| Gully ID:                                  |  |  |  |
|--|--|--|--|
| 06:14-11:46                                | MAP  |  |  |
| Date & Time:                               |  |  |  |
| June 14, 2021                              |  |  |  |
| 11:46                                      |  |  |  |
| Location:                                  |  |  |  |
| Mendota Heights                            | RAMSEY DAYOTA DSI  |  |  |
| Weather:                                   | Mtnnesota River  |  |  |
| Sunny                                      | Men<br>2nd St State  |  |  |
| Storm/Rainfall Event in the Past 24 Hours? | Energy Rd 55   |  |  |
| No   |  |  |  |
|  | South (Dulan Co. St. (Dulan Editation )                            |  |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | GULLY INFORMATION  |  |  |
| Calculated Erosion Potential:              | High (x - 49)  |  |  |
| Approximate Depth:                         | 1-Shallow (<3')  |  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |  |  |
| Approximate Gully Length:                  | Medium: 50'-100'   |  |  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |  |  |
| Condition of Gully Banks:                  | 5-Bare Soil  |  |  |
| Gully Bank Angles:                         | 5-Acute (< 90 degrees or undercut)                                 |  |  |
| Gully Shape:                               | 5-V-Shaped   |  |  |
| Gully Material:                            | Silt and/or Clay   |  |  |

| Seep:              | No  |          |
|--------------------|---|----------|
| Stormwater Inputs: | 0-Not present   |          |
| Fallen Trees:      | No  |          |
| Degradation:       | 1   | 5-Severe |
| Aggradation:       | 3-Moderate  |          |
| Slumping:          | 1-Low   |          |
| Additional Notes:  | Classification? High (x - 49)  Notes/Comments: Thin gully that looks like it eroded away some of the paved trail. V shaped, with a decently steep channel, high |          |
|                    | degradation on banks  |          |



Photo2



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Downstream view of gully.

**Photo2 View Direction** 

**View Upstream** 

**Photo2 Caption** 

Upstream view of gully.

| Gully ID:                                  |  |
|--|--|
| 21-06-14 09:31:04                          | МАР  |
| Date & Time:                               |  |
| June 14, 2021                              |  |
| 09:31                                      | 3  |
| Location:                                  | Minners  |
| Mendota Heights                            |  |
| Weather:                                   | To the stand Rd  |
| Sunny                                      | The seland Ro  |
| Storm/Rainfall Event in the Past 24 Hours? | s-femmol management of the second of the sec |
| No   |  |
|  | County of Dakota, County of Ramsey, Three Rivers Park District Power   |
|  | County of Dakota, County of Ramsey, Three Rivers Park District Power   |
|  |  |
|  |  |
|  |  |
|  |  |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 3-Medium (3'-15')  |
| Approximate Bottom Width:                  | 3-Medium (1'-5')   |
| Approximate Gully Length:                  | Medium: 50'-100'   |
| Condition of Gully Bottom:                 | 3-Some Vegetation  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 3-Mid-range (45 to 90 degrees)   |
| Gully Shape:                               | 3-U-Shaped   |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No   |       |
|--------------------|--|-------|
| Stormwater Inputs: | 0-Not present  |       |
| Fallen Trees:      | No   |       |
| Degradation:       |  | 1-Low |
| Aggradation:       | 1-Low  |       |
| Slumping:          | 1-Low  |       |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Gully goes under trail to other side, moderate vegetation on banks and bottom, not much slumping. Some tree branches in bottom, but not any fallen trees |       |

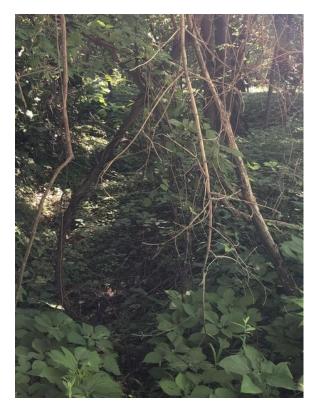


Photo1 View Direction: View Upstream

Photo1 Caption

Upstream view of right bank.

