



Photo from July 2012

The appearance of the water in Heath Creek is good, although water takes on a green hue in mid-summer as algae density increases. Clarity is quite good; after a storm event the water is cloudy, but the minimum measurement is not at a level of concern. The wide range of scores for Recreational Suitability reflects the late summer algae and the contribution of cloudiness and trash to the stream following a storm event (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.

## *E. coli* Monitoring Results 2011-2012

\*For the complete watershed monitoring report, see the Executive Summary at [www.CRWP.net](http://www.CRWP.net)

# Heath Creek

## (S006-521)

The Heath Creek monitoring site is located at 90<sup>th</sup> Street East, 1.5 miles west of Northfield, MN in Rice County.

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

| Parameter                       | Count | Mean   | Min  | Max     |
|---------------------------------|-------|--------|------|---------|
| Appearance                      | 16    | 2.1    | 1    | 4       |
| Recreational Suitability        | 16    | 2.7    | 1    | 4       |
| Clarity (cm) (2012 only)        | 7     | 70     | 34   | >100    |
| <i>E. coli</i> 2011 (MPN/100mL) | 9     | 339*** | 98.5 | >2419.6 |
| <i>E. coli</i> 2012 (MPN/100mL) | 6     | 276*** | 88.6 | 648.8   |

\*\*\*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.   |



### E. coli bacteria in Heath Creek

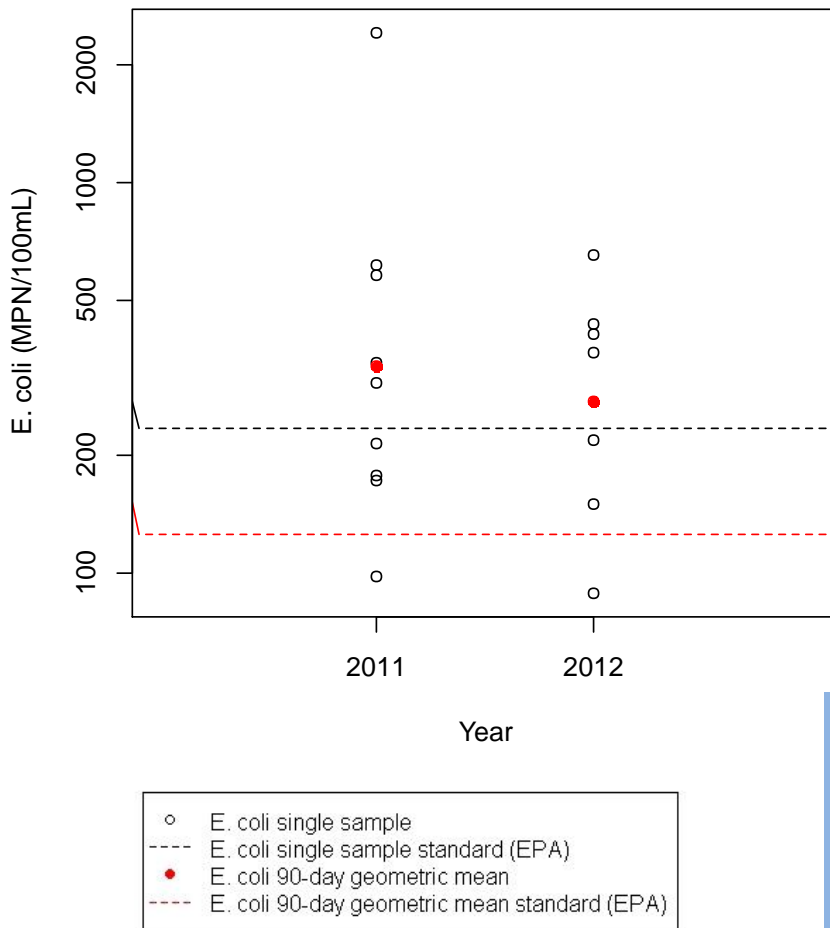
The open black circles and the black dotted line show the single sample values collected by the Cannon River Watershed Partnership and the single sample standard that the Environmental Protection Agency has set, respectively. Single samples above this dotted black line indicate that unsafe levels of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

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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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