

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		1-Low
Aggradation:		1-Low
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: This gully is a stream that runs through a grassy fie,d and under the road connecting to another gully. Upstream there are large trees leaning over the channel. couldnt reach area where stream drains into pipe under road due to heavy vegetation.	



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view of large leaning trees. Photo 2 Image



Photo 2 View Direction
Upstream

**Photo 2 Caption** Upstream view of gully.

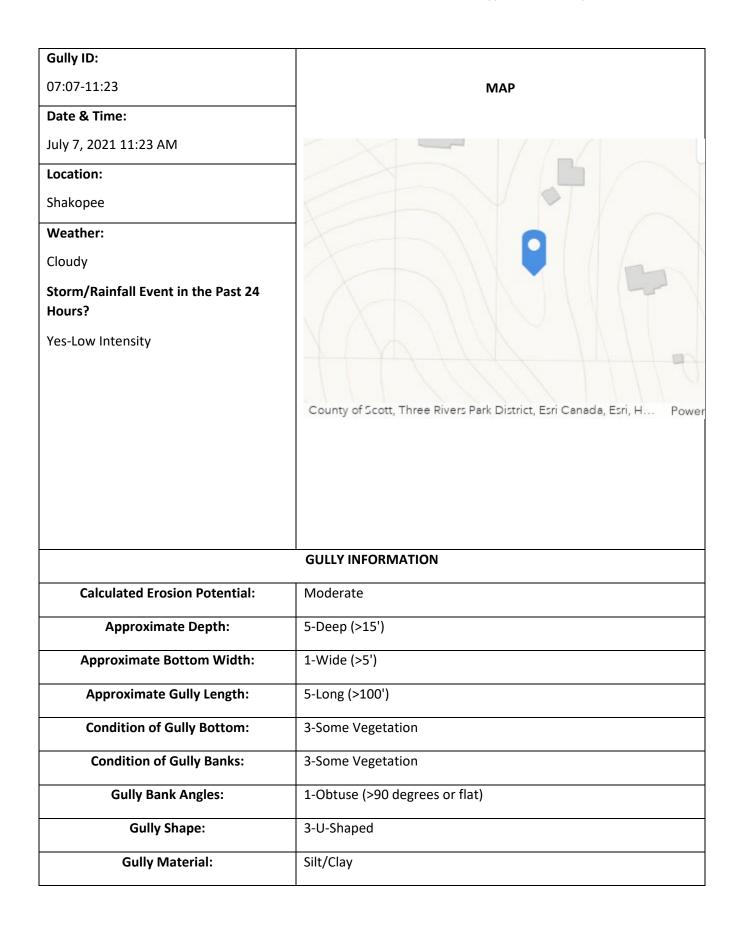


#### Photo 3 View Direction

Downstream

# Photo 3 Caption

Downstream view of gully.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	1	3-Moderate
Aggradation:	1-Low	
Slumping:		1-Yes
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Gully in woods behind houses. Very wide and deep. Has small deeper area in the center that looks like maybe a ravine when there is water in the gully.	



Photo 2 Image



Photo 1 View Direction
Upstream

**Photo 1 Caption** Upstream view of right bank. Photo 2 View Direction
Upstream

**Photo 2 Caption** Upstream view of left bank.



#### Photo 4 Image



Photo 3 View Direction

Downstream

#### **Photo 3 Caption**

Downstream view of end of gully which feed directly into private property.

# Photo 4 View Direction

Upstream

#### **Photo 4 Caption**

Upstream view of area where a stream potentially runs through the gully.

Gully ID:	
06:21-12:02	МАР
Date & Time:	
June 21, 2021 12:02 PM	~ / / /
Location:	
Shakopee	
Weather:	
Cloudy	
Storm/Rainfall Event in the Past 24 Hours? Yes-High Intensity	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	Low
Approximate Depth:	1-Shallow (<3')
Approximate Bottom Width:	3-Medium (1'-5')
Approximate Gully Length:	3-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)
Guily Ballk Angles:	
Gully Shape:	3-U-Shaped

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		3-Moderate
Aggradation:		0-None
Slumping:		1-Yes
Additional Notes:	Classification? Low	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Gully in neighborhood next to eagle creek. Heavy vegetation and slumping with leaning trees.	



Photo 2 Image



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view from right bank. Photo 2 View Direction Upstream

Photo 2 Caption

Upstream view from bottom of gully. Tree on right bank is leaning and slumping.

Gully ID:	
07:13-09:30	МАР
Date & Time:	
July 13, 2021 9:30 AM	
Location:	
Shakopee	
Weather:	
Sunny	
Storm/Rainfall Event in the Past 24 Hours?	
No	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	GULLY INFORMATION Moderate
Calculated Erosion Potential: Approximate Depth:	
	Moderate
Approximate Depth:	Moderate 3-Medium (3'-15')
Approximate Depth: Approximate Bottom Width:	Moderate         3-Medium (3'-15')         1-Wide (>5')
Approximate Depth: Approximate Bottom Width: Approximate Gully Length:	Moderate         3-Medium (3'-15')         1-Wide (>5')         3-Medium (50'-100')
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom:	Moderate         3-Medium (3'-15')         1-Wide (>5')         3-Medium (50'-100')         3-Some Vegetation
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom: Condition of Gully Banks:	Moderate         3-Medium (3'-15')         1-Wide (>5')         3-Medium (50'-100')         3-Some Vegetation         3-Some Vegetation

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:		1-Low
Aggradation:	1-Low	
Slumping:		1-Yes
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Some slumping and pistol shaped trees, meets with next gully at end, more vegetation on left bank than right	

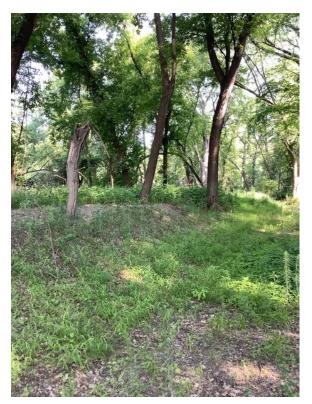


Photo 1 View Direction
Downstream

Photo 1 Caption

Left bank

Photo 2 Image



Photo 2 View Direction
Downstream

**Photo 2 Caption** Right bank



#### **Photo 3 View Direction**

Downstream

## Photo 3 Caption

Bottom

Gully ID:	
07:12-12:32	МАР
Date & Time:	
July 12, 2021 12:32 PM	
Location:	
Shakopee	
Weather:	
Sunny	
Storm/Rainfall Event in the Past 24 Hours?	ING DRIVE EAST
No	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	Moderate
Approximate Depth:	3-Medium (3'-15')
Approximate Bottom Width:	3-Medium (1'-5')
Approximate Gully Length:	5-Long (>100')
Condition of Gully Bottom:	3-Some Vegetation
Condition of Gully Banks:	1-Heavy Vegetation
Gully Bank Angles:	3-Mid-Range (45 to 90 degrees)
Gully Shape:	5-V-Shaped

Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	0-None	
Fallen Trees:	0-No	
Degradation:		1-Low
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Continued from other side of road, goes pretty far down, two piles lead out to it, not much visible degradation	



Photo 1 View Direction
Downstream

Photo 1 Caption

Left bank

Photo 2 Image



Photo 2 View Direction
Downstream

**Photo 2 Caption** Right bank

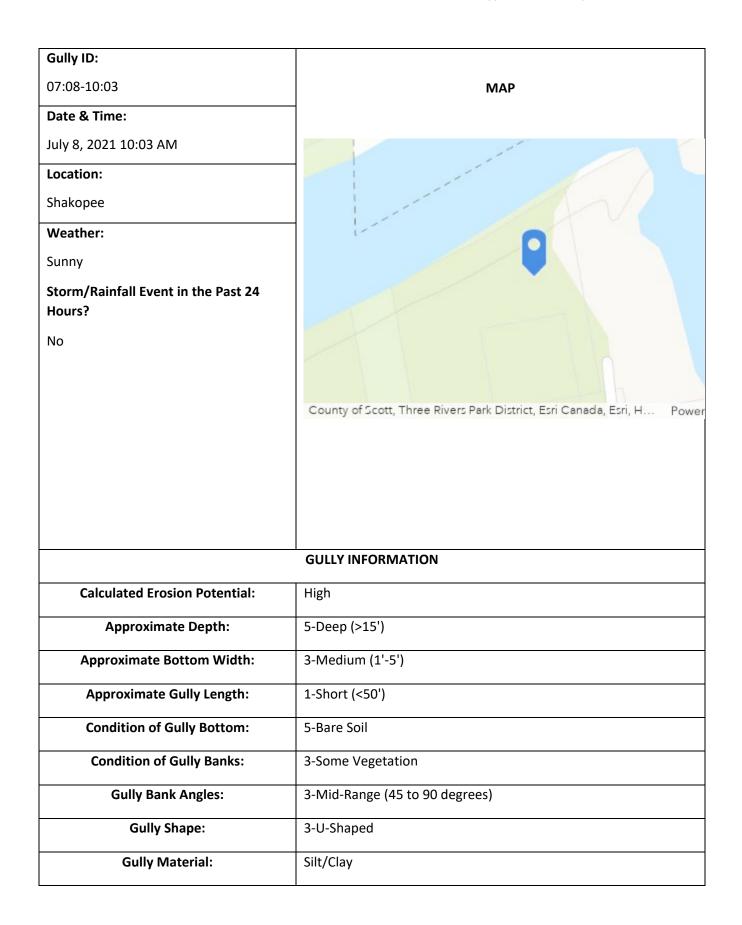


## **Photo 3 View Direction**

Upstream

# Photo 3 Caption

Pipes



Seep:	0-No		
Stormwater Runoff:	1-Yes		
Stormwater Inputs:	5-High Flow	5-High Flow	
Fallen Trees:	1-Yes		
Degradation:	1	3-Moderate	
Aggradation:	1-Low		
Slumping:	0-No		
Additional Notes:	Classification? High		
	Presence of Water? Yes		
	Quantity of Water? Torrent/Fast Moving		
	Notes/Comments: Second part of gully connected through pipes leading into the river. The right bank is worse than the left bank for degradation.		



<image>

Photo 1 View Direction

Downstream

## Photo 1 Caption

Downstream view of gully, inflow and outflow pipes are visible.

Photo 2 View Direction

Downstream

## Photo 2 Caption

Downstream view of right bank which has worse degradation.

## Photo 2 Image



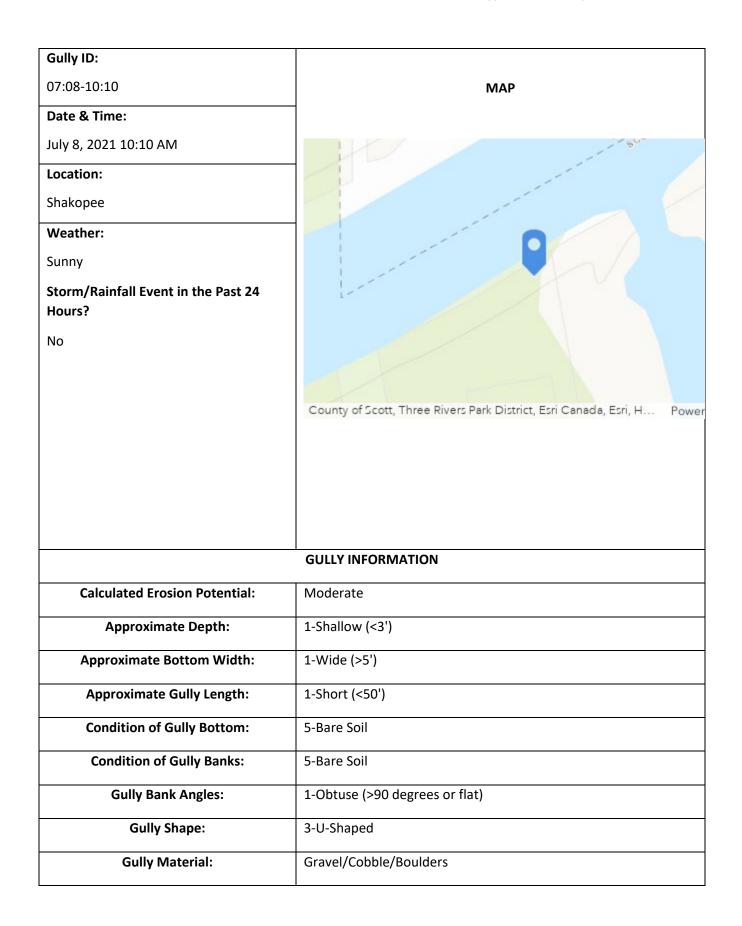
Photo 4 Image



Photo 3 View Direction
Downstream

**Photo 3 Caption** Downstream view of inflow pipe and left bank. Photo 4 View Direction
Downstream

Photo 4 Caption
Downstream view of outflow pipe.



Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	5-High Flow	
Fallen Trees:	0-No	
Degradation:	1	3-Moderate
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? Moderate	
	Presence of Water? Yes	
	Quantity of Water? Torrent/Fast Moving	
	Notes/Comments: Other side of pipe from previous gully, boulders armoring the gully, leads directly into river	



Photo 1 View Direction
Downstream

Photo 1 Caption

Full gully

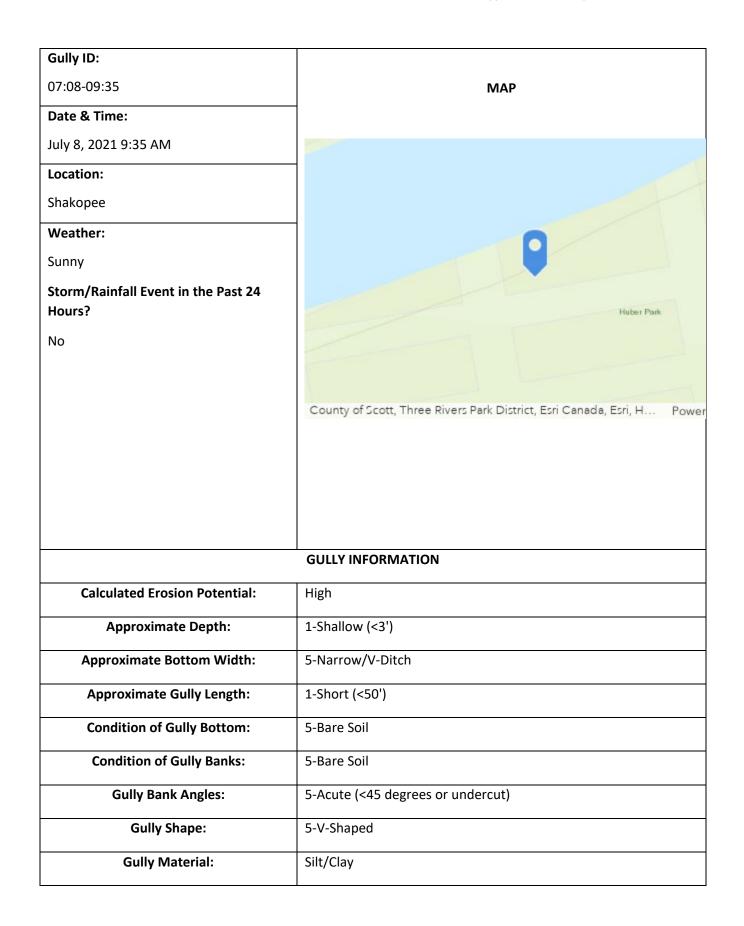
# Photo 2 Image



Photo 2 View Direction
Downstream

## Photo 2 Caption

Pipe



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:	I	5-Severe
Aggradation:	3-Moderate	
Slumping:		0-No
Additional Notes:	Classification? High	
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Multiple very similar gullies all kind of connected, leads directly into river, high erosion, can see sediment deposit directly into river	

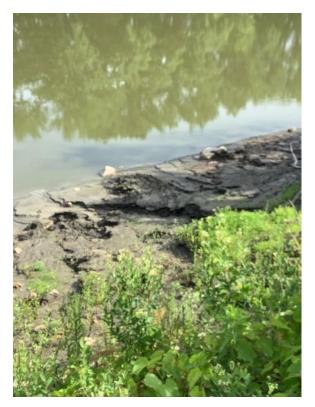


Photo 1 View Direction
Downstream

Photo 1 Caption

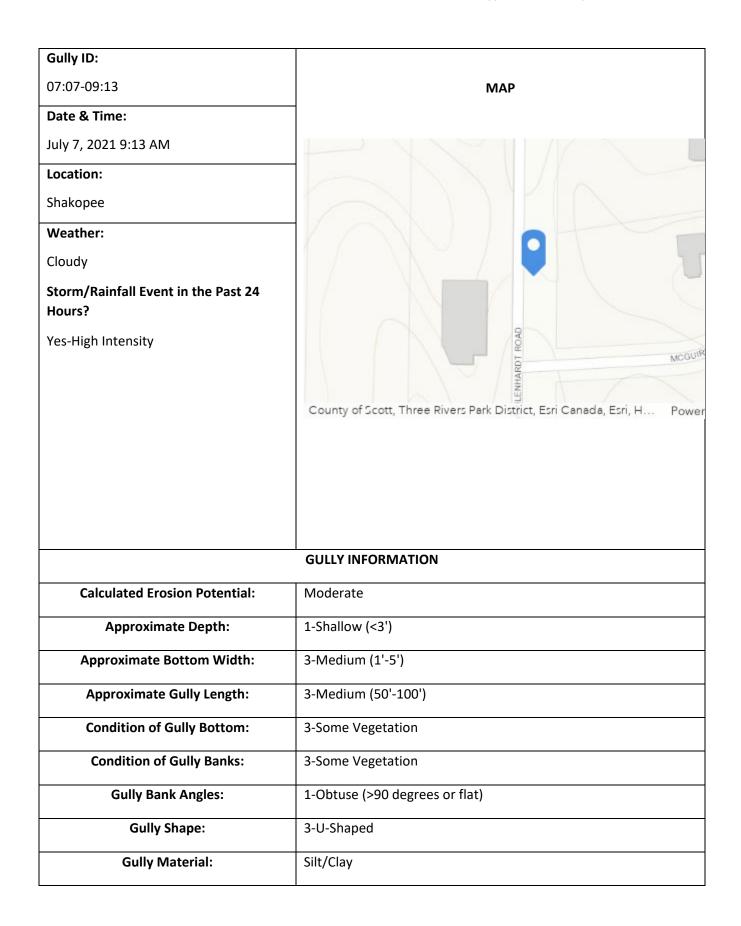
View of gully

# Photo 2 Image



Photo 2 View Direction
Downstream

Photo 2 Caption



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	1	1-Low
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Shallow gully with a dam thing half way through. Lots of fallen trees and branches at the end of gully downstream, but not much visible degradation	



Photo 1 View Direction
Downstream

Photo 1 Caption End of gully

# Photo 2 Image



Photo 2 View Direction Upstream

**Photo 2 Caption** Dam in middle



Photo 3 View Direction
Upstream

Photo 3 Caption

Left bank

Photo 4 Image



Photo 4 View Direction
Upstream

**Photo 4 Caption** Right bank

Gully ID:		
07:07-08:43	МАР	
Date & Time:		
July 7, 2021 8:43 AM		
Location:		
Shakopee		
Weather:		
Cloudy		
Storm/Rainfall Event in the Past 24 Hours?		
Yes-Low Intensity	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power	
	GULLY INFORMATION	
Calculated Erosion Potential:	GULLY INFORMATION High	
Calculated Erosion Potential: Approximate Depth:		
	High	
Approximate Depth:	High 1-Shallow (<3')	
Approximate Depth: Approximate Bottom Width:	High         1-Shallow (<3')         5-Narrow/V-Ditch	
Approximate Depth: Approximate Bottom Width: Approximate Gully Length:	High         1-Shallow (<3')         5-Narrow/V-Ditch         1-Short (<50')	
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom:	High         1-Shallow (<3')         5-Narrow/V-Ditch         1-Short (<50')         5-Bare Soil	
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom: Condition of Gully Banks:	High         1-Shallow (<3')         5-Narrow/V-Ditch         1-Short (<50')         5-Bare Soil         5-Bare Soil	

Seep:	0-No		
Stormwater Runoff:	1-Yes		
Stormwater Inputs:	0-None		
Fallen Trees:	0-No		
Degradation:		5-Severe	
Aggradation:		3-Moderate	
Slumping:		0-No	
Additional Notes:	Classification? High		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Gully likely formed from somebody's gutter, looks to run underground then cause erosion in hard. Kind of leads into previous site.		