Photo2



**Photo2 View Direction: View Upstream** 

**Photo2 Caption** 

Upstream view of left bank.

| Gully ID:                                  |  |
|--|--|
| 06:14-09:53                                | MAP  |
| Date & Time:                               |  |
| June 14, 2021                              | 5  |
| 09:53                                      | 2 55   |
| Location:                                  | Elegiand Rd 55   |
| Mendota Heights                            |  |
| Weather:                                   | \$ /// §   |
| Sunny                                      |  |
| Storm/Rainfall Event in the Past 24 Hours? | Snelling Lake  |
| No   | 1/// 5/1/  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|  |  |
|  |  |
|  |  |
|  |  |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Low (4 - x)  |
| Approximate Depth:                         | 1-Shallow (<3')  |
| Approximate Bottom Width:                  | 1-Wide (>5')   |
| Approximate Gully Length:                  | Short: <50'  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 1-Obtuse (>90 degrees)   |
| Gully Shape:                               | 1-Trapezoid  |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | Yes  |       |
|--------------------|--|-------|
| Stormwater Inputs: | 0-Not present  |       |
| Fallen Trees:      | No   |       |
| Degradation:       |  | 1-Low |
| Aggradation:       | 0-No aggradation   |       |
| Slumping:          | 1-Low  |       |
| Additional Notes:  | Classification? Low (4 - x)  Notes/Comments: Tiny gully leading into pond off of road on                                       |       |
|                    | Picnic Island. Lots of vegetation on banks and no pipe found as source so we're assuming there is some seepage from the river. |       |



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Downstream view from road.

#### Photo2



**Photo2 View Direction** 

**View Downstream** 

**Photo2 Caption** 

Downstream view of erosion and beginning part of the gully.

| Gully ID:                                  |  |
|--|--|
| 06:15-13:39                                | МАР  |
| Date & Time:                               |  |
| June 15, 2021                              | MSEY OTA OSI   |
| 13:39                                      | Mmræsota River DAKOTA DSI  |
| Location:                                  |  |
| Mendota Heights                            | 2nd S  |
| Weather:                                   | PETE SIGNARD 555   |
| Sunny                                      |  |
| Storm/Rainfall Event in the Past 24 Hours? | \$ 110   |
| No   |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|  |  |
|  |  |
|  |  |
|  | CHILLY INFORMATION   |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 1-Shallow (<3')  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |
| Approximate Gully Length:                  | Medium: 50'-100'   |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 1-Heavy Vegetation   |
| Gully Bank Angles:                         | 1-Obtuse (>90 degrees)   |
| Gully Shape:                               | 3-U-Shaped   |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No  |               |
|--------------------|---|---------------|
| Stormwater Inputs: | 2-Low flow  |               |
| Fallen Trees:      | No  |               |
| Degradation:       |   | 3-Moderate    |
| Aggradation:       |   | 1-Low         |
| Slumping:          |   | 0-No slumping |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Used to be a pipe here, eroded away the trail, flow of constant water, pebbles and rocks at bottom of gully |               |



