

## **Monitored Resource:** Unnamed Creek #7 at Blackdog Park in Burnsville

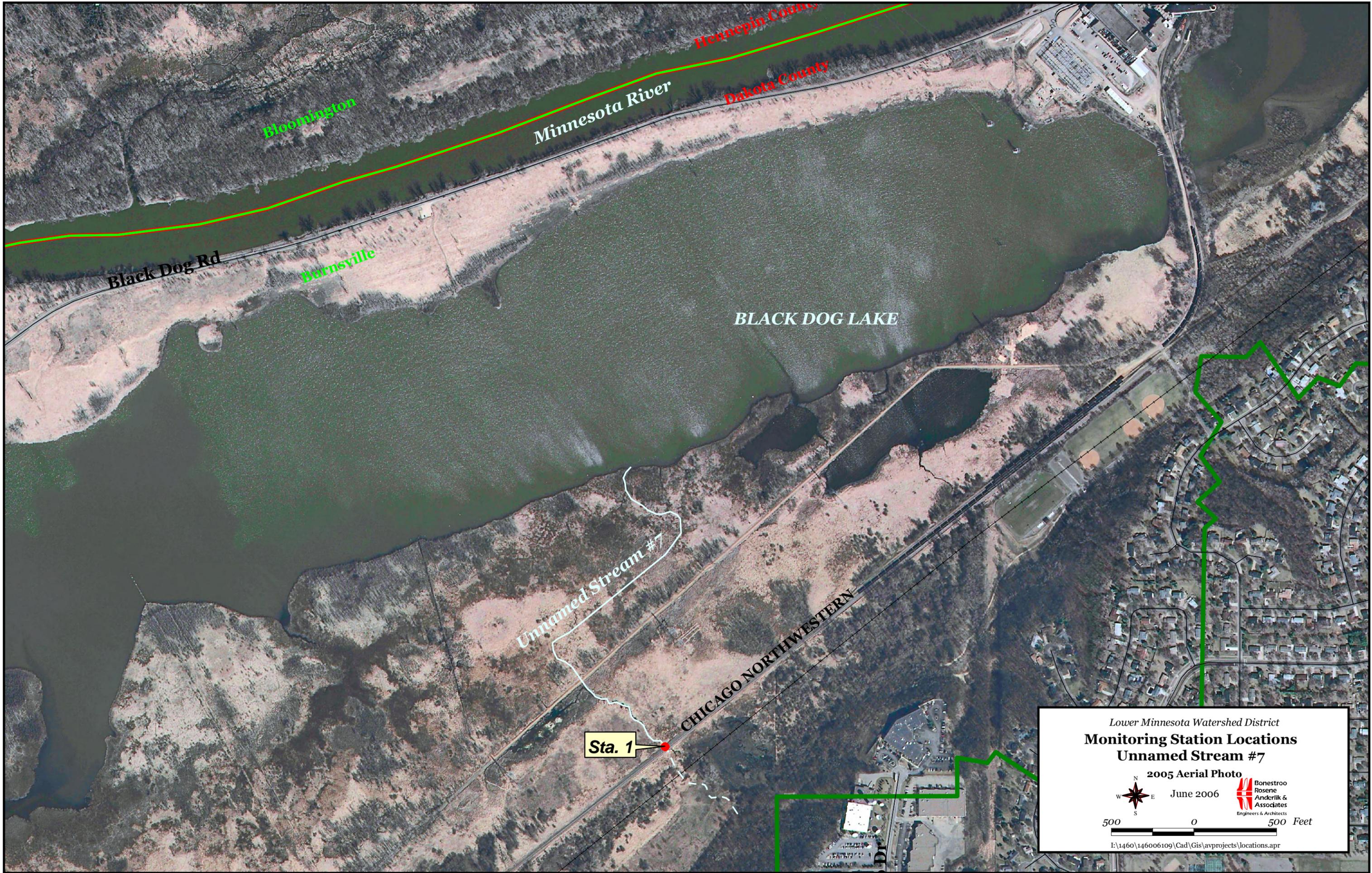
**Purpose:** The purpose of this monitoring project was to determine the thermal characteristics of Unnamed Creek #7, a Minnesota DNR designated trout stream, downstream of the Chicago Northwestern Rail Line about 2,500 feet west of Blackdog Park.

## **Monitoring Description:**

A temperature logger (Hobo® Water Temp ProV2 Data Logger, U22-001) was installed downstream of the railroad culvert to track the thermal characteristics of the stream and determine the potential impact of runoff on stream temperature and look for evidence of urban runoff impacts that may be raising temperatures above suitable ranges for trout. See the project map for locations of the monitoring station. The logger was located such to avoid direct sunlight affecting temperature measurements. The logger sampled at 15 minute interval for the monitoring period.