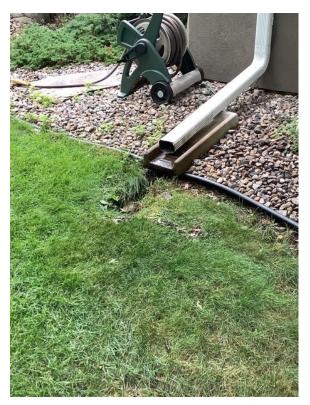


Photo 1 View Direction
Upstream

Photo 1 Caption Gutter and start Photo 2 Image



Photo 2 View Direction
Downstream

**Photo 2 Caption** Full gully

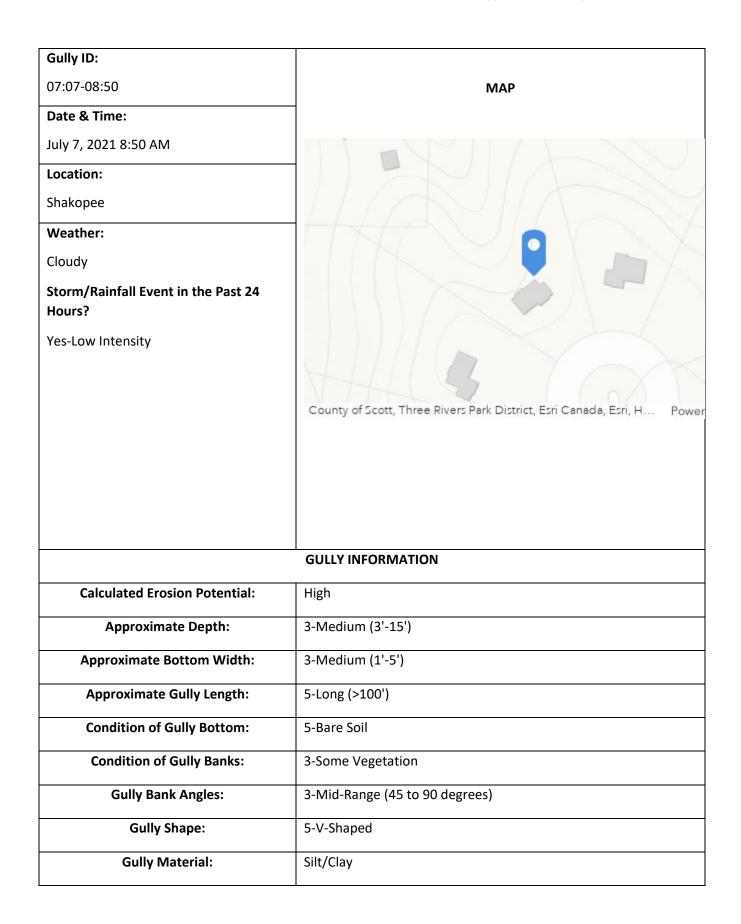


## **Photo 3 View Direction**

Upstream

Photo 3 Caption

Continuation



Seep:	0-No		
Stormwater Runoff:	0-No	0-No	
Stormwater Inputs:			
Fallen Trees:	1-Yes		
Degradation:	3-Moderate		
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification? High		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Gully running behind house in the woods. Begins with an obtuse u shape then cutes down and forms a narrow v shape. There are some fallen trees downstream.		



### Photo 2 Image



Photo 1 View Direction
Upstream

Photo 1 Caption

Upstream view of flatter beginning of gully.

#### **Photo 2 View Direction**

Downstream

## Photo 2 Caption

Downstream view of gully, downstream there are fallen trees and a board walk running across the banks.



Photo 4 Image



Photo 3 View Direction
Upstream

### Photo 3 Caption

Upstream view of area where slope drops off and gully becomes more severe.

Photo 4 View Direction
Downstream

**Photo 4 Caption** Downstream view of fallen tree.

Gully ID:	
07:19-11:35	МАР
Date & Time:	
July 19, 2021 11:35 AM	
Location:	
Shakopee	1005
Weather:	
Sunny	
Storm/Rainfall Event in the Past 24	RIVER ROAD
Hours?	
No	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	Moderate
Approximate Depth:	1-Shallow (<3')
Approximate Bottom Width:	1-Wide (>5')
Approximate Gully Length:	5-Long (>100')
Condition of Gully Bottom:	5-Bare Soil
Condition of Gully Banks:	3-Some Vegetation
Gully Bank Angles:	1-Obtuse (>90 degrees or flat)
Gully Shape:	1-Trapezoid

Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	0-None	
Fallen Trees:	1-Yes	
Degradation:	3-Moderate	
Aggradation:	3-Moderate	
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? Yes	
	Quantity of Water? Puddles/Stagnant	
	Notes/Comments: Under 169, goes from wide to narrow as you move downstream, heavier erosion downstream, pipe midway through, water runoff from highway leads into it	



Photo 1 View Direction
Upstream

Photo 1 Caption

Gully

Photo 2 Image



Photo 2 View Direction
Downstream

Photo 2 Caption

Gully



Photo 4 Image



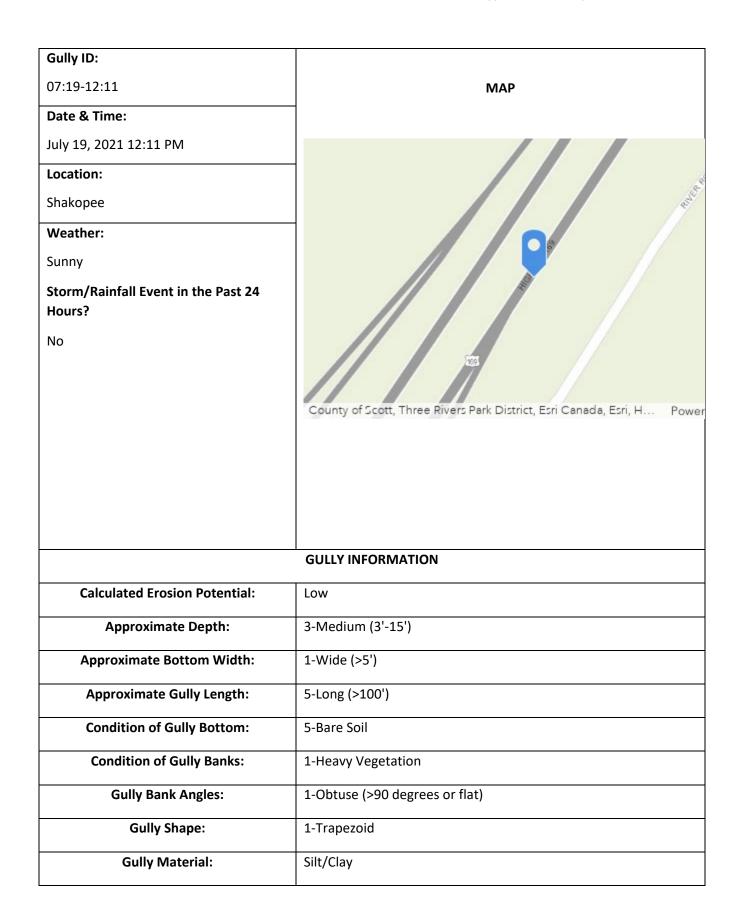
Photo 3 View Direction
Upstream

Photo 3 Caption

Pipe

Photo 4 View Direction Upstream

**Photo 4 Caption** Pipes from highway



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:	-	0-None
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? Low	
	Presence of Water? Yes	
	Quantity of Water? Puddles/Stagnant	
	Notes/Comments: Gully with stagnant water flowing into dam system which connects downstream to a large gully into the mn a river. Water is very murky. there is another stream on the other side of the dam system which is similar to this but less gully-like.	



Photo 2 Image



Photo 1 View Direction
Upstream

**Photo 1 Caption** Upstream view from right bank. Photo 2 View Direction
Downstream

**Photo 2 Caption** Downstream view of dam.

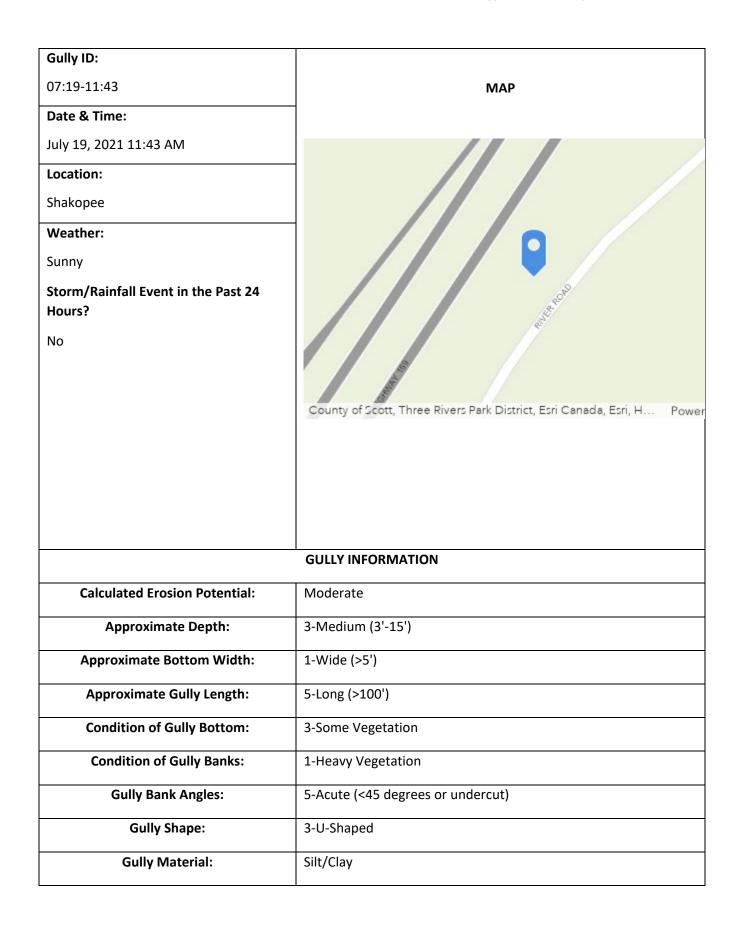


## Photo 3 View Direction

Upstream

# Photo 3 Caption

Upstream view of gully bottom.



Seep:	0-No		
Stormwater Runoff:	1-Yes	1-Yes	
Stormwater Inputs:	0-None		
Fallen Trees:	1-Yes		
Degradation:	1	5-Severe	
Aggradation:	0-None		
Slumping:	1-Yes		
Additional Notes:	Classification? Moderate		
	Presence of Water? Yes		
	Quantity of Water? Puddles/Stagnant		
	Notes/Comments: Gully downstream of dam system that connects three streams into this one heading towards the MN river. Very little stagnant water, upstream the water is covered in green algae suggesting it hasn't had much flow recently.		



Photo 2 Image



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view of gully. Photo 2 View Direction
Downstream

Photo 2 Caption

Downstream view of severe degradation on left bank.



Photo 4 Image



Photo 3 View Direction Downstream

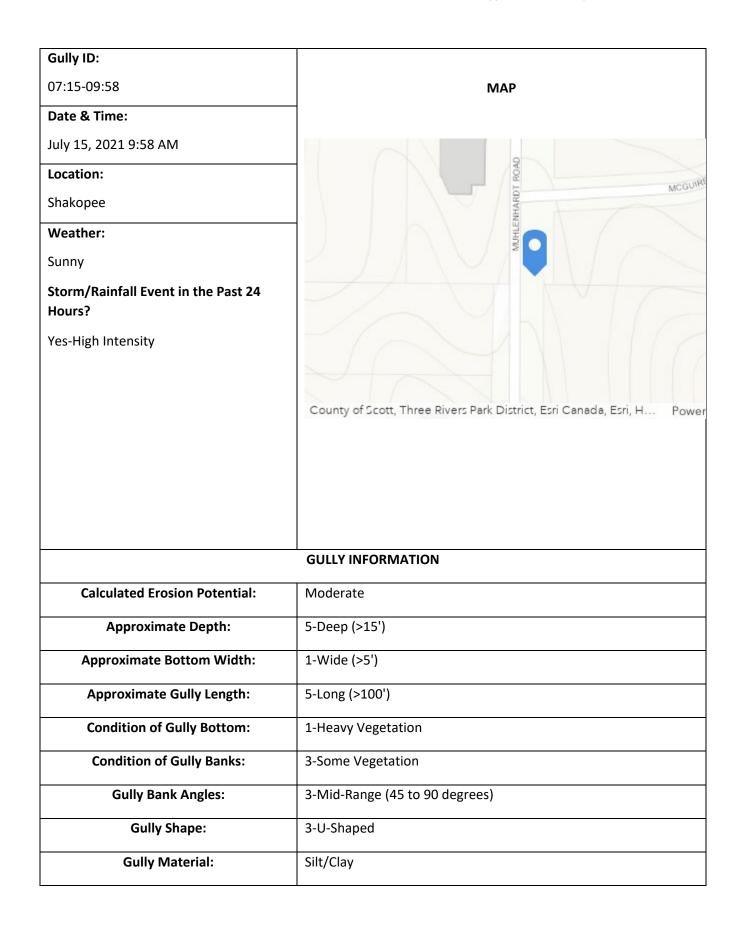
### Photo 3 Caption

Downstream view of severe degradation on right bank.

Photo 4 View Direction Upstream

## Photo 4 Caption

Upstream view of dam and green algae covered water.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	3-Moderate	
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Left bank much more degraded than right bank, heavy vegetation on right, none on left, heavier slumling on left bank, left bank is worse overall, pics are hard to make out	



Photo 1 View Direction
Upstream

Photo 1 Caption

Left bank

Photo 2 Image



Photo 2 View Direction Upstream

**Photo 2 Caption** Right bank

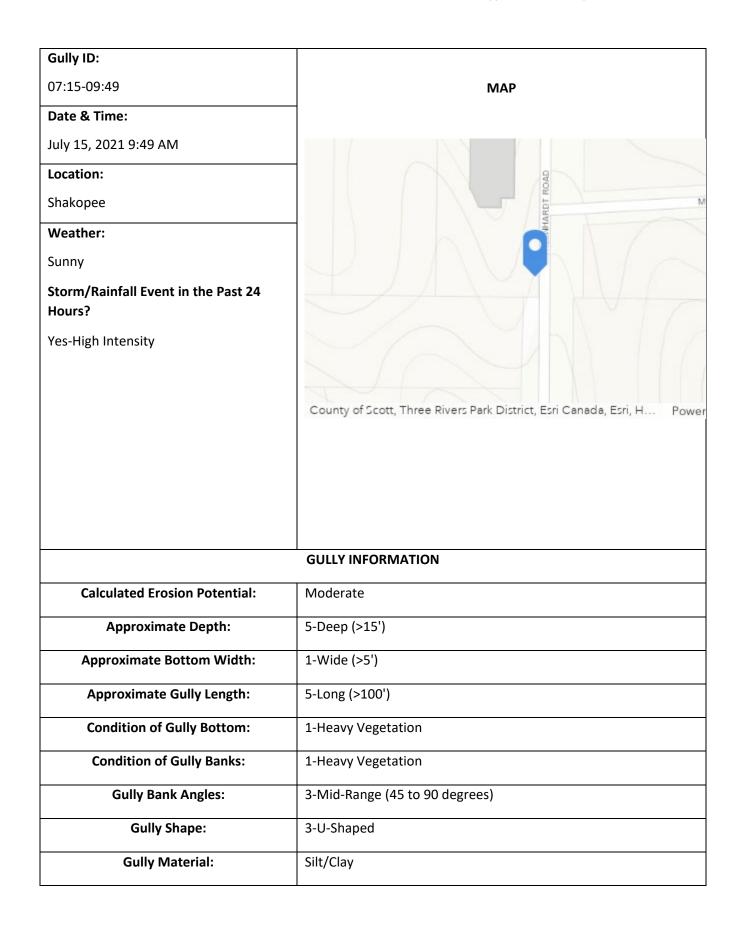


## **Photo 3 View Direction**

Upstream

# Photo 3 Caption

Middle



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		3-Moderate
Aggradation:	0-None	
Slumping:	0-No	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Gully in the woods running along the side of the road. The base opens up to a large building on private property so it could only be accessed from the side so pictures were not the best. on the left bank there were some trees with exposed roots.	



Photo 1 View Direction

Upstream

## Photo 1 Caption

Upstream view of right bank. Very vegetated area so it is hard to capture the gully in pictures.

Photo 2 Image



Photo 2 View Direction Upstream

**Photo 2 Caption** Upstream view of left bank.



Photo 4 Image



Photo 3 View Direction

Downstream

#### **Photo 3 Caption**

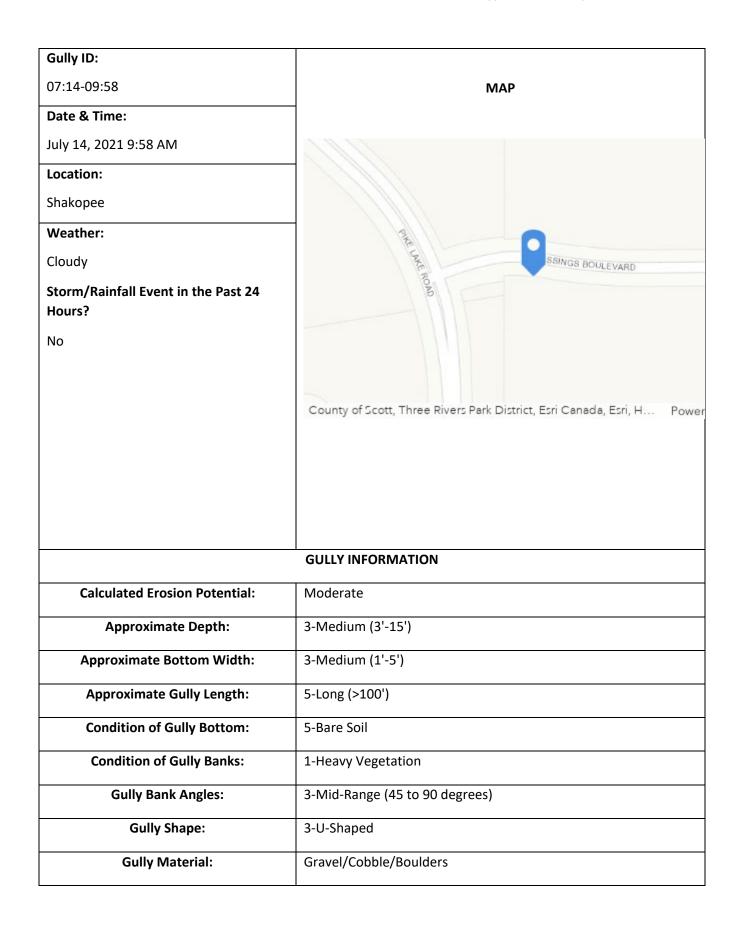
Downstream view of right bank showing leaning trees and the private property in the background.