Photo2



**Photo1 View Direction** 

**View Downstream** 

Photo1 Caption

Full gully

**Photo2 View Direction** 

**View Upstream** 

**Photo2 Caption** 

Upstream and where it eroded trail

| Gully ID:                           |  |
|-------------------------------------|--|
| 06:15-13:28                         | MAP  |
|                                     | IVIAP  |
| Date & Time:                        |  |
| June 15, 2021                       |  |
| 13:28                               |  |
| Location:                           | RAMSEY DAKOTA DSI  |
| Mendota Heights                     | Minnesota River  |
| Weather:                            | at Visit   |
| Sunny                               | 2nd St   |
| Storm/Rainfall Event in the Past 24 | Elizand Rd 55  |
| Hours?                              |  |
| No                                  |  |
|                                     | South of Policy County of Ports of South Feet 1995                 |
|                                     | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|                                     |  |
|                                     |  |
|                                     |  |
|                                     |  |
|                                     | GULLY INFORMATION  |
| Calculated Erosion Potential:       | Moderate (x - x)   |
| Approximate Depth:                  | 1-Shallow (<3')  |
| Approximate Bottom Width:           | 3-Medium (1'-5')   |
| Approximate Gully Length:           | Short: <50'  |
| Condition of Gully Bottom:          | 5-Bare Soil  |
| Condition of Gully Banks:           | 3-Some Vegetation  |
| Gully Bank Angles:                  | 1-Obtuse (>90 degrees)   |
| Gully Shape:                        | 3-U-Shaped   |
| Gully Material:                     | Silt and/or Clay   |

| Seep:              | No  |            |
|--------------------|---|------------|
| Stormwater Inputs: | 1-Dripping  |            |
| Fallen Trees:      | No  |            |
| Degradation:       |   | 3-Moderate |
| Aggradation:       | 1-Low   |            |
| Slumping:          |   | 1-Low      |
| Additional Notes:  | Classification? Moderate (x - x)                            |            |
|                    | Notes/Comments: Pipe going under trail, difficult to see    |            |
|                    | downstream. Not much water flowing through pipe, some rocks |            |
|                    | on upstream side  |            |



Photo2



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Pipe outfall

**Photo2 View Direction** 

**View Upstream** 

**Photo2 Caption** 

Upstream pipe

| Gully ID:                                  |  |
|--|--|
| 06:15-13:34                                | МАР  |
| Date & Time:                               | -  |
| June 15, 2021                              |  |
| 13:34                                      | CV -TA CO  |
| Location:                                  | Minnesota River DAXOTA DSI   |
| Mendota Heights                            |  |
| Weather:                                   | 2nd St   |
| Sunny                                      | Englished Rd 55  |
| Storm/Rainfall Event in the Past 24 Hours? | (13)   |
| No   | 3 3 110  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|  |  |
|  |  |
|  |  |
|  |  |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 1-Shallow (<3')  |
|  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |
| Approximate Gully Length:                  | Short: <50'  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 1-Obtuse (>90 degrees)   |
| Gully Shape:                               | 3-U-Shaped   |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No  |       |
|--------------------|---|-------|
| Stormwater Inputs: | 3-Constant high flow  |       |
| Fallen Trees:      | No  |       |
| Degradation:       | 3-Moderate  |       |
| Aggradation:       |   | 1-Low |
| Slumping:          | 0-No slumping   |       |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Gully has not fully formed, but high constant flow of water coming out of a hanging pipe. |       |



Photo2



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Hanging pipe

**Photo2 View Direction** 

**View Upstream** 

**Photo2 Caption** 

Where water is coming from

| Gully ID:                                  |  |  |
|--|--|--|
| 06:15-01:23                                | МАР  |  |
| Date & Time:                               |  |  |
| June 15, 2021                              |  |  |
| 13:23                                      |  |  |
| Location:                                  | MIDDESOTA RIVET DAKOTA 051   |  |
| Mendota Heights                            | Minnesota River DA   |  |
| Weather:                                   |  |  |
| Sunny                                      | 2nd St   |  |
| Storm/Rainfall Event in the Past 24 Hours? | Reland Rob 555   |  |
| No   |  |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |  |
|  | Tower  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  | GULLY INFORMATION  |  |
| Calculated Erosion Potential:              | Moderate (x - x)   |  |
| Approximate Depth:                         | 1-Shallow (<3')  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |  |
| Approximate Gully Length:                  | Short: <50'  |  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |  |
| Gully Bank Angles:                         | 5-Acute (< 90 degrees or undercut)                                 |  |
| Gully Shape:                               | 1-Trapezoid  |  |
| Gully Material:                            | Silt and/or Clay   |  |

| Seep:              | No   |                  |
|--------------------|--|------------------|
| Stormwater Inputs: | 2-Low flow   |                  |
| Fallen Trees:      | No   |                  |
| Degradation:       | I  | 3-Moderate       |
| Aggradation:       |  | 0-No aggradation |
| Slumping:          | 1-Low  |                  |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Pipe running underneath trail behind D St in fort snelling st park. Moderately vegetated but signs of moderate degradation as there is a constant slow moving flow through the pipe. |                  |



