

10.0 JACKSON TOWNSHIP

Jackson Township is an unincorporated Scott County community, across the river from the City of Carver and to the west of the City of Shakopee. The 2008 Inventory identified 21 sites in Jackson Township; 19 sites were gullies and two were unclear (**Figure 106**). An additional five pipe outfalls were identified and evaluated in Jackson Township as part of the Project; four previously identified gully sites were determined to be non-applicable due to clear evidence that there was no gully at the waypoint indicated. During the Project, 26 sites in total were evaluated in Jackson Township (**Figure 107**).

While the City of Shakopee was not specifically included as part of this Project, the 2008 Inventory identified four gullies within the City of Shakopee; those four locations have been included with the Jackson Township points. One Shakopee location was removed from the Project because the photo from the 2008 Inventory proved to depict trail construction, not a gully. Of the remaining three points, two were pipe outfalls and one was a gully; all three were included with the Jackson Township field survey.

10.1 Previous Restoration Efforts

None known.

10.2 Field Survey Discussion

In Jackson Township, all the gullies were found within the District's Steep Slopes Overlay District. In turn, access conditions were restricted for certain sites because of safety concerns associated with the steep slopes. A medium to high amount of buckthorn was observed in two of the gullies, but access was not restricted due to its presence. Sites were generally not located on private property, but one negative resident interaction was encountered while trying to access a public trail through private property. Additionally, a residential interaction occurred at Will's Riverview RV Park in Shakopee in which the resident noted headward erosion occurring on the gullies near their campground.

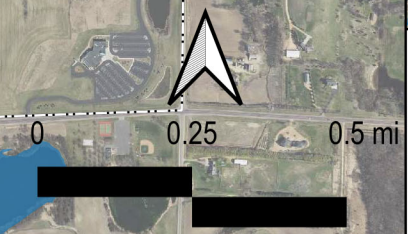
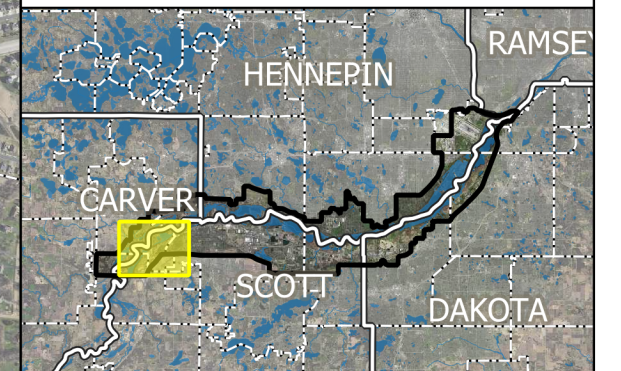
**Figure 106:
Jackson Twp. 2008
Inventory Locations**