#### **Photo 4 View Direction**

Downstream

#### **Photo 4 Caption**

Downstream view of left bank. This area is hard to see through all the trees, but some of these trees have some significant degradation around the roots.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:	1	3-Moderate
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? Moderate	
	Presence of Water? Yes	
	Quantity of Water? Puddles/Stagnant	
	Notes/Comments: Gully leading into left bank of stream that drains from two large pipes into another two large pipes and into a pond on the other side of the road. This gully has rock and boulders in it, but also is made of silt. there was construction occurring	



Photo 1 View Direction Upstream

## Photo 1 Caption

Upstream view of gully from road. This is where he gully connects to the stream.

**Photo 2 View Direction** 

Upstream

## Photo 2 Caption

Upstream view zoomed in showing small rock dams created.

Photo 2 Image





#### **Photo 3 View Direction**

Downstream

## Photo 3 Caption

Downstream view of where the stream the gully connects to drains under the road

Gully ID:	
07:14-09:00	МАР
Date & Time:	
July 14, 2021 9:00 AM	
Location:	
Shakopee	
Weather:	
Cloudy	
Storm/Rainfall Event in the Past 24 Hours?	
No	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	Low
Approximate Depth:	1-Shallow (<3')
Approximate Bottom Width:	5-Narrow/V-Ditch
Approximate Gully Length:	3-Medium (50'-100')
Condition of Gully Bottom:	1-Heavy Vegetation
Condition of Gully Banks:	1-Heavy Vegetation
Gully Bank Angles:	1-Obtuse (>90 degrees or flat)
Gully Shape:	3-U-Shaped

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	1	0-None
Aggradation:	0-None	
Slumping:	0-No	
Additional Notes:	Classification? Low	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Gully comp,geeky covered in vegetation which leads into the Minnesota a river. Can see a small winding stream that runs through the bottom of the grassy area. There are some leaning trees as well.	



Photo 2 Image



Photo 1 View Direction
Downstream

### Photo 1 Caption

Downstream view of gully. Hard to see channel due to high vegetation levels.

#### **Photo 2 View Direction**

Downstream

### Photo 2 Caption

Downstream view of headcut of gully right next to trail.

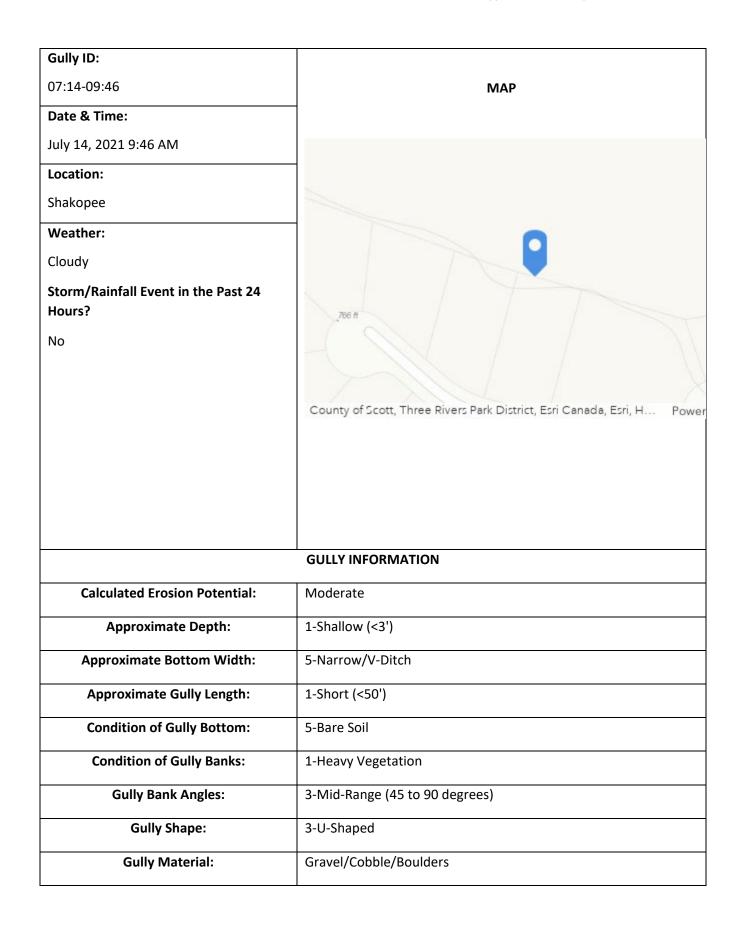


#### **Photo 3 View Direction**

Downstream

# Photo 3 Caption

Downstream view of trees leaning into channel



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:	3-Moderate	
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? Yes	
	Quantity of Water? Puddles/Stagnant	
	Notes/Comments: Pipe under yard that leads to pond marshy area. Boulders at bottom and banks with vegetation growing around	



Photo 1 View Direction
Upstream

Photo 1 Caption

Pipe

Photo 2 Image



Photo 2 View Direction
Upstream

Photo 2 Caption
Pipe again

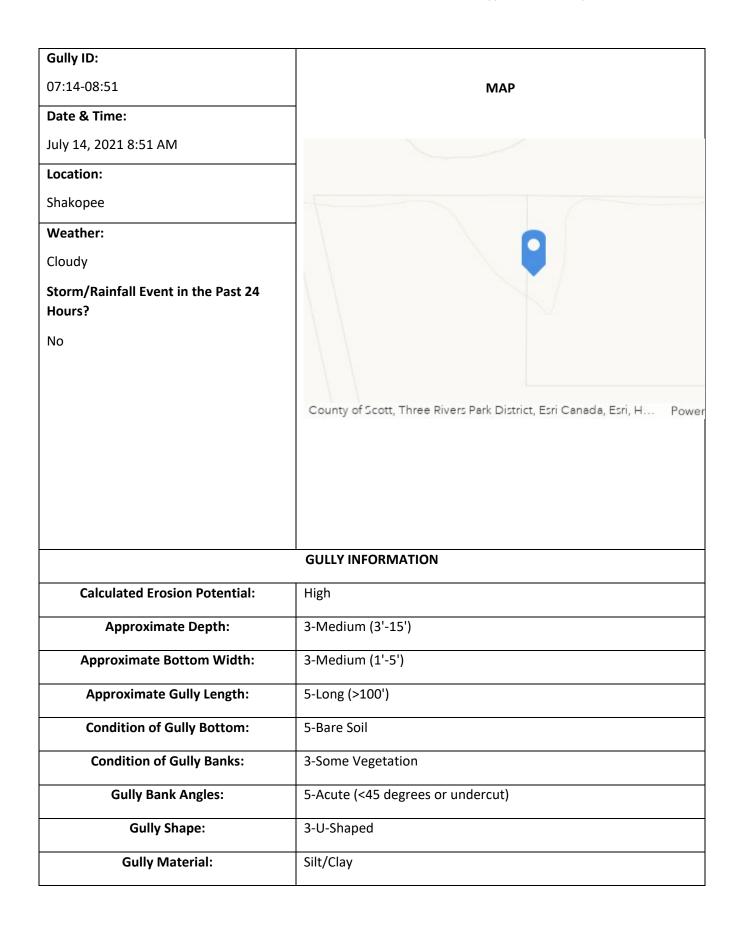


## **Photo 3 View Direction**

Downstream

# Photo 3 Caption

Gully



Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	0-None	
Fallen Trees:	1-Yes	
Degradation:	3-Moderate	
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? High	
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Pipe goes under trail, another pipe leads into gully with no water coming in, Boulders on banks downstream, not upstream, water constantly going out of pipe under trail	



Photo 2 Image



Photo 1 View Direction
Downstream

Photo 1 Caption

Right bank

Photo 2 View Direction
Downstream

Photo 2 Caption Left bank



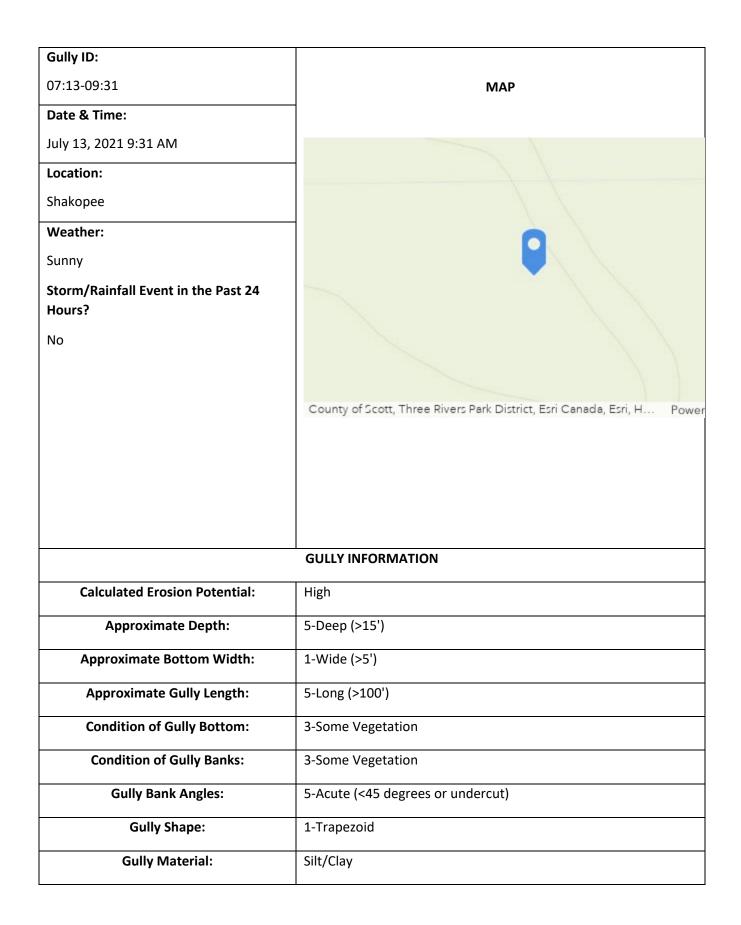
Photo 4 Image



Photo 3 View Direction
Upstream

Photo 3 Caption Right bank and pipe Photo 4 View Direction
Upstream

Photo 4 Caption Left bank



Seep:	0-No	0-No	
Stormwater Runoff:	1-Yes	1-Yes	
Stormwater Inputs:	3-Low Flow	3-Low Flow	
Fallen Trees:	1-Yes		
Degradation:		5-Severe	
Aggradation:		1-Low	
Slumping:		1-Yes	
Additional Notes:	Classification	? High	
	Presence of V	Vater? Yes	
	Quantity of V	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Gully located downstream of a dam that looks fairly new. This gully has very steep banks with severe degradation. There is armoring upstream around the area by the dam, but once the armoring ends the banks get very steep.		



## Photo 2 Image



Photo 1 View Direction

Downstream

#### **Photo 1 Caption**

Downstream view from right bank of fallen trees and make shift wooden and rock dams downstream of the man made large dam.

#### **Photo 2 View Direction**

Left Bank

#### **Photo 2 Caption**

View of left bank where severe degradation is occurring. This area is vey bare, but the bank downstream is heavily vegetated.



Photo 3 View Direction Upstream

Photo 3 Caption Upstream view of dam.

## Photo 4 Image



Photo 4 View Direction Left Bank

## Photo 4 Caption

Left bank view of where armoring transitions into severe degradation and a steep bank slope.



Seep:	0-No	0-No	
Stormwater Runoff:	0-No		
Stormwater Inputs:			
Fallen Trees:	1-Yes		
Degradation:	3-Moderate		
Aggradation:	1-Low		
Slumping:		0-No	
Additional Notes:	Classification	? Moderate	
	Presence of Water? Yes		
	Quantity of Water? Trickle/Slow Moving		
	Notes/Comments: Stream in bottom of gully which runs through a series of pipes and into the river, this is the first section of the gully. There are lots of fallen and dead branches in the gully bottom		



# Photo 2 Image



Photo 1 View Direction
Upstream

**Photo 1 Caption** Upstream view of gully from right bank. Photo 2 View Direction
Downstream

Photo 2 Caption

Downstream view of gully, pipe drain is at the end.



#### Photo 3 View Direction

Downstream

# Photo 3 Caption

Downstream view of pipe.

Gully ID:	
06:21-11:26	ΜΑΡ
Date & Time:	
June 21, 2021 11:26 AM	
Location:	
Shakopee	101 EAST [10]
Weather:	
Cloudy	
Storm/Rainfall Event in the Past 24 Hours? Yes-High Intensity	
	GULLY INFORMATION
Calculated Erosion Potential:	GULLY INFORMATION       Moderate
Calculated Erosion Potential: Approximate Depth:	
	Moderate
Approximate Depth:	Moderate 3-Medium (3'-15')
Approximate Depth: Approximate Bottom Width:	Moderate           3-Medium (3'-15')           1-Wide (>5')
Approximate Depth: Approximate Bottom Width: Approximate Gully Length:	Moderate         3-Medium (3'-15')         1-Wide (>5')         5-Long (>100')
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom:	Moderate         3-Medium (3'-15')         1-Wide (>5')         5-Long (>100')         5-Bare Soil
Approximate Depth: Approximate Bottom Width: Approximate Gully Length: Condition of Gully Bottom: Condition of Gully Banks:	Moderate         3-Medium (3'-15')         1-Wide (>5')         5-Long (>100')         5-Bare Soil         1-Heavy Vegetation

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	1	3-Moderate
Aggradation:	1-Low	
Slumping:		1-Yes
Additional Notes:	Classification	? Moderate
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Gully leading stream into pipes underneath highway 101. One of the large pipe drains downstream is blocked off	



Photo 1 View Direction
Upstream

**Photo 1 Caption** Upstream view from left bank.

# Photo 2 Image



Photo 2 View Direction
Upstream

**Photo 2 Caption** Upstream view from left bank.

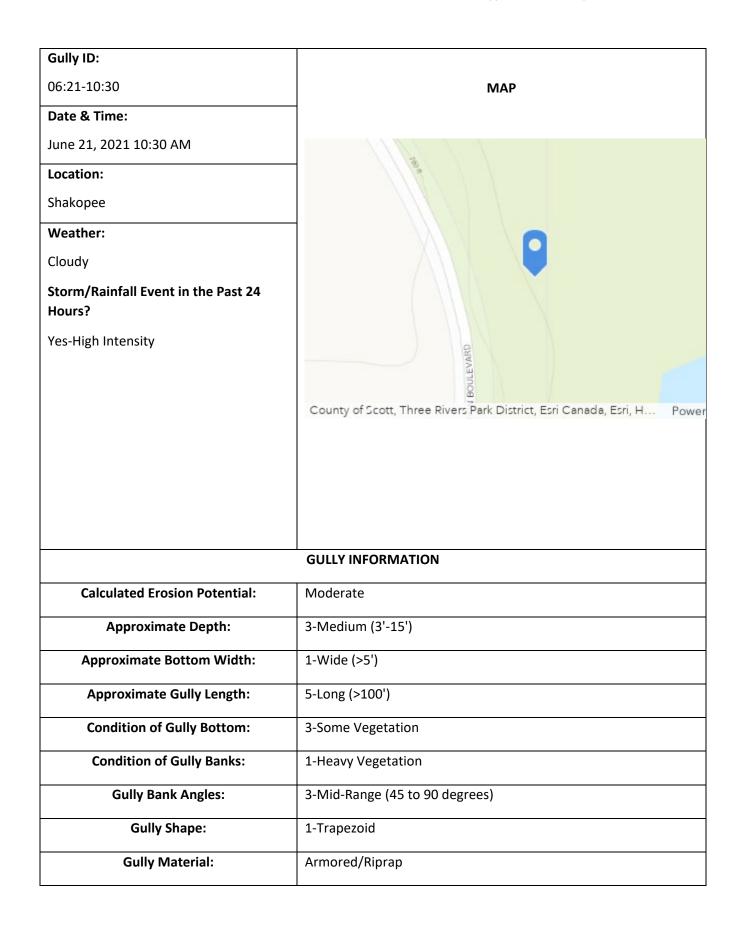


#### Photo 3 View Direction

Upstream

# Photo 3 Caption

Upstream view of pipes running under highway 101.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		0-None
Aggradation:	5-Severe	
Slumping:	1-Yes	
Additional Notes:	Classification	? Moderate
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: This gully is armored by caged rocks and large rocks on its bottom and the banks are heavily vegetated. There is severe aggradation though as near the pipe leading under the road the rocks are covered in sand. This made the erosion potential moderate.	



## Photo 2 Image



Photo 1 View Direction
Downstream

## Photo 1 Caption

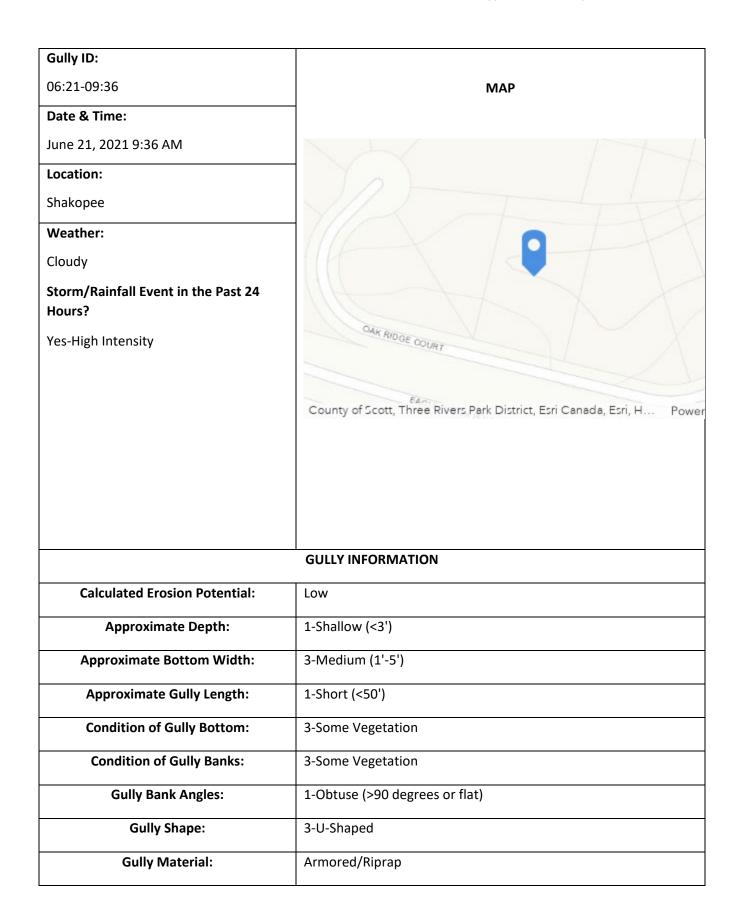
Downstream view from next to pipes running under road on left bank side.

# Photo 2 View Direction

Upstream

## Photo 2 Caption

Upstream view from left bank of pipes running under the road.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		1-Low
Aggradation:	0-None	
Slumping:		1-Yes
Additional Notes:	Classification? Low	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Small gully downstream of three other larger gullies.	