Photo2



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Downstream view from top of pipe

**Photo2 View Direction** 

**View Downstream** 

**Photo2 Caption** 

Downstream view of exposed pipe.



Photo3 View Direction

**View Upstream** 

**Photo3 Caption** 

Upstream view on other side of trail.

Gully ID: 06:15-01:31 MAP Date & Time: June 15, 2021 13:31 Location: Minnesota River Mendota Heights Weather: Sunny Storm/Rainfall Event in the Past 24 Hours? No County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, ... **GULLY INFORMATION Calculated Erosion Potential:** Moderate (x - x) **Approximate Depth:** 1-Shallow (<3') 5-Narrow/V-Ditch **Approximate Bottom Width: Approximate Gully Length:** Short: <50' **Condition of Gully Bottom:** 5-Bare Soil **Condition of Gully Banks:** 3-Some Vegetation 5-Acute (< 90 degrees or undercut) **Gully Bank Angles: Gully Shape:** 3-U-Shaped **Gully Material:** Silt and/or Clay

| Seep:              | No  |                  |
|--------------------|---|------------------|
| Stormwater Inputs: | 0-Not present   |                  |
| Fallen Trees:      | No  |                  |
| Degradation:       |   | 1-Low            |
| Aggradation:       |   | 0-No aggradation |
| Slumping:          |   | 1-Low            |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Gully caused by pipe running under trail in fort snelling state park. No water present in the pipe at the time. |                  |



Photo2



**Photo1 View Direction** 

**View Downstream** 

**Photo1 Caption** 

Downstream view from above pipe

**Photo2 View Direction** 

**View Upstream** 

**Photo2 Caption** 

Upstream view of pipe on other side of the trail.

| Gully ID:                                  |  |
|--|--|
| 06:15-01:39                                | MAP  |
| Date & Time:                               |  |
| June 15, 2021                              |  |
| 13:39                                      | RAMSEY DAKOTA DSI  |
| Location:                                  | Minnesota River  |
| Mendota Heights                            | To the state of th |
| Weather:                                   | 2nd 5t   |
| Sunny                                      | England Rd 55  |
| Storm/Rainfall Event in the Past 24 Hours? |  |
| No   | 110 (110)  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power   |
|  |  |
|  |  |
|  |  |
|  |  |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 1-Shallow (<3')  |
|  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |
| Approximate Gully Length:                  | Short: <50'  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 5-Acute (< 90 degrees or undercut)   |
| Gully Shape:                               | 3-U-Shaped   |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No  |                  |
|--------------------|---|------------------|
| Stormwater Inputs: | 2-Low flow  |                  |
| Fallen Trees:      | No  |                  |
| Degradation:       |   | 5-Severe         |
| Aggradation:       |   | 0-No aggradation |
| Slumping:          | 0-No slumping   |                  |
| Additional Notes:  | Classification? Moderate (x - x)  |                  |
|                    | Notes/Comments: Gully caused by pipe that has dislodged and been removed from under the trail to drain water. Water now runs directly through trail and is causing erosion. The pipe is laying next to the right bank of the gully. ses |                  |



**Photo1 View Direction: View Downstream** 

**Photo1 Caption** 

Downstream view from trail.

#### Photo2



**Photo2 View Direction: View Downstream** 

**Photo2 Caption** 

Downstream view of dislodged pipe laying to the right bank of the gully.