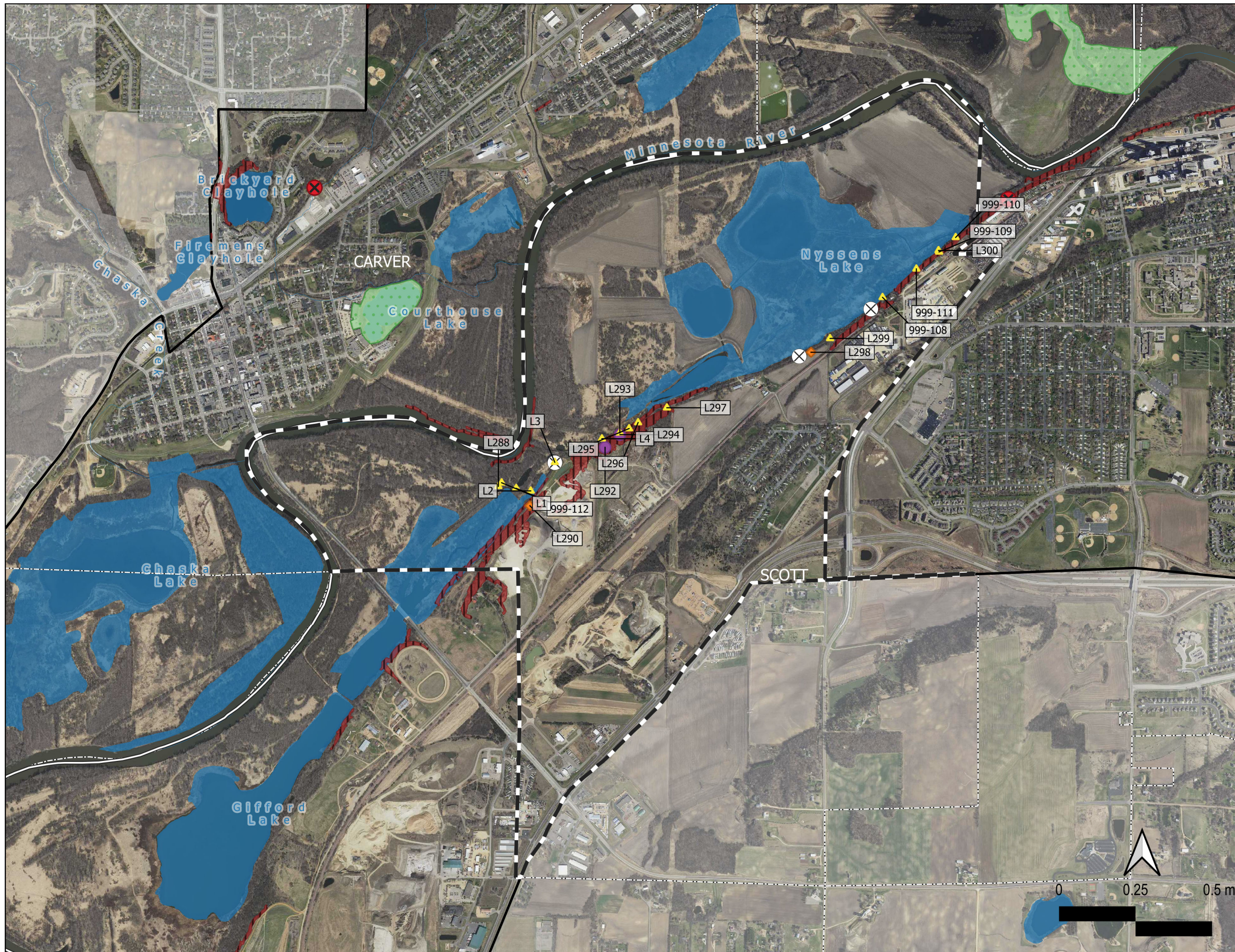
LEGEND

- 2008 Gully Inventory Waypoints
 - Inside LMRWD
 - Outside LMRWD Boundary
 - ✗ Non-Applicable Points
 - Outside Jackson Twp.
 - ◆ MnDNR Spring Inventory
 - ◇ Calcareous Fens
- Public Waters
- Public Waterbodies
- LMRWD Overlay Districts
 - High Value Resource Area Overlay District
 - Steep Slopes Overlay District [SSOD]
- Political Boundaries
 - ▭ Jackson Twp.
 - ▭ LMRWD Boundary
 - ▭ Cities, Townships, Unincorporated Areas
 - ▭ County Boundaries

LMRWD Watershed Location Map



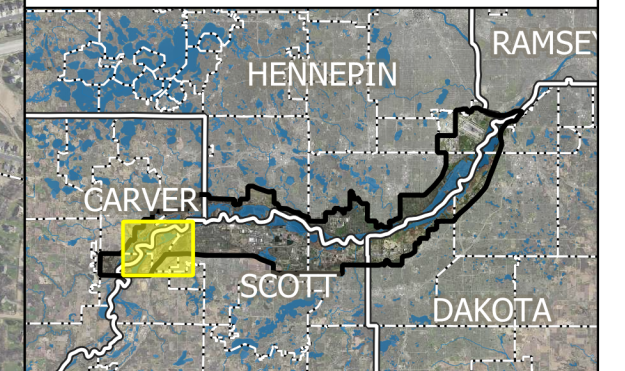
**Figure 107:
Jackson Twp. 2020
Survey Locations**



LEGEND

- ▲ 2020 Pipe Outfall Surveys
- ◆ 2020 Combination Surveys
- 2020 Gully Surveys
- ⊗ 2020 Inaccessible Waypoints
- ⊗ 2020 Non-Applicable Waypoints
- ◆ MnDNR Spring Inventory
- ◆ Calcareous Fens
- Public Waters
- Public Waterbodies
- LMRWD Overlay Districts
- ▨ High Value Resource Area Overlay District
- ▨ Steep Slopes Overlay District [SSOD]
- Political Boundaries
- Jackson Twp.
- LMRWD Boundary
- Cities, Townships, Unincorporated Areas
- County Boundaries