Photo 2 Image

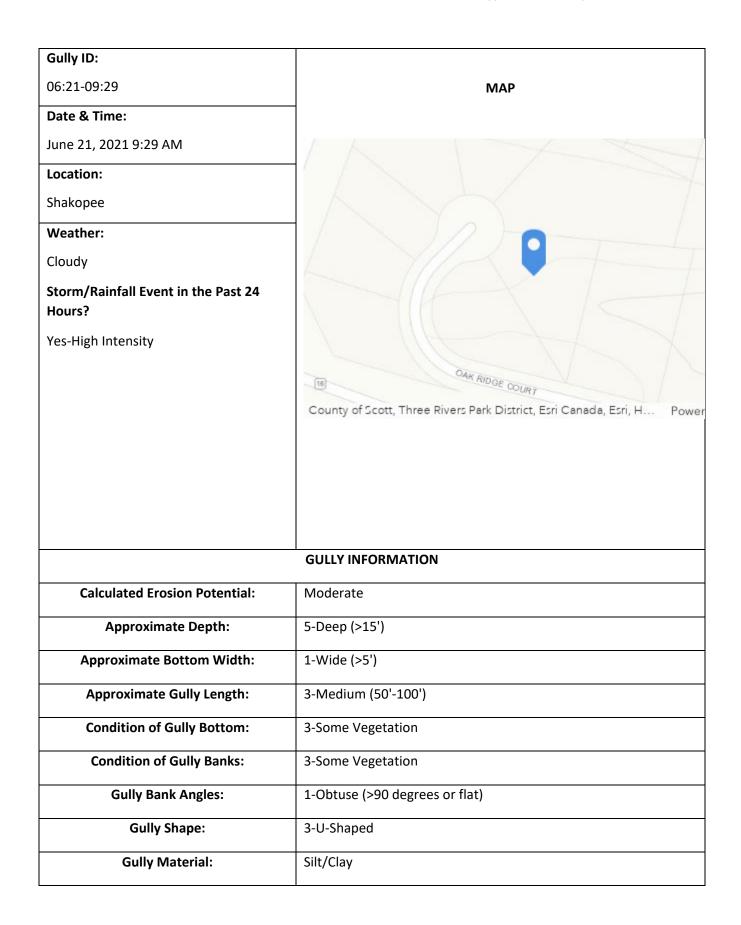


Photo 1 View Direction
Downstream

Photo 1 Caption Downstream view from top of gully. Photo 2 View Direction Upstream

Photo 2 Caption

Upstream view of gully showing some of the smaller trees leaning.



Seep:	0-No	0-No	
Stormwater Runoff:	1-Yes		
Stormwater Inputs:	0-None	0-None	
Fallen Trees:	1-Yes		
Degradation:	3-Moderate		
Aggradation:	0-None		
Slumping:	1-Yes		
Additional Notes:	Classification? Moderate		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Gully behind neighborhood. Connects downstream to two other gully's. Very little vegetation. Trees in the middle are growing straight up, but trees on the banks are pistol shaped and appear to be leaning.		



## Photo 2 Image



Photo 1 View Direction

Downstream

Photo 1 Caption

Downstream view of left bank

#### **Photo 2 View Direction**

Downstream

## Photo 2 Caption

Downstream view of right bank. Residential run off pipe visible in the middle, runs down left bank.

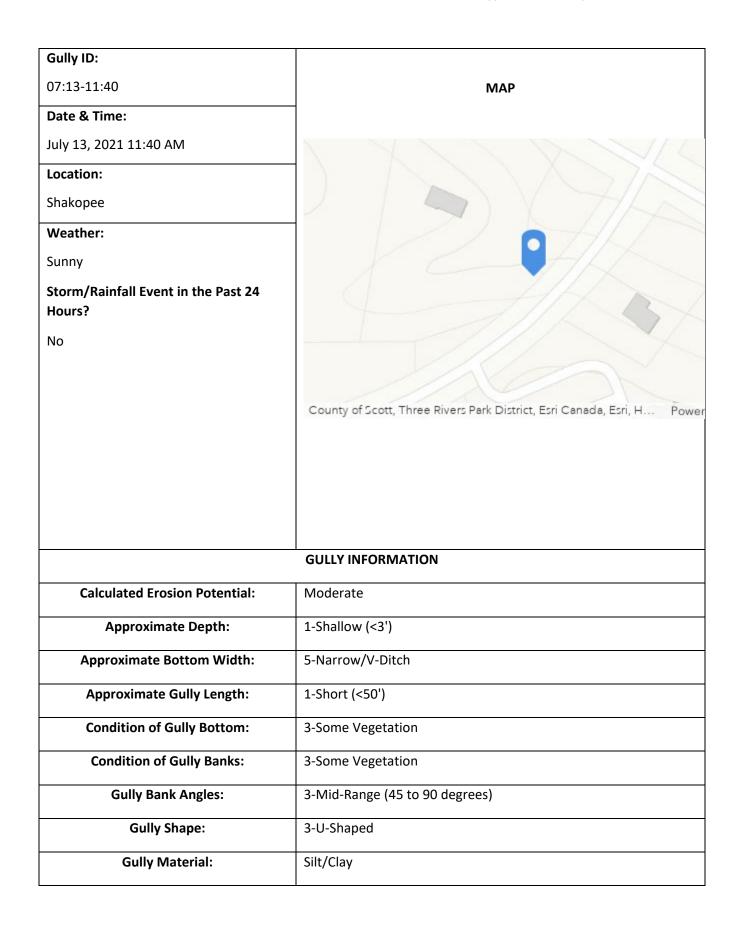


## Photo 3 View Direction

Upstream

# Photo 3 Caption

Upstream view from bottom of gully.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		3-Moderate
Aggradation:	0-None	
Slumping:		0-No
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Small gully which drains into a pipe Some pistol shaped trees are visible along with patches of bare soil that is degrading	



Photo 1 View Direction

Downstream

## Photo 1 Caption

Downstream view of gully. Lots of vegetation in the center, so pictures will not represent the site well Photo 2 View Direction
Downstream

Photo 2 Caption

View of the headcut of gully downstream.

## Photo 2 Image





## Photo 4 Image



Photo 3 View Direction

Downstream

## Photo 3 Caption

Downstream view of pipe which doesn't have much degradation around it.

#### **Photo 4 View Direction**

Downstream

## Photo 4 Caption

Downstream view of pistol shaped tree on right bank.

Gully ID:	
07:13-09:15	
	МАР
Date & Time:	
July 13, 2021 9:15 AM	
Location:	
Shakopee	
Weather:	
Sunny	
Storm/Rainfall Event in the Past 24 Hours?	
No	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	Moderate
Approximate Depth:	5-Deep (>15')
Approximate Bottom Width:	3-Medium (1'-5')
Approximate Gully Length:	5-Long (>100')
Condition of Gully Bottom:	1-Heavy Vegetation
Condition of Gully Banks:	3-Some Vegetation
Gully Bank Angles:	3-Mid-Range (45 to 90 degrees)
Gully Shape:	5-V-Shaped
Gully Material:	Silt/Clay

Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:		5-Severe
Aggradation:	0-None	
Slumping:	0-No	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Large gully running into the MN river. There are a ton of large trees in the gully, along with a huge dam type tree for,action. It looks like some were dumped here, but there are a lot still that appear to have fallen. Not much vegetation on banks.	



## Photo 2 Image



**Photo 1 View Direction** 

Downstream

#### Photo 1 Caption

Downstream view of right bank. Severe degradation is visible through the exposed roots around these trees.

#### **Photo 2 View Direction**

Downstream

## Photo 2 Caption

Downstream view of left bank. Picture shows heavy vegetation on bottom, and very little on banks.



## Photo 4 Image



Photo 3 View Direction

Upstream

#### **Photo 3 Caption**

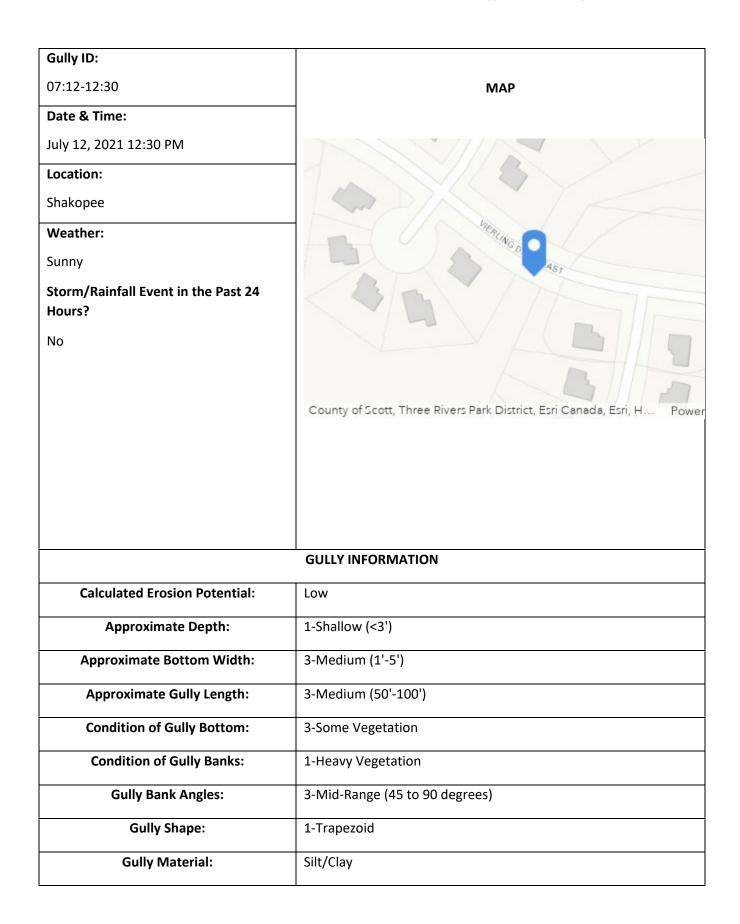
Upstream view of tree dam from right bank. There is also a tire thrown in the middle of the stack.

#### **Photo 4 View Direction**

Downstream

#### **Photo 4 Caption**

Downstream view from beginning of gully there area is shallow and very grassy. The tree dam is visible in the background.



Seep:	0-No	0-No	
Stormwater Runoff:	0-No		
Stormwater Inputs:			
Fallen Trees:	0-No		
Degradation:		3-Moderate	
Aggradation:	0-None		
Slumping:	0-No		
Additional Notes:	Classification? Low		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: This gully runs from a pond, through pipes under the road and to the other side. At the time of observation the gully was completely dry. The degradation is low expect by the smaller pipe outfall at the top of the right bank.		



Photo 1 View Direction
Upstream

#### Photo 1 Caption

Downstream view of gully from above large pipes.

Photo 2 View Direction

Photo 2 Caption

Downstream view of pipes that run under the road.

Photo 2 Image



Photo 3 View Direction
Downstream

**Photo 3 Caption** Downstream view of smaller pipe

#### Photo 4 Image

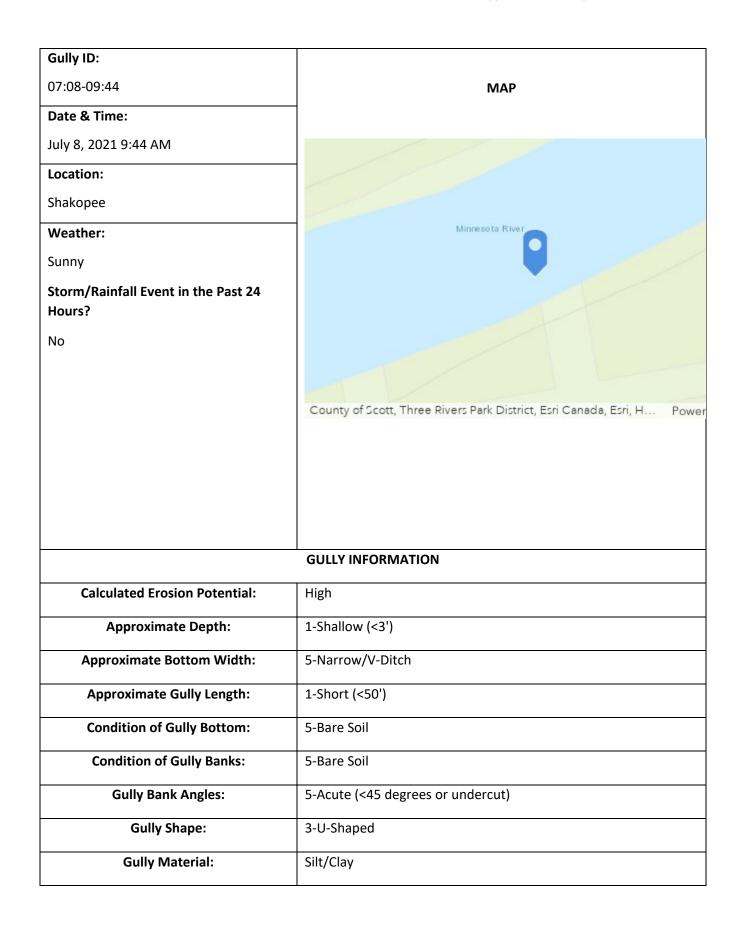


Photo 4 View Direction

Right Bank

#### **Photo 4 Caption**

View of right past bank area where moderate to severe erosion is happening near the smaller pipe.



Seep:	1-Yes	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:		5-Severe
Aggradation:	3-Moderate	
Slumping:	1-Yes	
Additional Notes:	Classification? High	
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Two seeps which created small gullies along the south bank of the mn river. These should be of concern as they are directly depositing sediment into the river and seem to be degrading quickly.	



# Photo 2 Image



Photo 1 View Direction

Downstream

#### Photo 1 Caption

Downstream view of small seep gully on the left.

# Photo 2 View Direction

Downstream

#### Photo 2 Caption

Downstream view of small seep gully on the right.

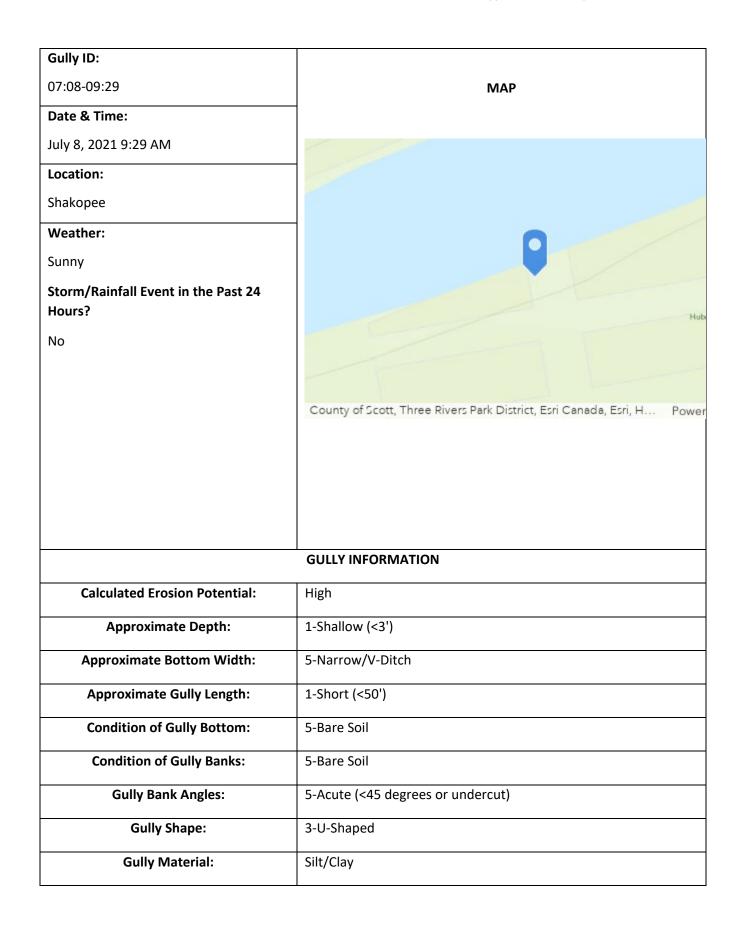


#### **Photo 3 View Direction**

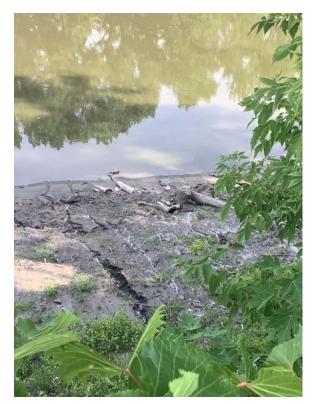
Right Bank

#### Photo 3 Caption

Sidestream view of the right bank of both gullies. The left side gully is the closer of the two, and the right side gully is the farther one.



Seep:	1-Yes		
Stormwater Runoff:	1-Yes	1-Yes	
Stormwater Inputs:	0-None		
Fallen Trees:	0-No		
Degradation:	5-Severe		
Aggradation:	3-Moderate		
Slumping:	1-Yes		
Additional Notes:	Classification? High		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Small gully's running through clay/silt on bank of MN river. There is a broken pipe that appears to have drained straight into the river before it was broken but down drains ,UCB earlier and could be the cause of so,r of these mini gullies.		



#### Photo 2 Image



Photo 1 View Direction
Downstream

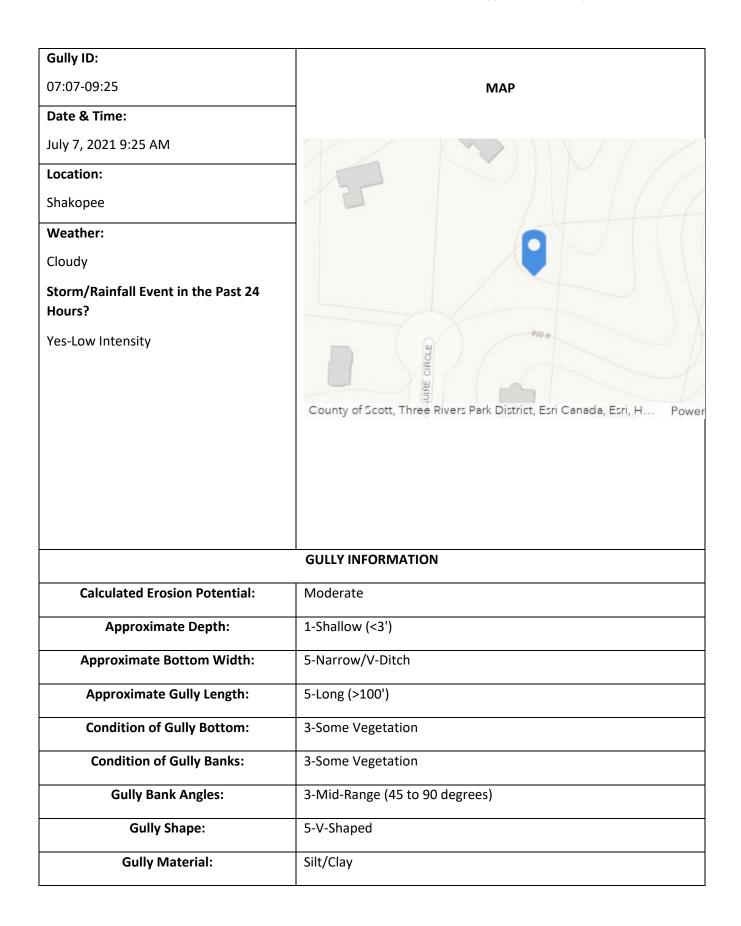
#### Photo 1 Caption

Downstream view of mini gullies and broken pipe.

Photo 2 View Direction
Downstream

Photo 2 Caption

Downstream view of where pipe outfall broke and now drains.



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	1-Yes	
Degradation:	3-Moderate	
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? Moderate	
	Presence of Water? No	
	Quantity of Water?	
	Notes/Comments: Gully running between two dirt trails behind houses. The headcut looks to have some armoring from rocks and stumps.	