Photo3 View Direction

**View Upstream** 

**Photo3 Caption** 

Upstream view of gully on other side of trail.

| Gully ID:                                  |  |  |  |
|--|--|--|--|
| 06:15-13:16                                | MAP  |  |  |
| Date & Time:                               |  |  |  |
| June 15, 2021                              | Pike Island  |  |  |
| 13:16                                      |  |  |  |
| Location:                                  |  |  |  |
| Mendota Heights                            | RAMSEY KOTA DSI  |  |  |
| Weather:                                   | Minnesota River  |  |  |
| Sunny                                      | 2nd St   |  |  |
| Storm/Rainfall Event in the Past 24 Hours? | Sent Stand Rd 55   |  |  |
| No   |  |  |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | GULLY INFORMATION  |  |  |
| Calculated Erosion Potential:              | Moderate (x - x)   |  |  |
| Approximate Depth:                         | 1-Shallow (<3')  |  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch   |  |  |
| Approximate Gully Length:                  | Medium: 50'-100'   |  |  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |  |  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |  |  |
| Gully Bank Angles:                         | 1-Obtuse (>90 degrees)   |  |  |
| Gully Shape:                               | 3-U-Shaped   |  |  |
| Gully Material:                            | Silt and/or Clay   |  |  |

| Seep:              | No   |            |
|--------------------|--|------------|
| Stormwater Inputs: | 2-Low flow   |            |
| Fallen Trees:      | No   |            |
| Degradation:       |  | 3-Moderate |
| Aggradation:       |  | 1-Low      |
| Slumping:          | 1-Low  |            |
| Additional Notes:  | Classification? Moderate (x - x)   |            |
|                    | Notes/Comments: Hanging pipe outfall releasing constant flow of water into gully. Very shallow, decently long with twists and turns. Pipe looks to be starting to expose itself on trail |            |



**Photo1 View Direction** 

**View Upstream** 

**Photo1 Caption** 

Upstream view of pipe and gully.

#### Photo2



**Photo2 View Direction** 

**View Downstream** 

**Photo2 Caption** 

Downstream view of full gully.

| Gully ID:                                  |  |
|--|--|
| 06:15-01:16                                | МАР  |
| Date & Time:                               |  |
| June 15, 2021                              | Pike Island  |
| 13:16                                      |  |
| Location:                                  |  |
| Mendota Heights                            | RAMSEY AKOTA DSI   |
| Weather:                                   | Minnesota River  |
| Sunny                                      | 2rd St   |
| Storm/Rainfall Event in the Past 24 Hours? | Englished Rd 555   |
| No   |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power |
|  | 1118   |
|  |  |
|  |  |
|  |  |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 1-Shallow (<3')  |
| Approximate Bottom Width:                  | 3-Medium (1'-5')   |
| Approximate Gully Length:                  | Short: <50'  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 3-Mid-range (45 to 90 degrees)                                     |
| Gully Shape:                               | 3-U-Shaped   |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No   |                  |
|--------------------|--|------------------|
| Stormwater Inputs: | 0-Not present  |                  |
| Fallen Trees:      | No   |                  |
| Degradation:       |  | 5-Severe         |
| Aggradation:       |  | 0-No aggradation |
| Slumping:          | 1-Low  |                  |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Small gully in the south bank of the MN river which has very little vegetation. It doesn't appear that there is an outfall source although there is an old rusty and tangled pipe about 15 feet upstream of it that could have been a previous source. |                  |



Photo1 View Direction: View Downstream

**Photo1 Caption** 

Downstream view from top of gully.

#### Photo2



**Photo2 View Direction: View Upstream** 

**Photo2 Caption** 

Upstream view from the low part of the mn river bank.