## **Monitoring Results Summary:**

- Stream temperature tracked well with air temperature following a diurnal pattern (Graph 1)
- Temperature was well below the optimal limit (66 °F) for Brown trout in the creek for all of 2006, with a mean summer temperature was approximately 53 °F
- The maximum recorded temperature was approximately 64 °F after a 1.4 inch rainfall event August 2, 2006 (Graph 2)
- There is little evidence of significant urban stormwater inputs based on temperature data collected in 2006



Lower Minnesota Watershed District  
**Monitoring Station Locations**  
**Unnamed Stream #7**

2005 Aerial Photo  
June 2006

 Bonestroo  
Rosene  
Anderlik &  
Associates  
Engineers & Architects

500 0 500 Feet

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View upstream from R.R. culvert



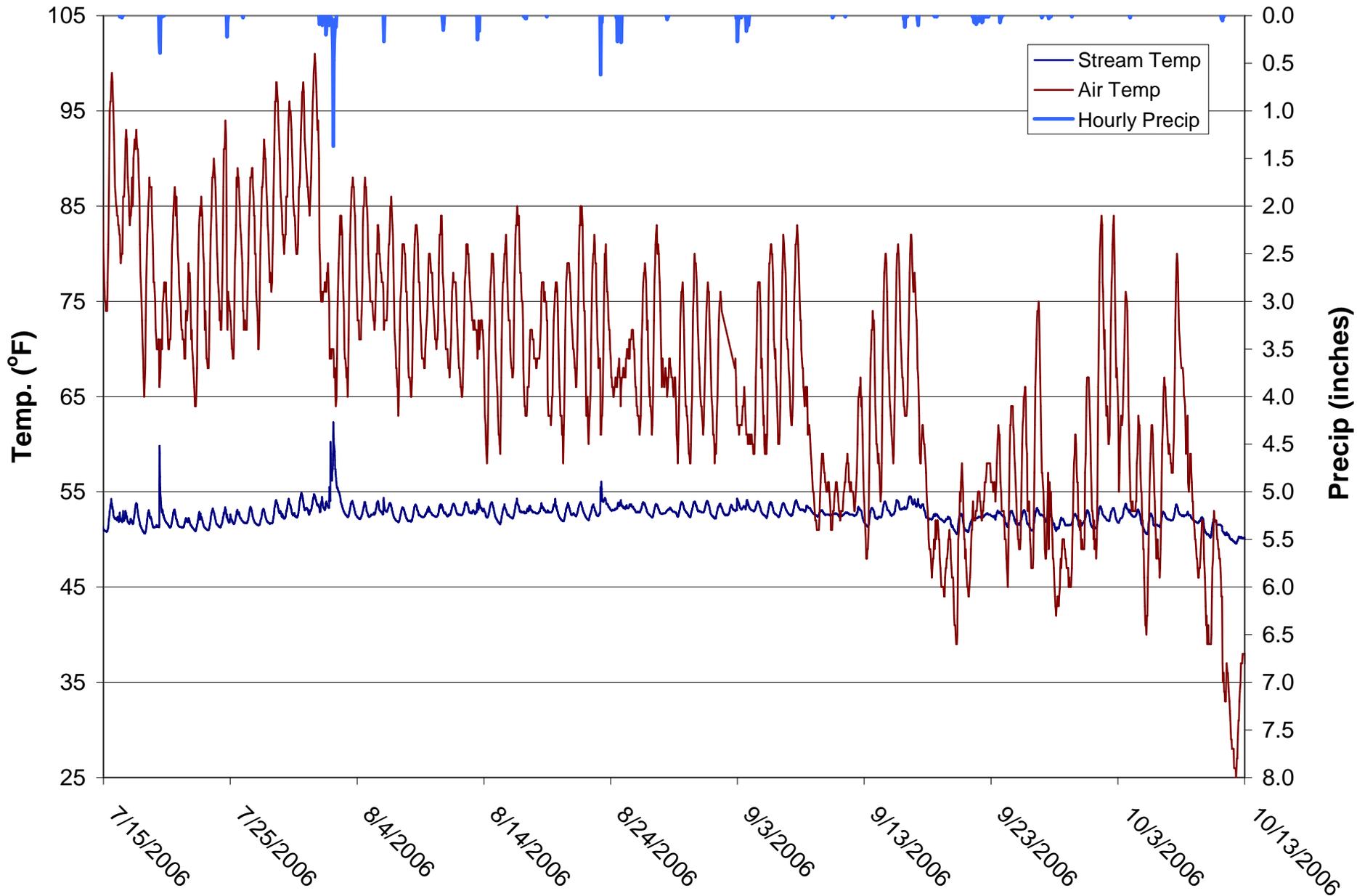
Location of stream crossing



Logger installed at the outlet of the culvert (view of logger in main flow path)



**Graph 1**  
**Stream Temp, MSP Air Temp and Precip**  
**7/15/06 - 10/13/06**



**Graph 2**  
**Stream Temp and MSP Hourly Precip**  
**7/15/06 - 10/13/06**