Photo 2 Image



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view from trail. Photo 2 View Direction
Downstream

**Photo 2 Caption** Downstream view of fallen tree.



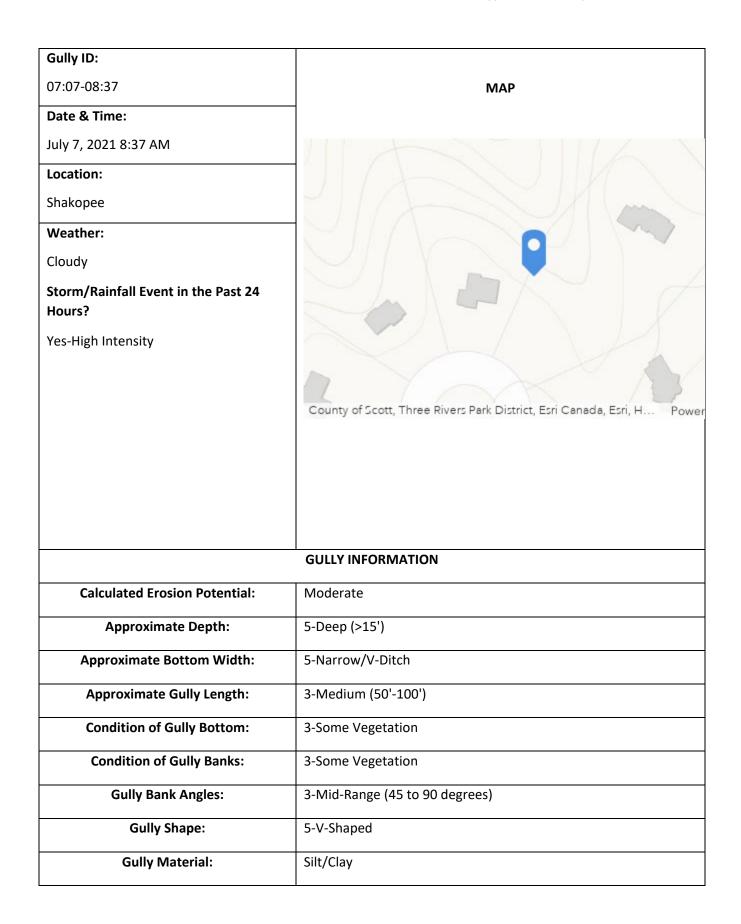
Photo 3 View Direction
Upstream

Photo 3 Caption Upstream view of slight armoring at headcut. Photo 4 Image



Photo 4 View Direction
Downstream

Photo 4 Caption
Downstream view of bank angle.



Seep:	0-No		
Stormwater Runoff:	0-No	0-No	
Stormwater Inputs:			
Fallen Trees:	1-Yes		
Degradation:	1-Low		
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification? Moderate		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Gully running in woods between houses. Lots of vegetation and some trees slumping over the channel.		



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream left bank. Photo 2 Image



Photo 2 View Direction
Downstream

Photo 2 Caption Downstream right bank view.

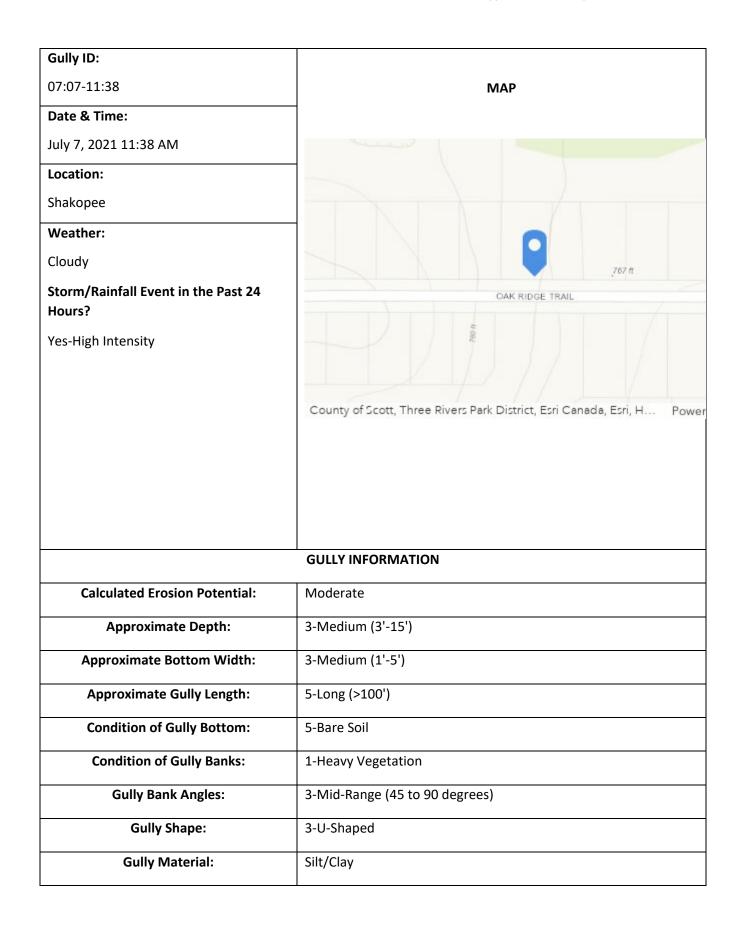


#### Photo 3 View Direction

Upstream

# Photo 3 Caption

Upstream view where gully begins and is less deep.



Seep:	0-No		
Stormwater Runoff:	1-Yes	1-Yes	
Stormwater Inputs:	3-Low Flow		
Fallen Trees:	0-No		
Degradation:		3-Moderate	
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification	? Moderate	
	Presence of V	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving		
	Notes/Comments: Pipe goes under road with flow of water. Hanging roots along the side, another pipe further downstream		



Photo 1 View Direction
Downstream

Photo 1 Caption Full gully Photo 2 Image



Photo 2 View Direction Upstream

**Photo 2 Caption** Full gully

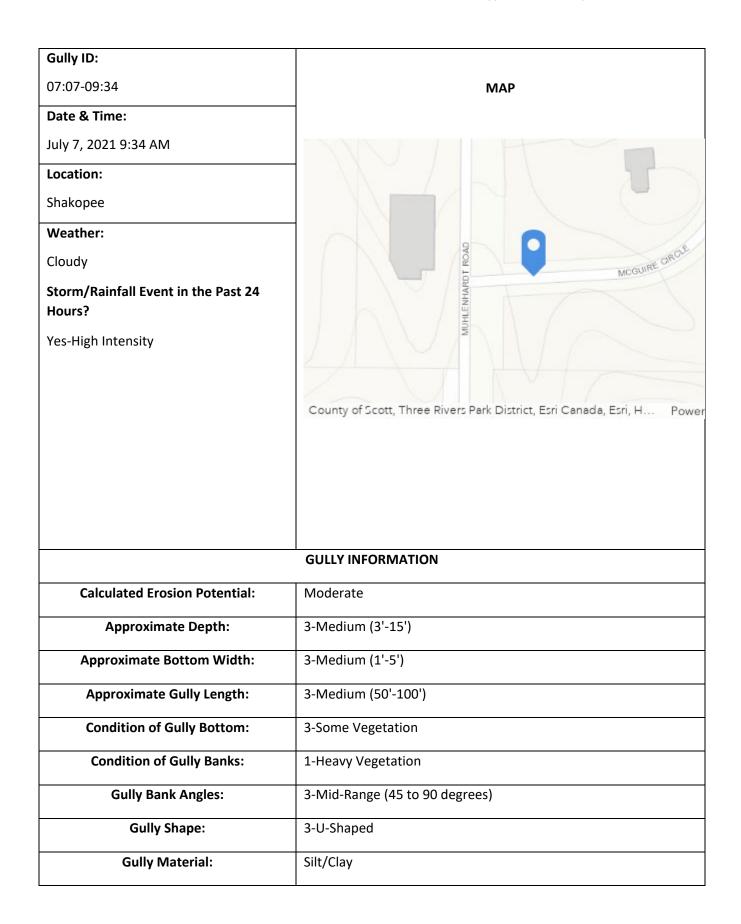


#### **Photo 3 View Direction**

Upstream

Photo 3 Caption

Pipe under road



Seep:	0-No		
Stormwater Runoff:	1-Yes	1-Yes	
Stormwater Inputs:	0-None	0-None	
Fallen Trees:	1-Yes		
Degradation:	3-Moderate		
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification? Moderate		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Gully off side of road that goes along road, pipe that goes under road leads into gully, nothing coming out of it		



Photo 1 View Direction
Upstream

**Photo 1 Caption** Pipe on right bank

# Photo 2 Image



Photo 2 View Direction Upstream

**Photo 2 Caption** Right bank

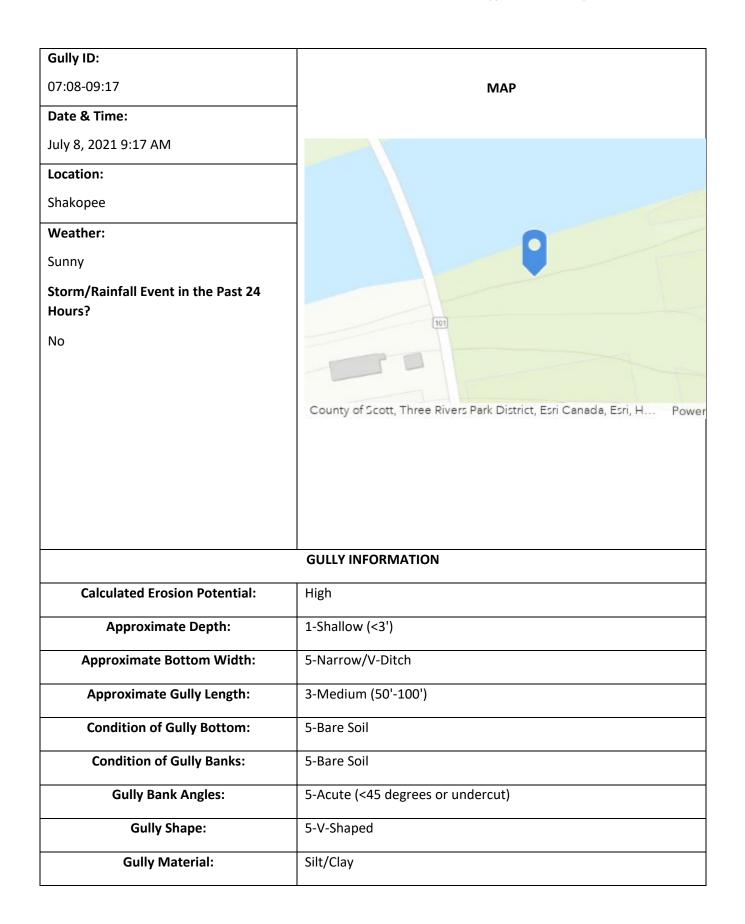


#### **Photo 3 View Direction**

Upstream

# Photo 3 Caption

Left bank



Seep:	0-No	
Stormwater Runoff:	0-No	
Stormwater Inputs:		
Fallen Trees:	0-No	
Degradation:		5-Severe
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? High	
	Presence of Water? Yes	
	Quantity of Water? Puddles/Stagnant	
	Notes/Comments: Feeds directly into river, some hanging roots, lots of erosion and undercutting	



Photo 1 View Direction

Downstream

Photo 1 Caption

Top of gully

# Photo 2 Image



#### Photo 2 View Direction

Downstream

Photo 2 Caption

Left bank

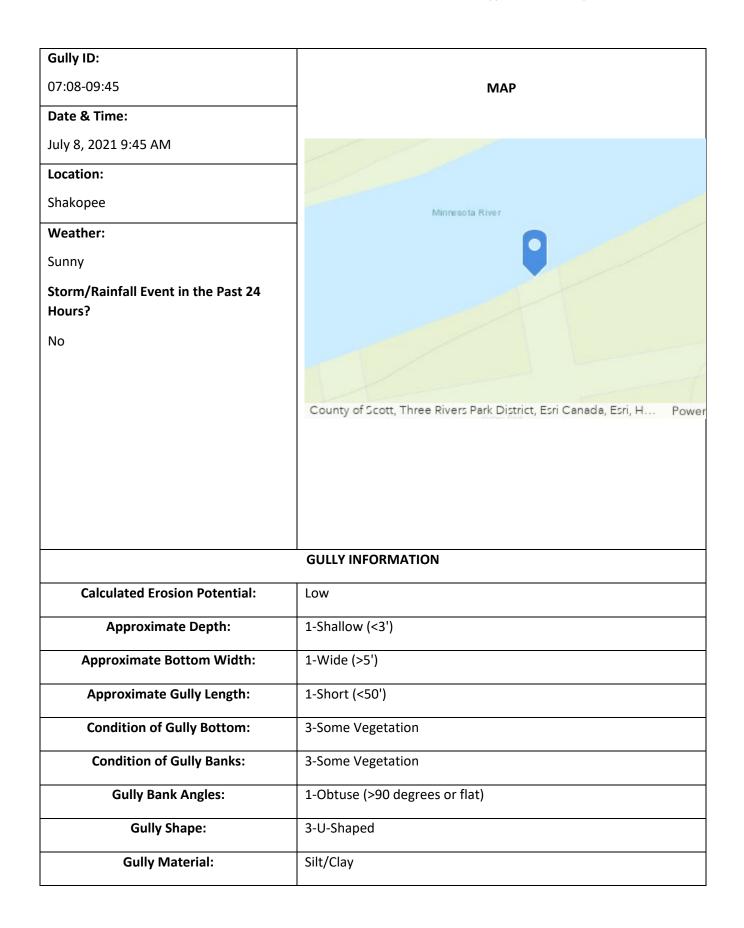


#### Photo 3 View Direction

Downstream

Photo 3 Caption

Empties into river



Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	1-Dripping	
Fallen Trees:	0-No	
Degradation:	1-Low	
Aggradation:	1-Low	
Slumping:	0-No	
Additional Notes:	Classification? Low	
	Presence of Water? Yes	
	Quantity of Water? Trickle/Slow Moving	
	Notes/Comments: Pipe that leads out to a bunch of boulders armoring the gully. Weeds growing along the bottom, not much degradation	



Photo 1 View Direction
Downstream

Photo 1 Caption Full gully

# Photo 2 Image



Photo 2 View Direction
Downstream

Photo 2 Caption
Pipe with water trickling out

Gully ID:	
07:08-09:58	МАР
Date & Time:	
July 8, 2021 9:58 AM	
Location:	
Shakopee	
Weather:	
Sunny	
Storm/Rainfall Event in the Past 24 Hours?	
No	County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
	GULLY INFORMATION
Calculated Erosion Potential:	High
Approximate Depth:	3-Medium (3'-15')
Approximate Bottom Width:	5-Narrow/V-Ditch
Approximate Gully Length:	1-Short (<50')
Condition of Gully Bottom:	5-Bare Soil
Condition of Gully Banks:	5-Bare Soil
Gully Bank Angles:	5-Acute (<45 degrees or undercut)
Gully Shape:	5-V-Shaped
Gully Material:	Silt/Clay

Seep:	0-No	
Stormwater Runoff:	1-Yes	
Stormwater Inputs:	5-High Flow	
Fallen Trees:	0-No	
Degradation:	5-Severe	
Aggradation:	1-Low	
Slumping:	1-Yes	
Additional Notes:	Classification? High	
	Presence of Water? Yes	
	Quantity of Water? Torrent/Fast Moving	
	Notes/Comments: Pipe hose thing spraying water from above, heavy degradation and hanging roots, slumling trees, leads into pond	



Photo 2 Image



Photo 1 View Direction
Upstream

Photo 1 Caption
Pipe exiting heavy flow of water

Photo 2 View Direction
Upstream

Photo 2 Caption Left bank



Photo 3 View Direction
Upstream

Photo 3 Caption

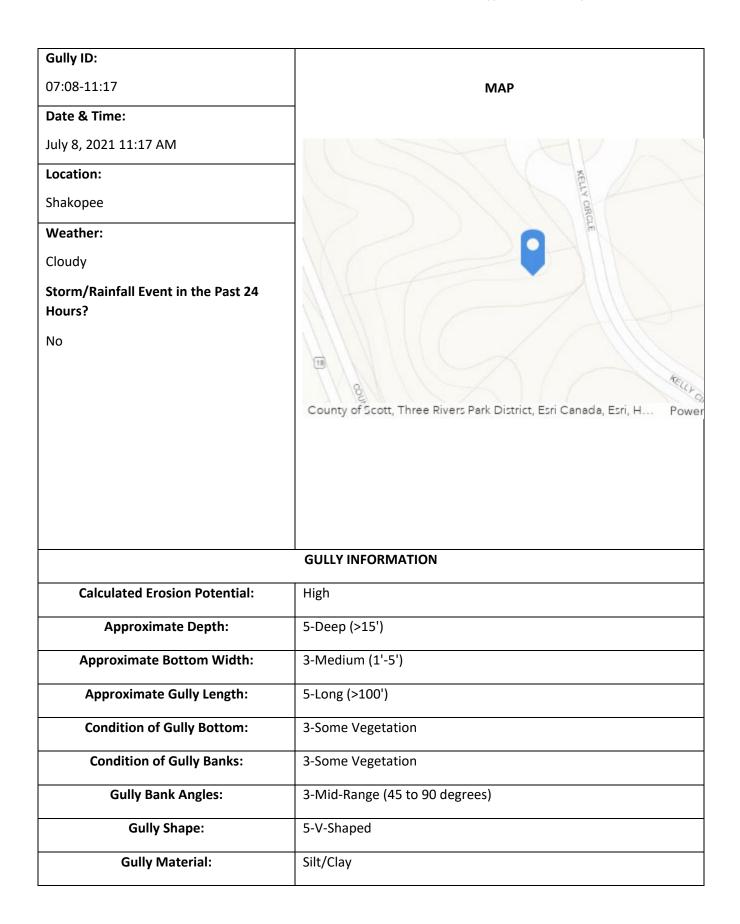
Right bank

# Photo 4 Image



Photo 4 View Direction
Downstream

Photo 4 Caption Pond where water flows



Seep:	0-No		
Stormwater Runoff:	0-No	0-No	
Stormwater Inputs:			
Fallen Trees:	1-Yes		
Degradation:	5-Severe		
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification? High		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Large gully which has a smaller gully connecting to it on other left bank. Starts very narrow them becomes a little wider after about 20 feet.		



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view of left bank.

# Photo 2 Image



Photo 2 View Direction
Downstream

**Photo 2 Caption** Downstream view of right bank.



### Photo 4 Image



Photo 3 View Direction

Upstream

### **Photo 3 Caption**

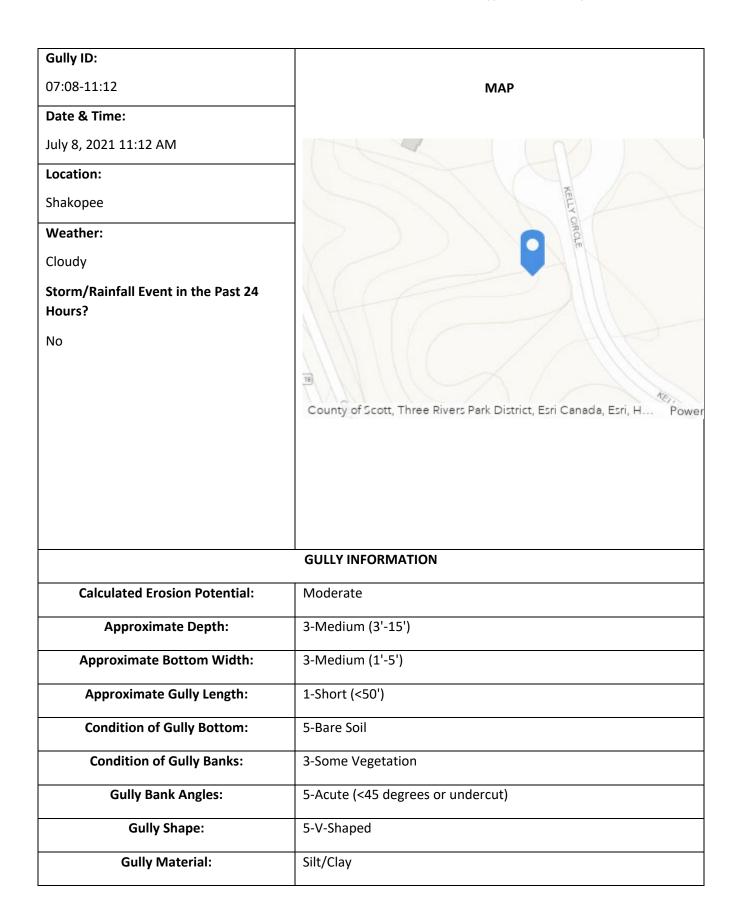
Upstream view of area where the gully is narrower, the tree on the left edge of the photo is where the small gully connects to this larger one.