**Photo3 View Direction: View Upstream** 

**Photo3 Caption** 

View of old pipe.

| Gully ID:                                  |   |  |  |
|--|---|--|--|
| 06:14-11:41                                | MAP   |  |  |
| Date & Time:                               |   |  |  |
| June 14, 2021                              | 1! \ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~  |  |  |
| 11:41                                      |   |  |  |
| Location:                                  |   |  |  |
| Mendota Heights                            | Minnesota River   |  |  |
| Weather:                                   | Mei   |  |  |
| Sunny                                      | 2nd St Square   |  |  |
| Storm/Rainfall Event in the Past 24 Hours? | Phile stand Rd 55   |  |  |
| No   |   |  |  |
|  | County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, Power  |  |  |
|  | Tower of business of the state |  |  |
|  |   |  |  |
|  |   |  |  |
|  |   |  |  |
|  | GULLY INFORMATION   |  |  |
| Calculated Erosion Potential:              | Moderate (x - x)  |  |  |
| Approximate Depth:                         | 1-Shallow (<3')   |  |  |
| Approximate Bottom Width:                  | 5-Narrow/V-Ditch  |  |  |
| Approximate Gully Length:                  | Short: <50'   |  |  |
| Condition of Gully Bottom:                 | 5-Bare Soil   |  |  |
| Condition of Gully Banks:                  | 5-Bare Soil   |  |  |
| Gully Bank Angles:                         | 5-Acute (< 90 degrees or undercut)  |  |  |
| Gully Shape:                               | 5-V-Shaped  |  |  |
| Gully Material:                            | Silt and/or Clay  |  |  |

| Seep:              | No   |                  |
|--------------------|--|------------------|
| Stormwater Inputs: | 1-Dripping   |                  |
| Fallen Trees:      | No   |                  |
| Degradation:       | 1  | 3-Moderate       |
| Aggradation:       |  | 0-No aggradation |
| Slumping:          | 1-Low  |                  |
| Additional Notes:  | Classification? Moderate (x - x)   |                  |
|                    | Notes/Comments: Gully with two pipe outfalls off trail behind church. Pipes are armored but very little vegetation in the gully. no water was present at the time. |                  |



Photo2



**Photo1 View Direction: View Downstream** 

**Photo2 View Direction: View Upstream** 

# **Photo1 Caption**

Downstream view from above the pipe on the right side. The second pipe outfall is to the left.

**Photo2 Caption** 

Upstream view of pipes.



**Photo3 View Direction** 

**View Upstream** 

**Photo3 Caption** 

Upstream view of exposed pipe on other side of the trail coming down the hill. Area around the pipe is severely eroded. We believe this pipe is connected to the right pipe outfall downstream.

**Gully ID:** 06:14-11:56 MAP Date & Time: June 14, 2021 11:56 Location: Mendota Heights Minnesota River Weather: Mendota 2nd St Sunny Storm/Rainfall Event in the Past 24 Hours? Victor No County of Dakota, County of Ramsey, Esri Canada, Esri, HERE, ... **GULLY INFORMATION Calculated Erosion Potential:** Moderate (x - x) **Approximate Depth:** 3-Medium (3'-15') **Approximate Bottom Width:** 3-Medium (1'-5') **Approximate Gully Length:** Long: >100' **Condition of Gully Bottom:** 1-Heavy Vegetation **Condition of Gully Banks:** 1-Heavy Vegetation **Gully Bank Angles:** 1-Obtuse (>90 degrees) **Gully Shape:** 3-U-Shaped **Gully Material:** Silt and/or Clay

| Seep:              | No  |       |
|--------------------|---|-------|
| Stormwater Inputs: | 0-Not present   |       |
| Fallen Trees:      | Yes   |       |
| Degradation:       |   | 1-Low |
| Aggradation:       | 0-No aggradation  |       |
| Slumping:          | 3-Moderate  |       |
| Additional Notes:  | Classification? Moderate (x - x)  |       |
|                    | Notes/Comments: Gully accessed off parking lot right off sublet memorial highway. Very heavily vegetated area with no water or potential source we could see. |       |



Photo2



**Photo1 View Direction: View Downstream** 

**Photo2 View Direction: View Downstream** 

**Photo1 Caption** 

Downstream view right bank. Pistol shaped tree on right side in the back.