LMRWD Watershed Location Map



10.3 Findings

Jackson Township did not contain any groundwater-fed streams or seeps, confirmed through review of the MnDNR Minnesota Spring Inventory. Four gullies were investigated within the LMRWD boundary of Jackson Township, all located within the Steep Slopes Overlay District. All gullies and pipe outfalls in Jackson Township were centered around the walking trail near the Minnesota River floodplain. The gullies found were variable in their characteristics. Of the four gullies observed, three had unknown apparent causes, but slope was the primary suspect. Slumping and undercut/overhanging banks were commonly seen in all gullies, with channel incision, loss of bank vegetation, and pistol-butted trees noted less consistently. In general, coarse-grained clastic sediments such as sand or gravel were the predominant gully materials in the region. Additionally, gully morphology, geometry, and length were variable, but half of all sites were deep (greater than 15 feet deep), and most sites possessed a steep channel gradient.

10.4 Jackson Township Gully Progression

Overall gully evolution from 2008 to 2020 appears to have remained relatively steady, with most sites not having progressed in severity since 2008. The benchmarking analysis did over-estimate the number of gullies when compared with the 2020 survey, shown in **Table 10-1**. During field surveys, many sites were discovered not to be true gullies but rather pipe outfalls in poor condition (**Figure 108**).

Table 10-1: Jackson Township Gully Erosion Potential Summary

	2008 Benchmark Condition	2020 Condition
High Erosion Potential	3	1
Moderate Erosion Potential	6	2
Low Erosion Potential	6	1
	15	4

One gully moved from the high erosion potential category to the moderate erosion potential category; another moved from moderate to low. Gully L290 was characterized in the 2008 Inventory as a pipe outfall causing significant erosion in its downstream scour, creating a channel. Due to the limited information available, it was rated as a high erosion potential site during the desktop analysis. During the field survey it was determined that the site has not eroded significantly since the previous survey, and was accordingly recategorized as having moderate erosion potential. However, the pipe outfall required attention (**Figure 108**). Gully L294 was observed in during the 2008 Inventory as having moderate erosion potential. During the field survey, the site was determined to have a low erosion potential because of the heavy vegetation observed to be providing stability throughout the channel (**Figure 109**).

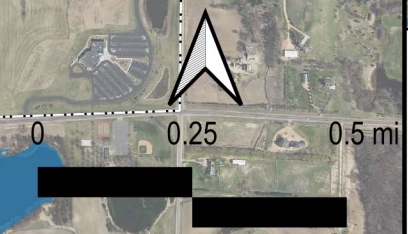
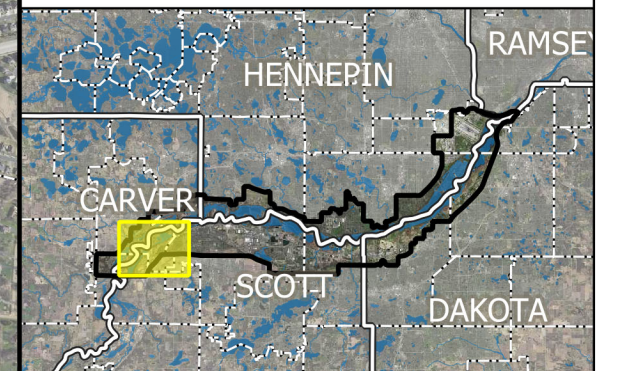
**Figure 108:
Jackson Twp. 2020
Pipe Outfall
Conditions**



LEGEND

- 2020 Pipe Outfalls
- ▲ Needs Immediate Attention
 - ▲ Potential/Future Repair Needed
 - △ Good Condition/No Repair Needed
 - ◆ MnDNR Spring Inventory
 - ◇ Calcareous Fens
 - Public Waters
 - Public Waterbodies
- LMRWD Overlay Districts
- High Value Resource Area Overlay District
 - Steep Slopes Overlay District [SSOD]
- Political Boundaries
- ▭ Jackson Twp.
 - ▭ LMRWD Boundary
 - ▭ Cities, Townships, Unincorporated Areas
 - ▭ County Boundaries