#### **Photo 4 View Direction**

Left Bank

### **Photo 4 Caption**

Left bank view of degradation, slumping and pistol shaped trees.



Seep:	0-No		
Stormwater Runoff:	0-No	0-No	
Stormwater Inputs:			
Fallen Trees:	1-Yes		
Degradation:	3-Moderate		
Aggradation:	1-Low		
Slumping:	0-No		
Additional Notes:	Classification? Moderate		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Small gully which leads into the right bank of a larger gully. This area was hard to photograph with the vegetation present.		



Photo 1 View Direction
Downstream

**Photo 1 Caption** Downstream view of right gully bank.

# Photo 2 Image



Photo 2 View Direction
Downstream

**Photo 2 Caption** Downstream view of left gully bank



Photo 3 View Direction
Downstream

Photo 3 Caption Downstream view of center

# Photo 4 Image



Photo 4 View Direction Upstream

Photo 4 Caption

Upstream view of small gully from bottom of large gully.

07:13-11:25MAPDate & Time:July 13, 2021 11:25 AMLocation:ShakopeeWeather:SunnyStorm/Rainfall Event in the Past 24 Hours?No	Gully ID:	
Date & Time:         July 13, 2021 11:25 AM         Location:         Shakopee         Weather:         Sumy         Storm/Rainfall Event in the Past 24         Hours?         No         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H         Power         Approximate Bottom Width:         S	Gully ID:	
July 13, 2021 11:25 AM         Location:         Shakopee         Weather:         Sunny         Storm/Rainfall Event in the Past 24         Hours?         No         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Calculated Erosion Potential:         High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         Approximate Gully Length:       3-Some Vegetation         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped		МАР
Location:       Shakopee         Weather:       Sunny         Storm/Rainfall Event in the Past 24       For any of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         No       County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Scoutty INFORMATION         Condition Potential:       High         Approximate Bottom Width:       S-Narrow/V-Ditch         Approximate Gully Length:       S-Long (>100')         Condition of Gully Banks:       3-Some Vegetation         Gully Bank Angles:       S-Acute (<45 degrees or undercut)         Gully Shape:       S-V-Shaped	Date & Time:	
Shakopee         Weather:         Sunny         Storm/Rainfall Event in the Past 24         Hours?         No         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Iong (>100')         Condition of Gully Bottom:       3-Some Vegetation         Condition of Gully Banks:       3-Some Vegetation         Gully Shape:       5-V-Shaped	July 13, 2021 11:25 AM	1 / / / ///
Weather:         Sunny         Storm/Rainfall Event in the Past 24         Hours?         No         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         S-Narrow/V-Ditch       S-Iong (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Location:	
Sunny         Storm/Rainfall Event in the Past 24         Hours?         No         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         S-Narrow/V-Ditch       S-Iong (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Shakopee	
Storm/Rainfall Event in the Past 24       Image: Control of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         No       County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         GULLY INFORMATION         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         Approximate Gully Length:       5-Long (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Weather:	
Hours?       No         No       County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         Culty INFORMATION         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         Approximate Gully Length:       5-Long (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Sunny	
County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power         GULLY INFORMATION         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         Approximate Gully Length:       5-Long (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Hours?	
GULLY INFORMATION         Calculated Erosion Potential:       High         Approximate Depth:       1-Shallow (<3')         Approximate Bottom Width:       5-Narrow/V-Ditch         Approximate Gully Length:       5-Long (>100')         Condition of Gully Bottom:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	No	
Calculated Erosion Potential:HighApproximate Depth:1-Shallow (<3')		County of Scott, Three Rivers Park District, Esri Canada, Esri, H Power
Approximate Depth:1-Shallow (<3')		GULLY INFORMATION
Approximate Bottom Width:5-Narrow/V-DitchApproximate Gully Length:5-Long (>100')Condition of Gully Bottom:3-Some VegetationCondition of Gully Banks:3-Some VegetationGully Bank Angles:5-Acute (<45 degrees or undercut)Gully Shape:5-V-Shaped	Calculated Erosion Potential:	High
Approximate Gully Length:       5-Long (>100')         Condition of Gully Bottom:       3-Some Vegetation         Condition of Gully Banks:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Approximate Depth:	1-Shallow (<3')
Condition of Gully Bottom:3-Some VegetationCondition of Gully Banks:3-Some VegetationGully Bank Angles:5-Acute (<45 degrees or undercut)	Approximate Bottom Width:	5-Narrow/V-Ditch
Condition of Gully Banks:       3-Some Vegetation         Gully Bank Angles:       5-Acute (<45 degrees or undercut)         Gully Shape:       5-V-Shaped	Approximate Gully Length:	5-Long (>100')
Gully Bank Angles:     5-Acute (<45 degrees or undercut)       Gully Shape:     5-V-Shaped	Condition of Gully Bottom:	3-Some Vegetation
Gully Shape:     5-V-Shaped	Condition of Gully Banks:	3-Some Vegetation
	Gully Bank Angles:	5-Acute (<45 degrees or undercut)
Gully Material: Sand	Gully Shape:	5-V-Shaped
	Gully Material:	Sand

Seep:	0-No		
Stormwater Runoff:	0-No	0-No	
Stormwater Inputs:			
Fallen Trees:	0-No		
Degradation:	5-Severe		
Aggradation:	1-Low		
Slumping:	1-Yes		
Additional Notes:	Classification? High		
	Presence of Water? No		
	Quantity of Water?		
	Notes/Comments: Long narrow gully, hanging roots and slumping vegetation, some small rocks along the banks but mostly soil, lots of wood and branches in the bottom		



Photo 1 View Direction

Upstream

Photo 1 Caption

Gully

# Photo 2 Image



Photo 2 View Direction
Downstream

### Photo 2 Caption

Gully

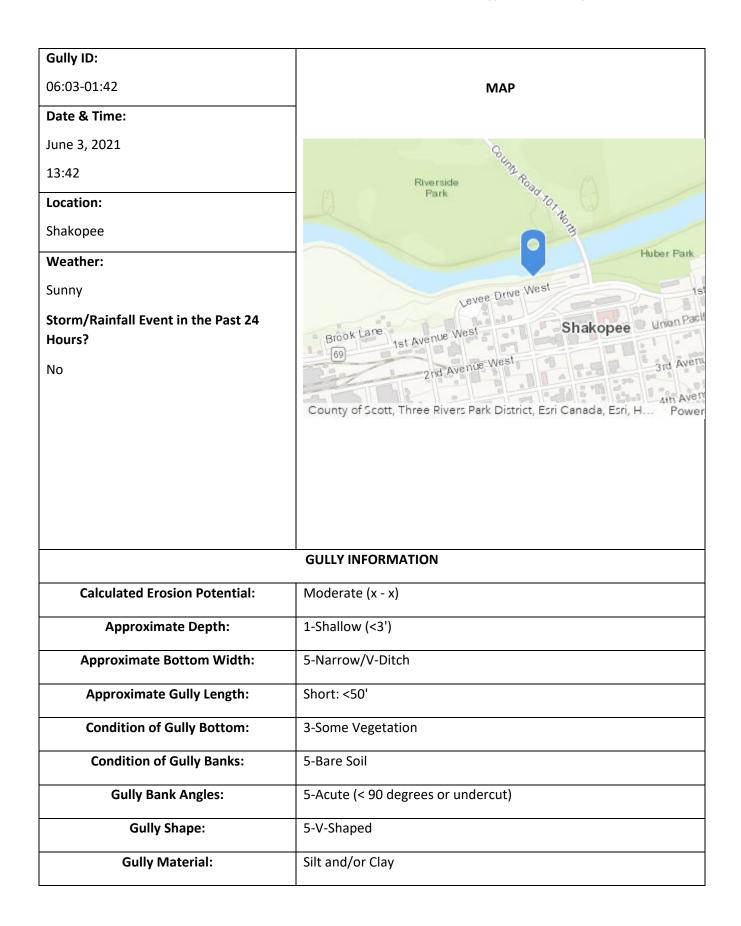


#### **Photo 3 View Direction**

Downstream

# Photo 3 Caption

Further downstream



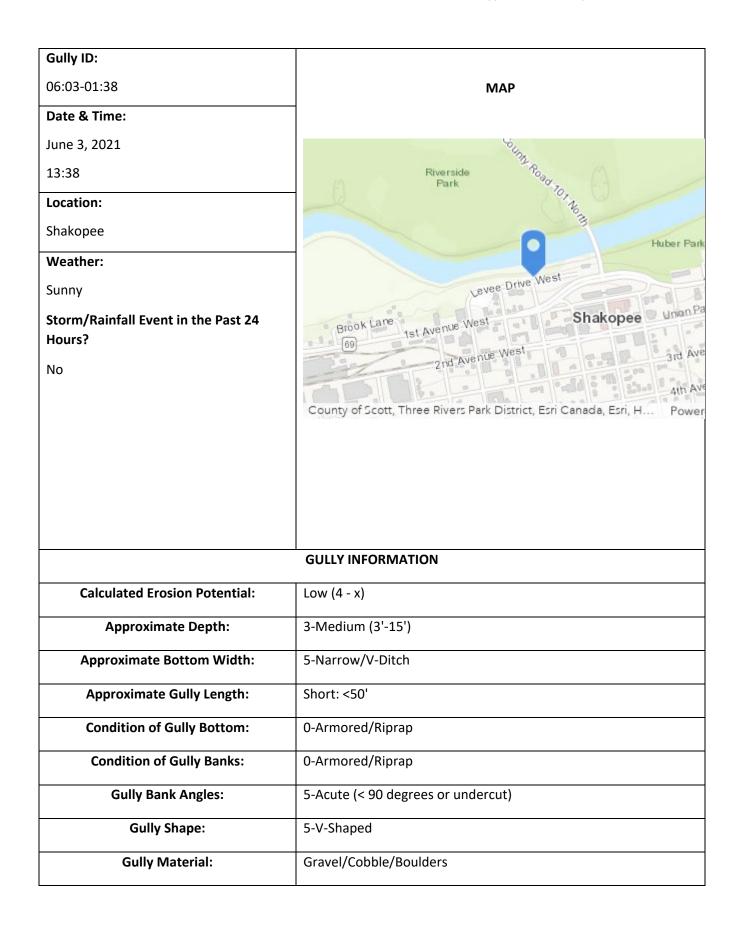
Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:	0-No degradation	
Aggradation:		0-No aggradation
Slumping:		0-No slumping
Additional Notes:	Classification? Moderate (x - x)	
	Notes/Comments: Small gully next to sewer hole.	



Photo1 View Direction: View Upstream

Photo1 Caption

View of small gully in front of sewer hole. Gully begins we're rip rap is and is only a couple feet long.



Seep:	No	No	
Stormwater Inputs:	0-Not present		
Fallen Trees:	No		
Degradation:	1-Low		
Aggradation:		0-No aggradation	
Slumping:		0-No slumping	
Additional Notes:	Classification? Low (4 - x) Notes/Comments: Comes out from concrete pipe, goes to boulders into the MN river.		



Photo1 View Direction: View Downstream

Photo1 Caption Downstream view of right bank.

#### Photo2



Photo2 View Direction: View Downstream

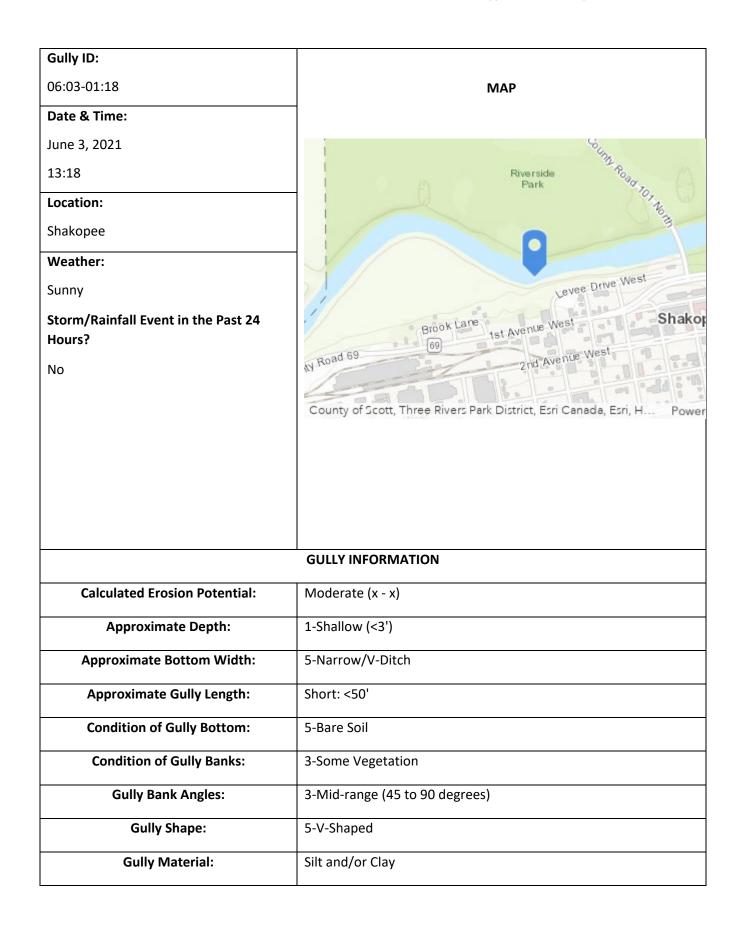
Photo2 Caption Downstream view of left bank.



Photo3 View Direction: View Upstream

### Photo3 Caption

Pipe and concrete area where the water flows from upstream.



Seep:	No		
Stormwater Inputs:	0-Not present	0-Not present	
Fallen Trees:	No		
Degradation:	3-Moderate		
Aggradation:	0-No aggradation		
Slumping:	0-No slumping		
Additional Notes:	Classification? Moderate (x - x)		
	Notes/Comments: Very close to river, with some obvious erosion. Vegetation on banks, but little to none on bottom.		



Photo1 View Direction: View Upstream

Photo1 Caption Upstream view of left bank.

#### Photo2



Photo2 View Direction: View Upstream

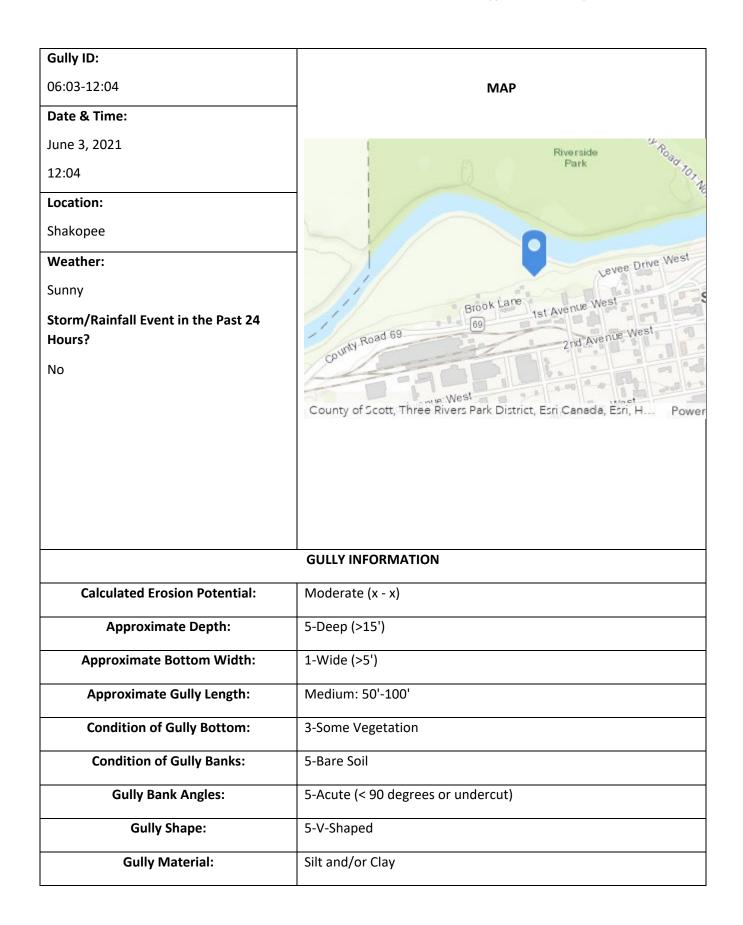
Photo2 Caption Upstream view of right bank.



Photo3 View Direction: View Downstream

Photo3 Caption

View of downstream.



Seep:	No		
Stormwater Inputs:	0-Not presen	t	
Fallen Trees:	Yes		
Degradation:		3-Moderate	
Aggradation:		0-No aggradation	
Slumping:		1-Low	
Additional Notes:	Classification	Classification? Moderate (x - x)	
	-	Notes/Comments: Other side of another gully across the trail, pipes downstream, steep slopes and bare soil on sides	



Photo1 View Direction: View Upstream

Photo1 Caption

Upstream view of left bank.

#### Photo2

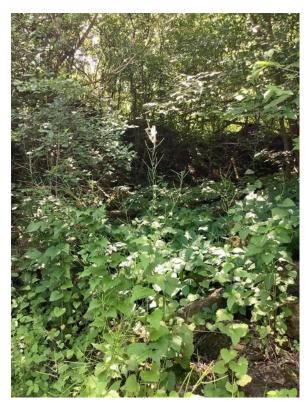


Photo2 View Direction: View Upstream

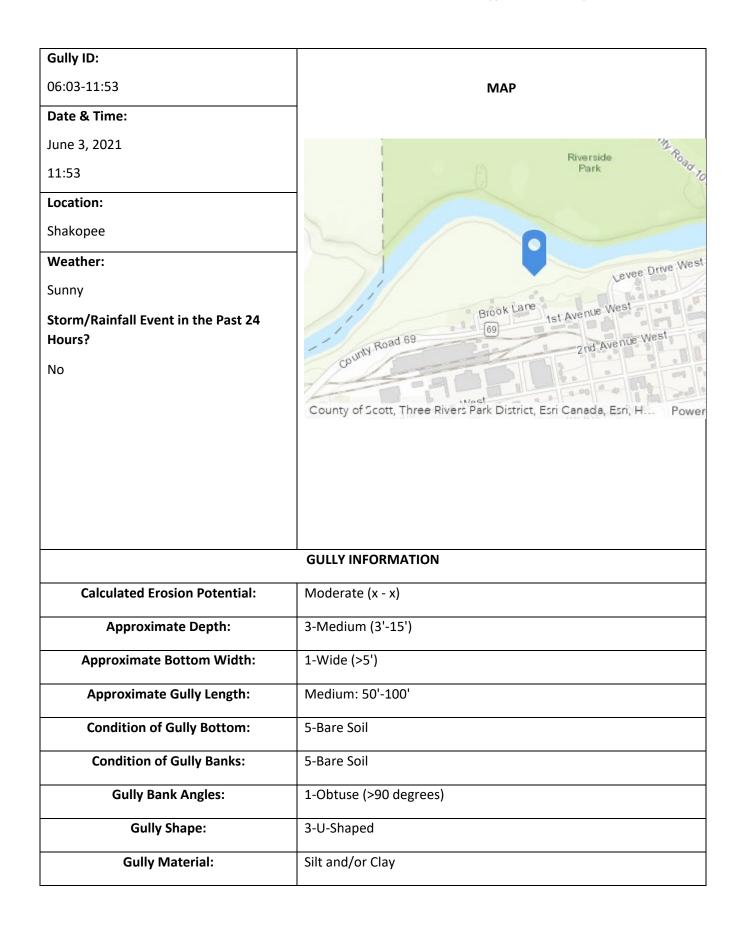
Photo2 Caption Upstream view of right bank.