**Photo2 Caption** 

Downstream view left bank.



**Photo3 View Direction: View Upstream** 

**Photo3 Caption** 

Upstream view of beginning of gully.

| Gully ID:                                  |  |
|--|--|
| 06:15-11:11                                | МАР  |
| Date & Time:                               |  |
| June 15, 2021                              | LC<br>SCo Lloyd's  |
| 11:11                                      | Food<br>Products Lam   |
| Location:                                  | MN Knitting Alles  |
| Mendota Heights                            | Mills Enginee  |
| Weather:                                   | Greetings Northland Dr   |
| Sunny                                      | Prime Theraputics  |
| Storm/Rainfall Event in the Past 24 Hours? | 494 Interstate 494 494   |
| No   | Eagan Woods Office County of Dakota, Esri Canada, Esri, HERE, Garmin, INCREMEN Power |
|  | GULLY INFORMATION  |
| Calculated Erosion Potential:              | Moderate (x - x)   |
| Approximate Depth:                         | 3-Medium (3'-15')  |
| Approximate Bottom Width:                  | 1-Wide (>5')   |
| Approximate Gully Length:                  | Long: >100'  |
| Condition of Gully Bottom:                 | 5-Bare Soil  |
| Condition of Gully Banks:                  | 3-Some Vegetation  |
| Gully Bank Angles:                         | 5-Acute (< 90 degrees or undercut)   |
| Gully Shape:                               | 1-Trapezoid  |
| Gully Material:                            | Silt and/or Clay   |

| Seep:              | No   |               |  |
|--------------------|--|---------------|--|
| Stormwater Inputs: | 0-Not present  | 0-Not present |  |
| Fallen Trees:      | No   |               |  |
| Degradation:       |  | 5-Severe      |  |
| Aggradation:       | 3-Moderate   |               |  |
| Slumping:          |  | 1-Low         |  |
| Additional Notes:  | Classification? Moderate (x - x)  Notes/Comments: Long gully with water flowing constantly through it. Grass roots hanging, heavier degradation downstream |               |  |



**Photo1 View Direction: View Upstream** 

Photo1 Caption

Upstream view of full gully.

## Photo2



**Photo2 View Direction: View Downstream** 

Photo2 Caption

Downstream view of full gully.

HD

Pilot Knob Rd

**Gully ID:** 06:15-09:26 MAP Date & Time: June 15, 2021 09:26 Location: Mendota Heights uminous adways Weather: Sunny Alorica Storm/Rainfall Event in the Past 24 Hours? No County of Dakota, Esri Canada, Esri, HERE, Garmin, INCREMEN... **GULLY INFORMATION Calculated Erosion Potential:** Low (4 - x) **Approximate Depth:** 1-Shallow (<3') **Approximate Bottom Width:** 1-Wide (>5') **Approximate Gully Length:** Short: <50'

5-Bare Soil

1-Trapezoid

Silt and/or Clay

1-Heavy Vegetation

1-Obtuse (>90 degrees)

**Condition of Gully Bottom:** 

**Condition of Gully Banks:** 

**Gully Bank Angles:** 

**Gully Shape:** 

**Gully Material:** 

| Seep:              | No   |               |  |
|--------------------|--|---------------|--|
| Stormwater Inputs: | 0-Not presen   | 0-Not present |  |
| Fallen Trees:      | No   |               |  |
| Degradation:       | 1  | 1-Low         |  |
| Aggradation:       | 1-Low  |               |  |
| Slumping:          | 0-No slumping  |               |  |
| Additional Notes:  | Classification? Low (4 - x)  Notes/Comments: No vegetation on bottom, lots on banks, pipe at top of gully, minor degradation |               |  |



**Photo1 View Direction: View Downstream** 

Photo1 Caption

Downstream view of full gully.

## Photo2



**Photo2 View Direction: View Upstream** 

**Photo2 Caption** 

Upstream view of pipe.