LMRWD Watershed Location Map



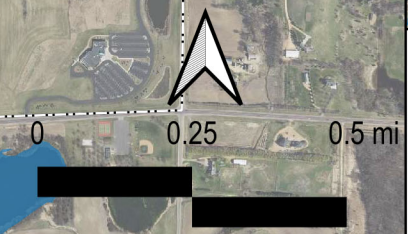
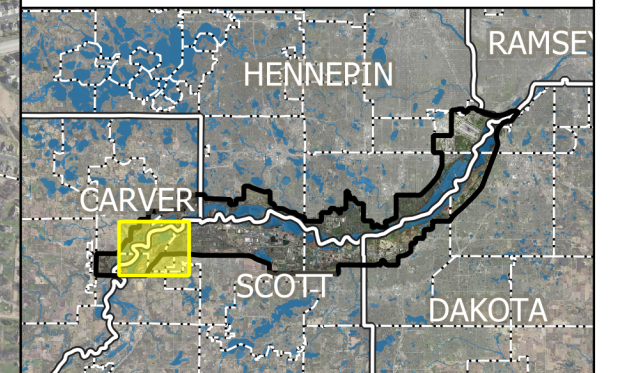
**Figure 109:
Jackson Twp. 2020
Gully Conditions**



LEGEND

- 2020 Gully Condition
- ◆ High Erosion Potential
 - Moderate Erosion Potential
 - Good Condition/No Repair Needed
 - ◆ MnDNR Spring Inventory
 - ◆ Calcareous Fens
 - Public Waters
 - Public Waterbodies
- LMRWD Overlay Districts
- High Value Resource Area Overlay District
 - Steep Slopes Overlay District [SSOD]
- Political Boundaries
- Jackson Twp.
 - LMRWD Boundary
 - Cities, Townships, Unincorporated Areas
 - County Boundaries

LMRWD Watershed Location Map



10.5 Jackson Township High-Priority Sites

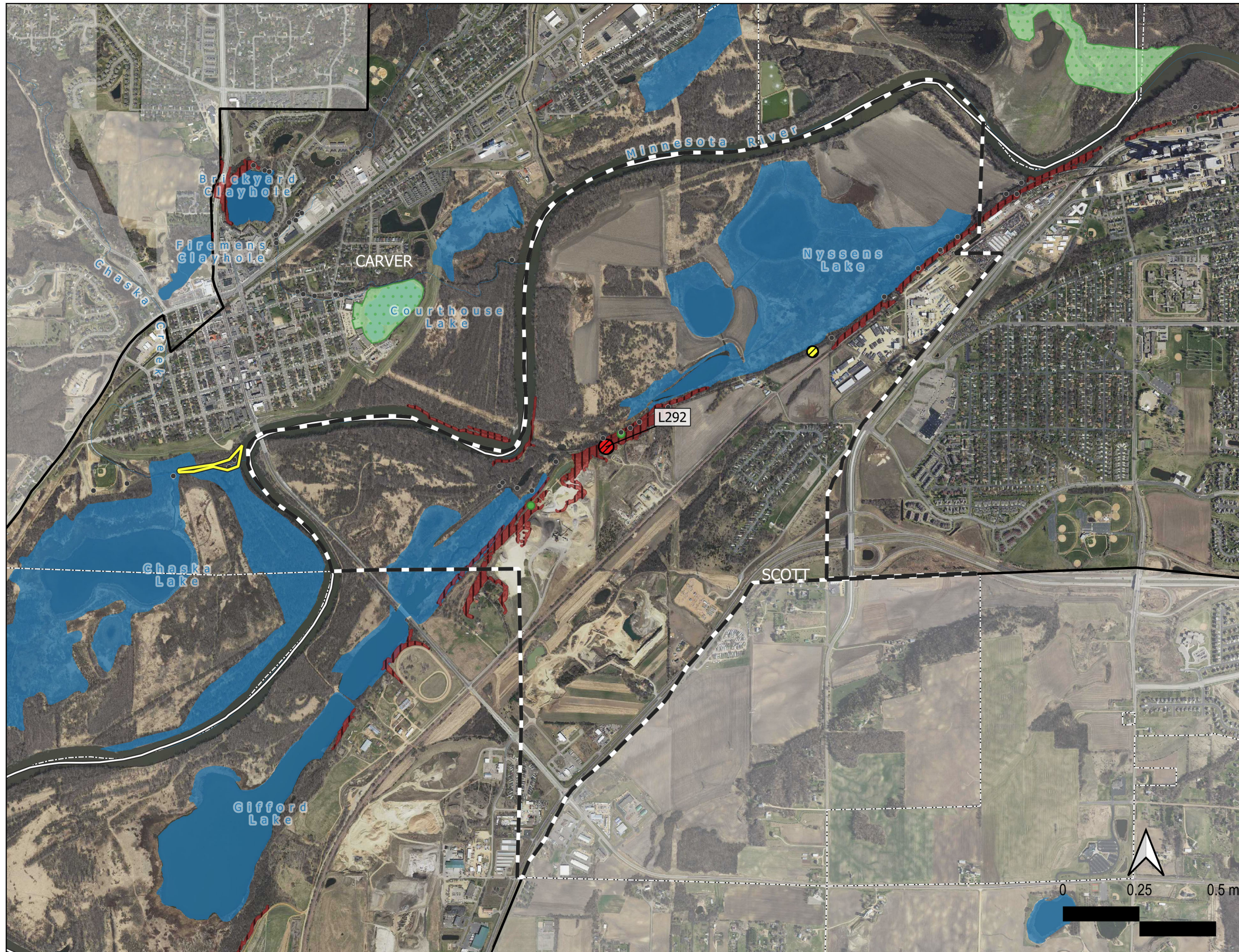
Jackson Township was found to only have one high-priority site, and in turn, no region groupings were created for the City (**Figure 110**). The high-priority site's characteristics and rationale for its ranking is described in the section below.