Photo3 View Direction: View Upstream

Photo3 Caption

Upstream view of pipes.



Seep:	No		
Stormwater Inputs:	0-Not present	0-Not present	
Fallen Trees:	No		
Degradation:		0-No degradation	
Aggradation:	0-No aggradation		
Slumping:	1-Low		
Additional Notes:		Classification? Moderate (x - x)	
	Notes/Comments: Very wide with no signs of water, but pipe at top. Minor slumping of trees, and close to other gullies found		



Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of right bank.

### Photo2



Photo2 View Direction: View Downstream

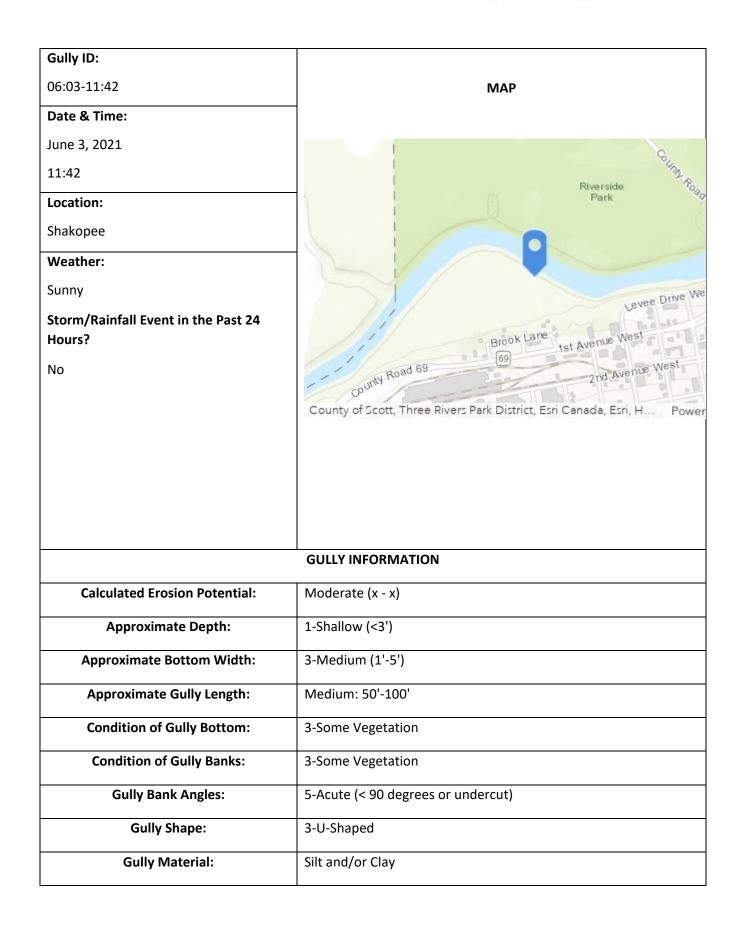
Photo2 Caption Downstream view of left bank.



Photo3 View Direction: View Upstream

### Photo3 Caption

Pipe goes under trail, can see through to the other side



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		5-Severe
Aggradation:	0-No aggradation	
Slumping:	0-No slumping, 5-Severe	
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Gully that is actively eroding, no traces of water or any pipe outfalls and some vegetation on banks and bottom.	



Photo1 View Direction: View Downstream

**Photo1 Caption** 

View front on top of head cut, can see active erosion on banks.

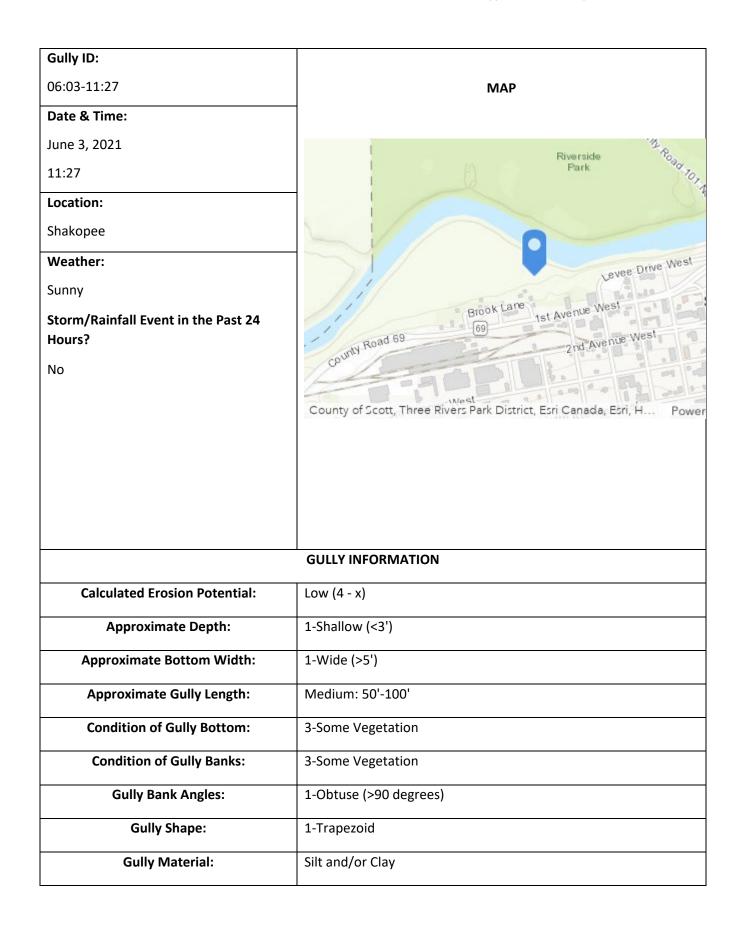
Photo2



Photo2 View Direction: View Upstream

**Photo2 Caption** 

View of eroding head cut from downstream in bottom of gully.



Seep:	No		
Stormwater Inputs:	0-Not present	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: Two sewer pipes from right off trail, connects to gully downstream from pipe outfall with high water flow. No water flow, vegetation growing right in front of pipes and area seems very dry.		



Photo1 View Direction: View Upstream

**Photo1** Caption

Outfall pipes right under trail, heavy vegetation in front of outfall.

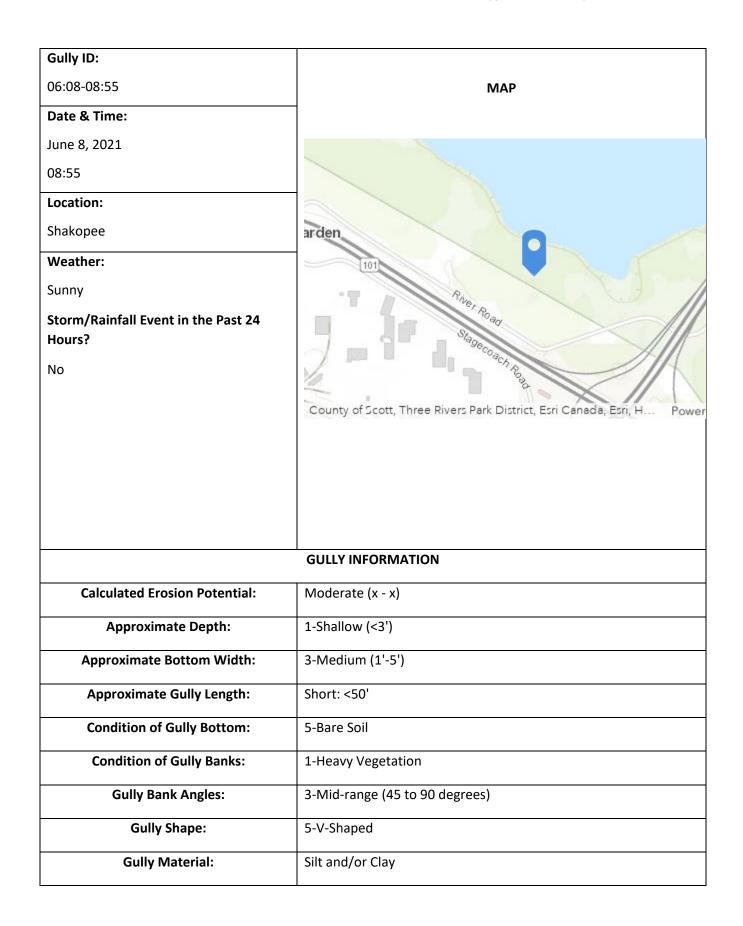
Photo2



Photo2 View Direction: View Downstream

**Photo2 Caption** 

View showing wide shallow banks with little vegetation.



Seep:	No	
Stormwater Inputs:	2-Low flow	
Fallen Trees:	No	
Degradation:		5-Severe
Aggradation:	1-Low	
Slumping:	3-Moderate	
Additional Notes:	Classification? Moderate (x - x)	
	Notes/Comments: Pipe outfall underneath hwy 101. Constant	
	flow of water, and heavy degradation with grass roots hanging	
	down. Moderate tree slumping. Downstream, another pipe goes under road and connects to other side, but was difficult to access	



Photo1 View Direction: View Upstream

Photo1 Caption

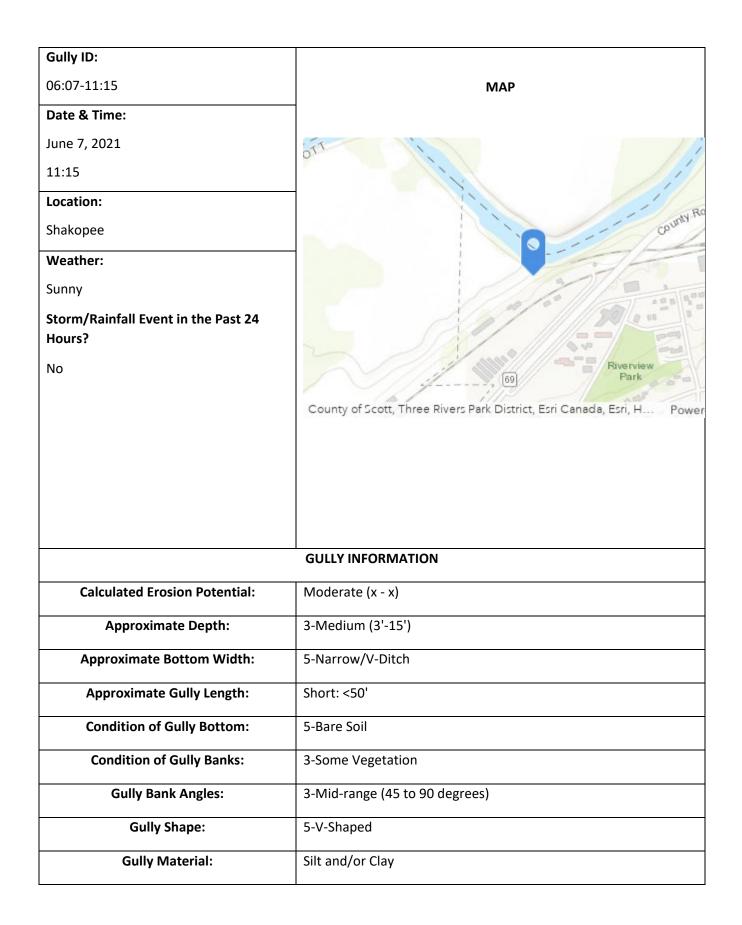
Upstream view of right bank.

Photo2



Photo2 View Direction: View Upstream

Photo2 Caption Upstream view of left bank.



Seep:	No	
Stormwater Inputs:	2-Low flow	
Fallen Trees:	Yes	
Degradation:		3-Moderate
Aggradation:		1-Low
Slumping:		1-Low
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Pipe exits water, trees fallen into gully with constant stream leading directly into MN river. Not much vegetation on the banks	



Photo1 View Direction: View Upstream Photo1 Caption Upstream view of pipe outfall at top of gully.

# Photo2



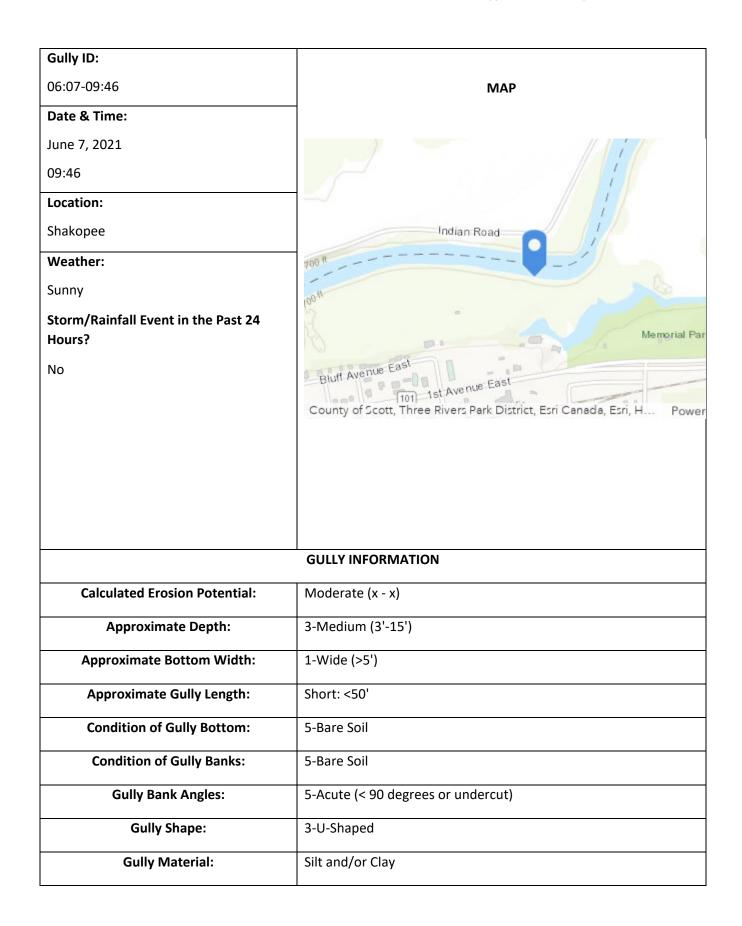
Photo2 View Direction: View Downstream Photo2 Caption Downstream view of left bank.



Photo3 View Direction: View Downstream

**Photo3 Caption** 

Downstream view of right bank.



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		1-Low
Aggradation:	0-No aggradation	
Slumping:	0-No slumping	
Additional Notes:	Classification? Moderate (x - x)	
	Notes/Comments: Hanging pipe, exits directly into the river, no vegetation on banks	

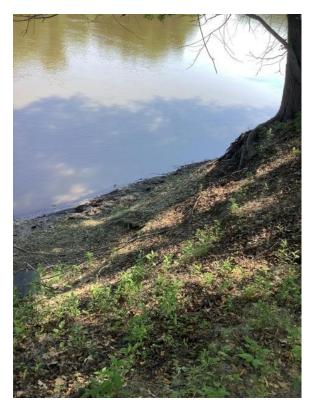


Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of right bank.

#### Photo2

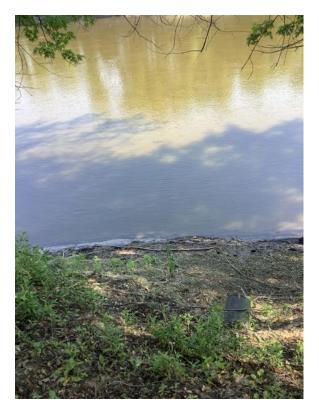
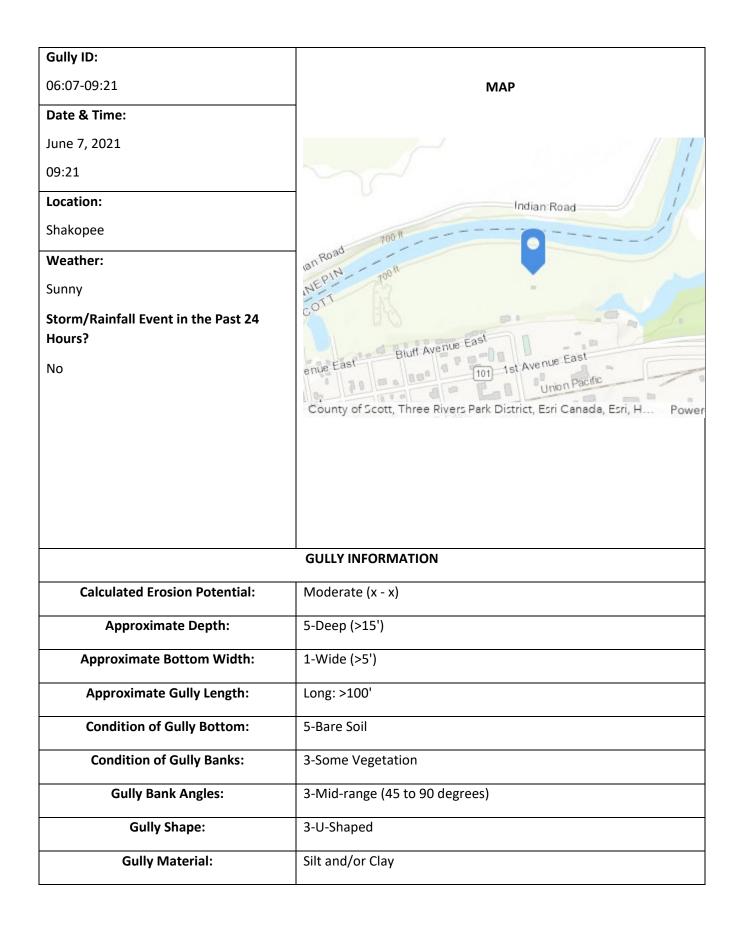


Photo2 View Direction: View Downstream

Photo2 Caption Downstream view of left bank.



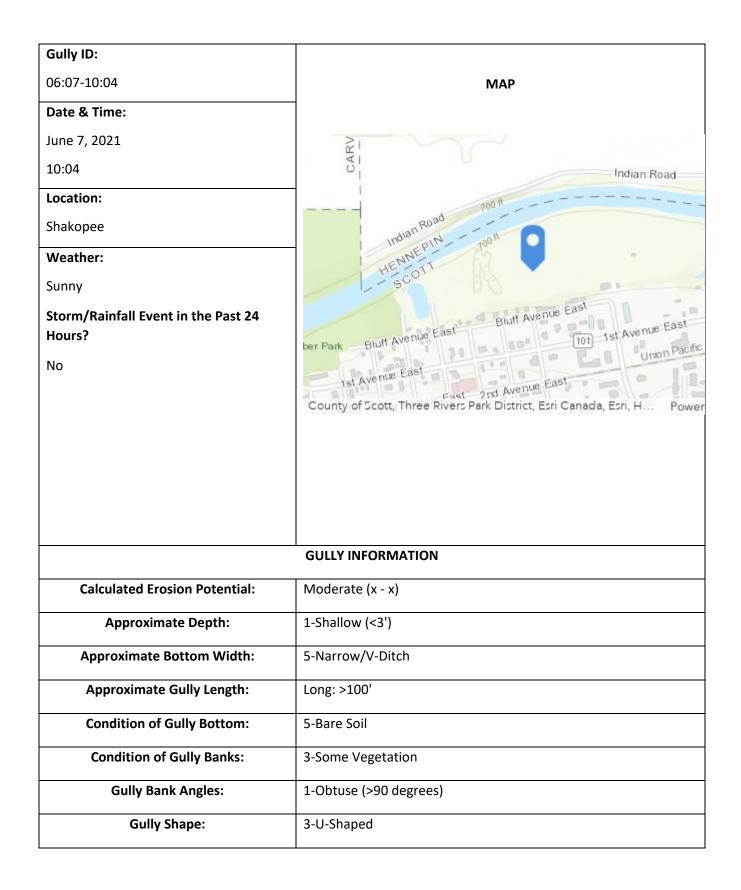
Seep:	No	
Stormwater Inputs:	0-Not present	t
Fallen Trees:	No	
Degradation:		0-No degradation
Aggradation:		0-No aggradation
Slumping:		1-Low
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Further down area of gully with pipe outfall, big pipe at end connecting to other side. Water moving at decent pace.	