Gully ID:

06:15-09:16

Date & Time:

June 15, 2021

09:16

Location:

Mendota Heights

Weather:

Sunny

Storm/Rainfall Event in the Past 24 Hours?

No

MAP



|                               | GULLY INFORMATION      |
|-------------------------------|------------------------|
| Calculated Erosion Potential: | Low (4 - x)            |
| Approximate Depth:            | 3-Medium (3'-15')      |
| Approximate Bottom Width:     | 1-Wide (>5')           |
| Approximate Gully Length:     | Short: <50'            |
| Condition of Gully Bottom:    | 3-Some Vegetation      |
| Condition of Gully Banks:     | 1-Heavy Vegetation     |
| Gully Bank Angles:            | 1-Obtuse (>90 degrees) |
| Gully Shape:                  | 3-U-Shaped             |
| Gully Material:               | Silt and/or Clay       |
|                               |                        |

| Seep:              | No  |                  |
|--------------------|---|------------------|
| Stormwater Inputs: | 1-Dripping  |                  |
| Fallen Trees:      | No  |                  |
| Degradation:       | 1   | 1-Low            |
| Aggradation:       |   | 0-No aggradation |
| Slumping:          | 1-Low   |                  |
| Additional Notes:  | Classification? Low (4 - x)   |                  |
|                    | Notes/Comments: Gully off Big River regional trail. Gully has pipe outfall that appears to have no water flow present and it looks like the pipe is being filled with sediment. |                  |



Photo2



**Photo1 View Direction: View Upstream** 

Photo1 Caption

Upstream view of gully.

**Photo2 View Direction: View Upstream** 

**Photo2 Caption** 

Zoomed in upstream view of pipe filling with sediment.



**Photo3 View Direction: View Side stream** 

**Photo3 Caption** 

Side stream view from right bank area off of trail.

**Gully ID:** 06:15-09:09

Date & Time:

June 15, 2021

09:09

Location:

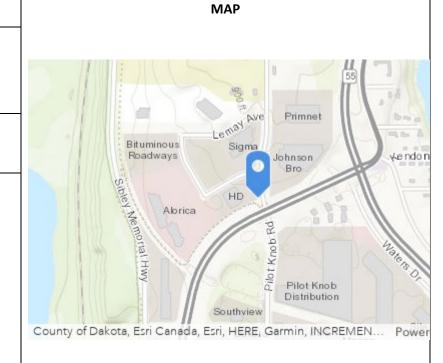
Mendota Heights

Weather:

Sunny

Storm/Rainfall Event in the Past 24 Hours?

No



|                               | GULLY INFORMATION              |
|-------------------------------|--------------------------------|
| Calculated Erosion Potential: | Low (4 - x)                    |
| Approximate Depth:            | 3-Medium (3'-15')              |
| Approximate Bottom Width:     | 1-Wide (>5')                   |
| Approximate Gully Length:     | Medium: 50'-100'               |
| Condition of Gully Bottom:    | 1-Heavy Vegetation             |
| Condition of Gully Banks:     | 1-Heavy Vegetation             |
| Gully Bank Angles:            | 3-Mid-range (45 to 90 degrees) |
| Gully Shape:                  | 3-U-Shaped                     |
| Gully Material:               | Silt and/or Clay               |

| Seep:              | No  |                  |
|--------------------|---|------------------|
| Stormwater Inputs: | 0-Not present   |                  |
| Fallen Trees:      | No  |                  |
| Degradation:       |   | 0-No degradation |
| Aggradation:       |   | 0-No aggradation |
| Slumping:          |   | 0-No slumping    |
| Additional Notes:  | Classification? Low (4 - x)  Notes/Comments: Lots of vegetation, no slumping, not many signs of degradation |                  |



**Photo1 View Direction: View Downstream** 

Photo1 Caption

Downstream view of right bank.

Photo2



**Photo2 View Direction: View Downstream** 

Photo2 Caption

Downstream view of left bank.