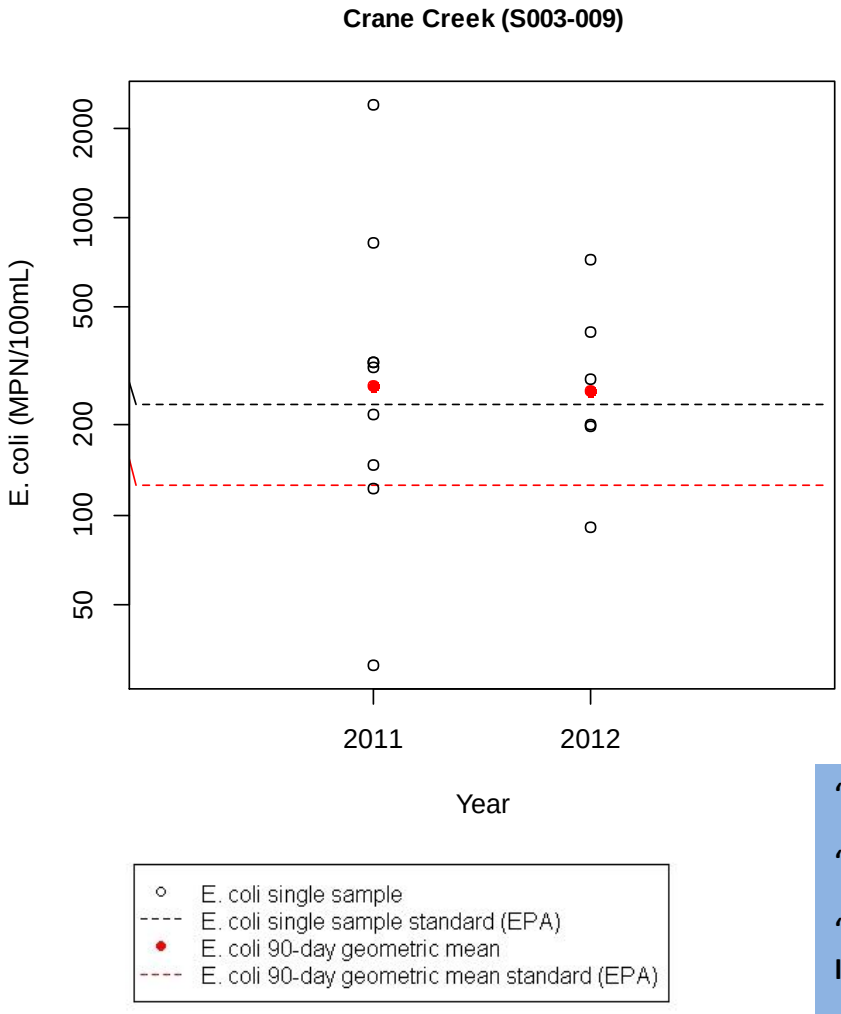
***E. coli* bacteria in Crane Creek**

The open black circles and the black dotted line show the single sample values collected by the Cannon River Watershed Partnership and the single sample standard that the Environmental Protection Agency has set, respectively. Single samples above this dotted black line indicate that unsafe levels of disease-causing pathogens may be present in the water.

The red circles and the red dashed line indicate the geometric mean calculated by the Cannon River Watershed Partnership and the Environmental Protection Agency geometric mean standard, respectively. The geometric mean helps to dampen the effect of very high or very low numbers, thus reducing bias and allowing for meaningful statistical results. Even so, the geometric mean is still above the EPA standard for safe recreation. Additionally, this is a 90-day geometric mean which means it is quite conservative.

What is E. coli and why monitor it?

Escherichia coli (E. coli) bacteria are an indicator of fecal contamination and used by the Environmental Protection Agency to evaluate public health risk in fresh waters. High levels suggest that disease-causing pathogens may be present.



The *E. coli* data from 2011 and 2012 show that the single sample values are widespread; both over and within the single sample standard. During both years, the geometric mean was above the geometric mean standard which suggests that there may be disease-causing pathogens above the level that the Environmental Protection Agency has set to protect public health.

"What can I do to help?"

"Where can I learn more?"

"How can I monitor a stream or lake near me?"

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