10.5.1 Gully L292

Gully L292 was found to be a deep, steep, and long gully; the gully channel was incised throughout its length. The right bank had bare soil, while the left bank had some vegetation. A quarry for Barton Sand & Gravel Co. was located right behind the head cut of the gully. The problem indicators observed at the time of the visit included slumping, overhanging/undercut banks, loss of bank vegetation, incision, and leaning trees. Additionally, a medium amount of buckthorn was noted, which may have contributed to the observed loss of bank vegetation. A large severe slump was seen on the right bank of the gully with overhanging banks along the top edge. **Figure 111** is an image taken in 2020 showing the scale of the slump along the gully channel and the magnitude of erosion and incision, further providing rationale for the site's high-priority ranking. An additional slump was observed downstream of L292 with overhanging banks. The apparent causes for the gully were not distinct and conclusive, but the field team hypothesized that slope and channel incision would be the likely culprits.

The gully was noted in the 2008 Inventory to have lots of litter, major erosion, large boulders, and natural springs. The field survey confirmed a substantial amount of erosion, resulting in a high erosion potential. No groundwater seeps or water in the channel were observed during the field survey. The Minnesota Spring Inventory confirmed that there is no evidence of groundwater upwelling in the region around L292. **Figure 112** is a side by side comparison of the 2008 and 2020 conditions observed. Both images show the incised, steep banks. **Figure 112b** depicts the recent slumping seen in the channel in 2020, showing that this gully is actively eroding.

**Figure 110:
Jackson Twp. Erosion
Progression and HPRs**



LEGEND

- High Priority Region
- Erosion Progression (2008 --> 2020)
- Low --> High
- Moderate --> High
- High --> High
- New Site High
- Low --> Moderate
- Moderate --> Moderate
- New Site Moderate
- Low --> Low
- New Site Low
- Improved
- Non-Gully
- Public Waters
- Public Waterbodies
- High Value Resource Area Overlay District
- Steep Slopes Overlay District
- Jackson Twp.
- LMRWD Boundary
- Cities, Townships, Unincorporated Areas
- County Boundaries

LMRWD Watershed Location Map

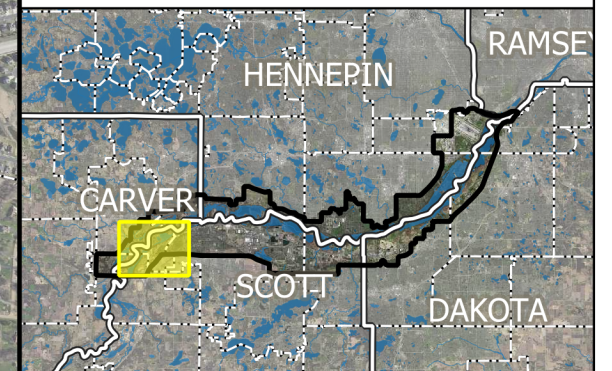


Figure 111. Side stream view of the large slump on Gully L292's right bank, with person for scale.



Figure 112. Photo 'a' shows the downstream channel conditions at Gully L292 in 2008; Photo 'b' shows the downstream channel conditions in 2020.

