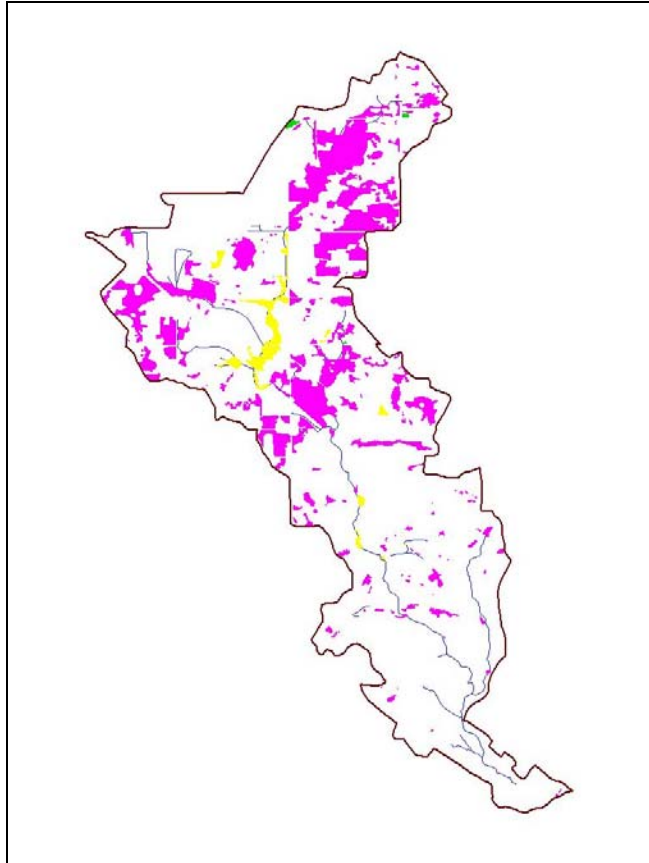


*Miller Creek Watershed  
Wetland Functional Analysis*



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*South St. Louis  
Soil & Water Conservation District*

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# *Miller Creek Watershed Wetland Functional Analysis*

## *Contents*

- **GIS Data**
- **Quick Facts**
- **Introduction / Procedure**
- **Location Maps**
- **Wetland Functional Analysis Maps**
  - Entire Watershed
  - By Section (1 Square mile)
- **Data Tables**
  - All Wetlands
  - High Overall Rating Wetlands
- **St. Louis County Wetland Assessment Guide (SWAG)**

## *Acknowledgment*

### **Wetland identification and functional assessment:**

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### **Geographic Information System work completed by:**

South St. Louis Soil & Water Conservation District and  
Community GIS Services, Inc.



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# *Miller Creek Watershed*

## *Wetland Functional Analysis*

### GIS Data

All data for this project is projected in:

- Universal Transverse Mercator coordinate system,
- Units – meters
- Zone – 15
- Datum – NAD 1983

#### Wetland Identification

The South St. Louis Soil & Water Conservation District identified wetlands in 2000 and 2001. Boundaries were identified using office reference materials, aerial photography, and some field verifications. The wetlands were not delineated according to the 1987 Corps of Engineers manual methods.

#### Wetland Functional Analysis

The South St. Louis Soil & Water Conservation District utilized the St. Louis County Wetland Assessment Guide functional assessment methodology in 2000 and 2001.

#### Watershed Boundary

The South St. Louis Soil & Water Conservation District defined the Miller Creek Watershed boundary in 1991.

#### Aerial Photography

Color infrared photography was obtained from the Minnesota Department of Natural Resources.

Photos were taken from 7900 feet above ground. Photographs were orthorectified by Community GIS Services, Inc. The South St. Louis Soil & Water Conservation District used the orthorectified images as a base map for wetland identification.

*Miller Creek Watershed  
Wetland Functional Analysis*

**Quick Facts**

Number wetlands identified within the Miller Creek  
Watershed: 188

Total acres of wetlands within the Miller Creek Watershed:  
1039.9 Acres

Number and acres of wetlands with an overall rating of  
High: 12, 86.3 acres

Number and acres of wetlands with an overall rating of  
Moderate: 173, 948.4 acres

Number and acres of wetlands with an overall rating of  
Low: 3, 5.2 acres

# *Miller Creek Watershed*

## *Wetland Functional Analysis*

### *Introduction / Procedure*

#### Wetland Inventory

Wetlands were inventoried utilizing 1997 DNR color infrared aerial photos.

Other resources:

- Quadrangle Maps
- National Wetland Inventory Maps (NWI)
- Preliminary Soil Maps St. Louis County
- Field visits were conducted to verify photo interpretation of difficult sites.

Aerial photo interpretation of wetland identification cannot distinguish between specific types of aspen woodlands. There may be wetlands dominated by aspen that have not been inventoried, or the extent of the wetlands has not been indicated accurately. Conversely, alder typically inhabits wetlands. Alder may also be a pioneer species populating abandoned areas. Aerial photo interpretation cannot distinguish between alder colonizing wetland areas and upland areas. This wetland inventory is not to be used as wetland delineation. On-site wetland delineations will need to be conducted to determine wetland boundaries.

#### Wetland Functional Analysis

The wetland analysis was conducted using the St. Louis County Wetland Assessment Guide (SWAG). References utilized include:

- Quadrangle Maps
- National Wetland Inventory Maps
- Preliminary Soil Maps St. Louis County
- 1997 Department of Natural Resource color infrared aerial photos
- Hydric Soil Map Unit List St. Louis County
- St. Louis County Plat Book, South Part
- USDA-NRCS Official Soil Series Descriptions

Field analysis of sixty-eight wetlands was conducted. Many of the wetlands found throughout the Miller Creek Watershed are the same type and have similar characteristics and settings. Field analysis was limited due to accessibility and time constraints. Field analysis was conducted on the standard characteristically encountered for particular wetland types, and also on wetlands exhibiting features outside of the standard.

A wetland receiving an overall rating of High or Low was determined by four or more of the seven functions being rated either high or low. This methodology is based on the St. Louis County Comprehensive Wetland Protection and Management Plan, for which the

SWAG was developed. Ratings outside of this criterion received an overall Moderate rating, though individual functions may be rated higher or lower.

A functional assessment is a guide and caution should be used when evaluating a wetland using the overall rating. A wetland with an overall Moderate rating may actually have a high value if the sediment retention function is rated high and containment of sediment is significant for the location and activity occurring around the wetland. Individual functions related to the activity and location should be considered before the overall rating.

The wetlands analyzed were done under present conditions. Function ratings may change due to new development or activity. A wetland with a Moderate function rating for sediment retention may receive a high rating for that same function upon re-evaluation prior to or during activity creating an increase of sediment flow.

Overall ratings are generalized. Other factors may need to be evaluated when considering the function and protection level for a specific wetland. For example, the *St Louis County Comprehensive Wetland Protection and Management Plan* mandates that a wetland adjacent to a designated trout stream receive a high protection level, even if the overall rating is Moderate.