# Photo1 Caption

Downstream view of entire gully and pipe connecting.

Photo1 View Direction: View Downstream



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? Moderate (x - x) Notes/Comments: Stream off of pond, we believe this stream connects to the gully downstream. Lots of vegetation upstream on the banks.	



Photo1 View Direction: View Downstream

## **Photo1** Caption

View downstream from pond, can see lots of vegetation on the left bank and little on the right.

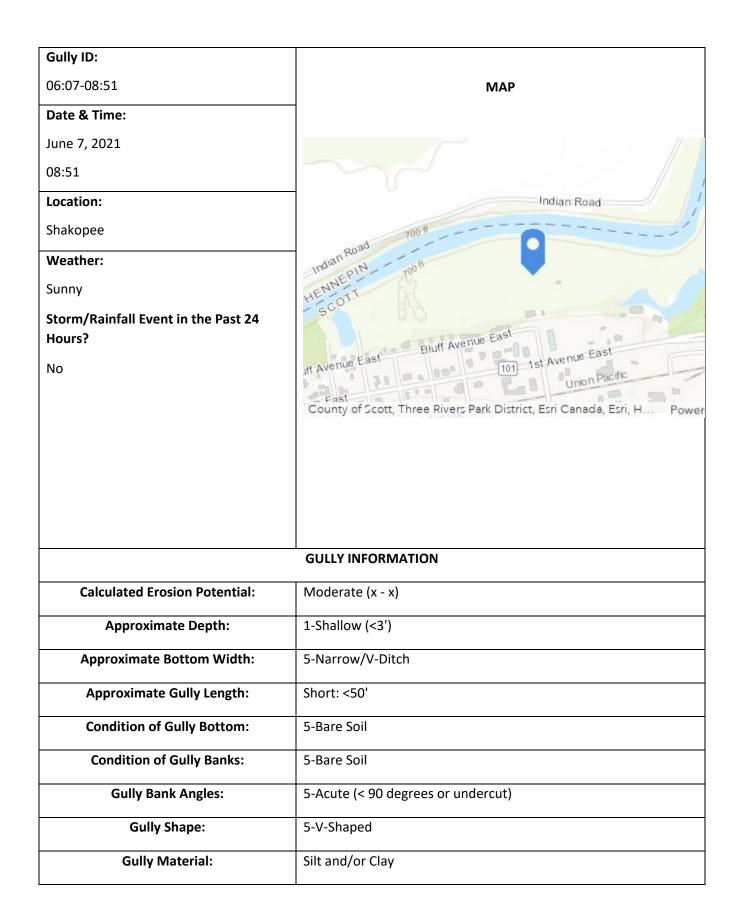
#### Photo2



Photo2 View Direction: View Upstream

#### **Photo2 Caption**

Upstream view where stream connects to its source pond.



Seep:	No		
Stormwater Inputs:	0-Not present	0-Not present	
Fallen Trees:	No	No	
Degradation:		5-Severe	
Aggradation:	0-No aggradation		
Slumping:	0-No slumping		
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Severely hanging pipe with know current water flow which drains into larger creek. Lots of exposed roots in gully.		



Photo1 View Direction: View Upstream

View of hanging pipe from across the creek. Lots of visible erosion as a large amount of the pipe is exposed.

Photo1 Caption

Gully ID:	
06:10-11:25	МАР
Date & Time:	
June 10, 2021	700 m
11:25	American
Location:	
Shakopee	
Weather:	
Sunny	NAL SIN
Storm/Rainfall Event in the Past 24	CO1.
Hours?	
No	
	County of Scott, Three Rivers Park District, Esri Canada, Esri, H 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:	Long: >100'
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:	0-Not present	0-Not present	
Fallen Trees:	Yes	Yes	
Degradation:		1-Low	
Aggradation:		1-Low	
Slumping:		3-Moderate	
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Large gully with lots of fallen trees. Heavy		
	vegetation on banks, light on bottom. Decent amount of slumping		

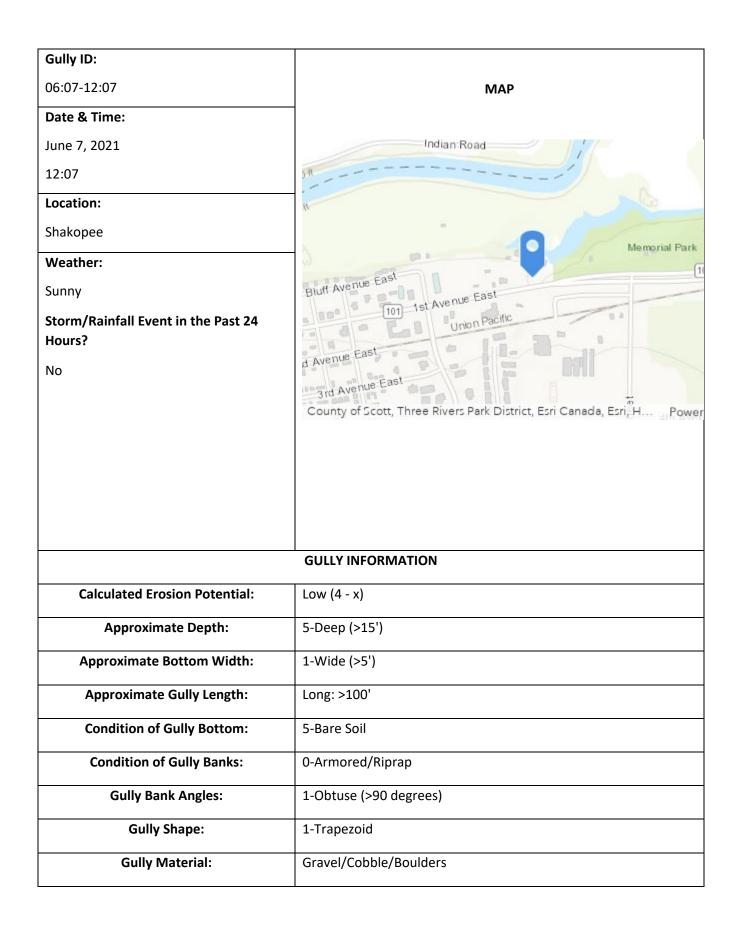


Photo1 View Direction: View Upstream Photo1 Caption Upstream view of left bank.

## Photo2



Photo2 View Direction: View Upstream Photo2 Caption Upstream view of right bank



Seep:	No	
Stormwater Inputs:	2-Low flow	
Fallen Trees:	No	
Degradation:		0-No degradation
Aggradation:		0-No aggradation
Slumping:	0-No slumping	
Additional Notes:	Classification? Low (4 - x) Notes/Comments: Armored gully under bridge. Very little vegetation.	



Photo1 View Direction: View Upstream

**Photo1 Caption** 

Upstream view of gully, armored banks are visible.

Photo2

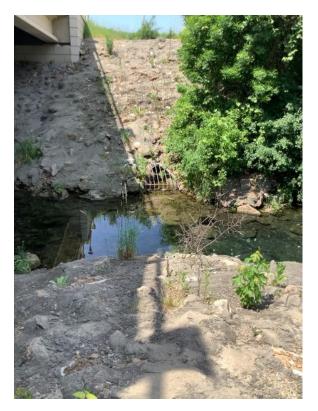
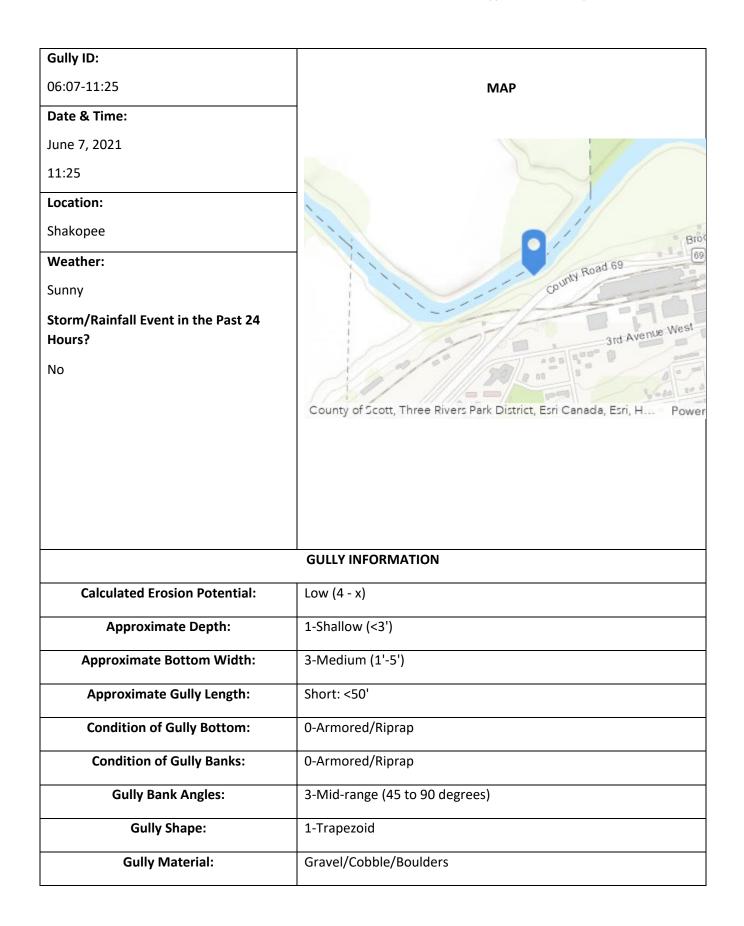


Photo2 View Direction: View Side stream

**Photo2 Caption** 

Sewer drainage pipe leading into gully just downstream of the bridge on the left bank.



Seep:	No	
Stormwater Inputs:	1-Dripping	
Fallen Trees:	No	
Degradation:		1-Low
Aggradation:		3-Moderate
Slumping:	0-No slumping	
Additional Notes:	Classification? Low (4 - x)	
	Notes/Comments: Sewer drainage pipe with very low flow and low degradation. Has some aggradation as the rocks in front of it are covered in dried dirt or clay that must've been carried through the sewer into the river on high flow days.	



Photo1 View Direction: View Downstream

**Photo1 Caption** 

View of sewer pipe from above pipe. Can see lots of armoring around pipe.

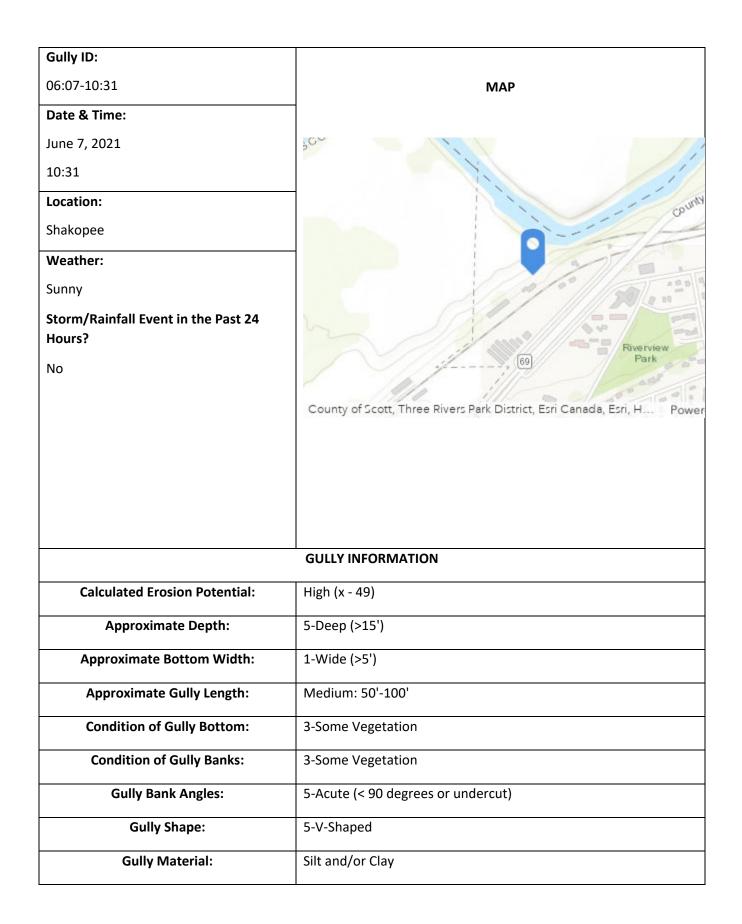
#### Photo2



Photo2 View Direction: View Downstream

#### **Photo2 Caption**

Pipe to the left of other drainage pipe, with no erosion present and no noticeable flow.



Seep:	No		
Stormwater Inputs:	0-Not present	0-Not present	
Fallen Trees:	Yes		
Degradation:		5-Severe	
Aggradation:		0-No aggradation, 5-Severe	
Slumping:	5-Severe		
Additional Notes:	Classification? High (x - 49) Notes/Comments: Gully formed on land side of trail next to MN river, gully is eroding into a campsite/trailer park. Slabs of concrete and a tent were present on the gully		



Photo1 View Direction: View Downstream

**Photo1 Caption** 

View downstream of large gully it's lots of erosion and concrete slabs and rock.

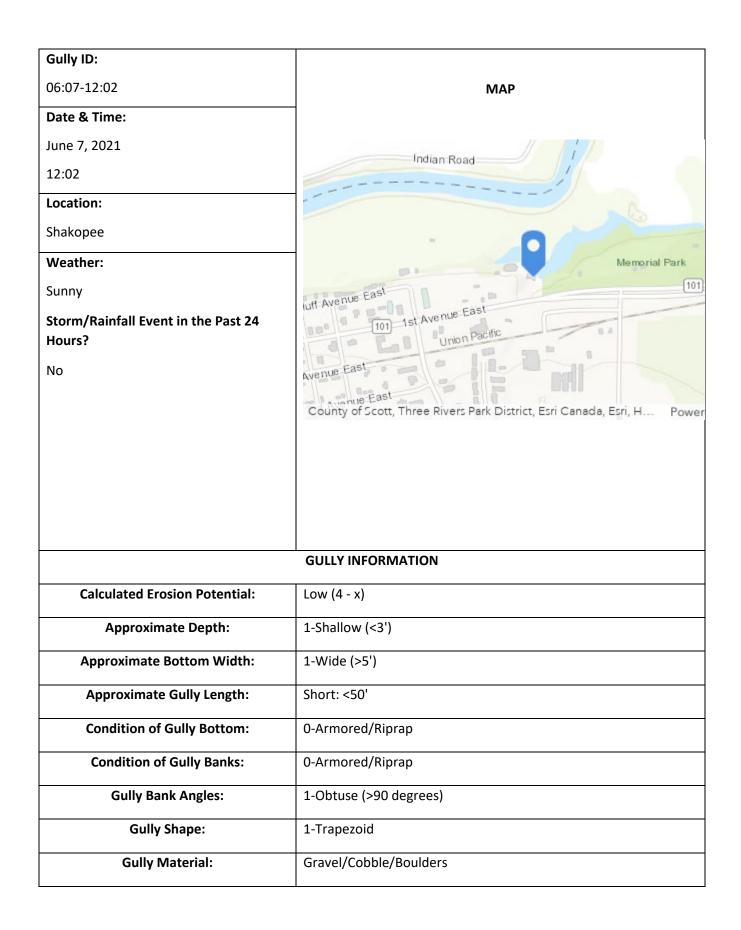
#### Photo2



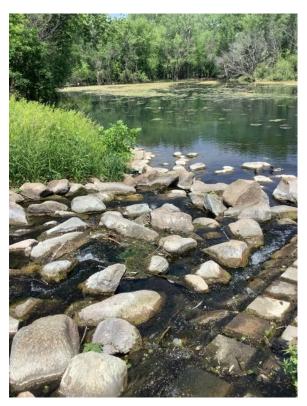
Photo2 View Direction: View Upstream

#### **Photo2 Caption**

View from trail looking up at the gully, moderate vegetation at the bottom, but the further up the gully the less vegetation there is and the more severe the erosion is



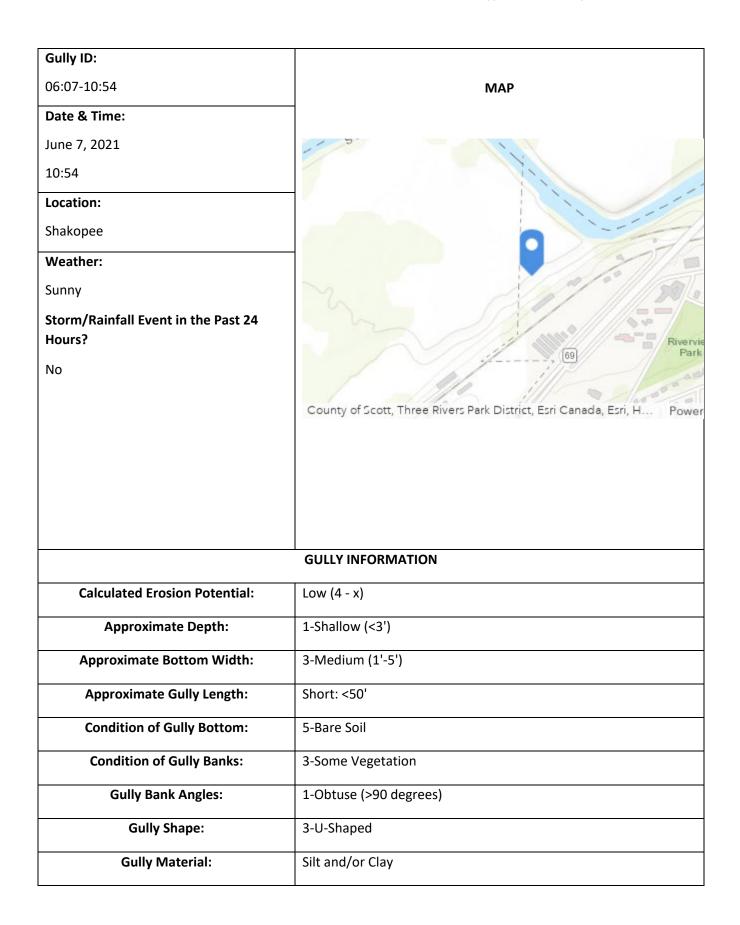
Seep:	No		
Stormwater Inputs:	3-Constant hi	3-Constant high flow	
Fallen Trees:	No		
Degradation:		0-No degradation	
Aggradation:		0-No aggradation	
Slumping:	0-No slumping		
Additional Notes:	Classification? Low (4 - x) Notes/Comments: Armored all the way through, constant stream from one pond to another, some vegetation comes through the concrete armoring		



# Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of gully covered in armoring.



Seep:	No	
Stormwater Inputs:	0-Not present	t
Fallen Trees:	No	
Degradation:		1-Low
Aggradation:		0-No aggradation
Slumping:		1-Low
Additional Notes:	Classification? Low (4 - x) Notes/Comments: Pipe outfall, heavy vegetation on right bank, low on left bank, feeds into another creek/stream, smaller trees slumping	



Photo1 View Direction: View Downstream

Photo1 Caption

Both sides of gully downstream

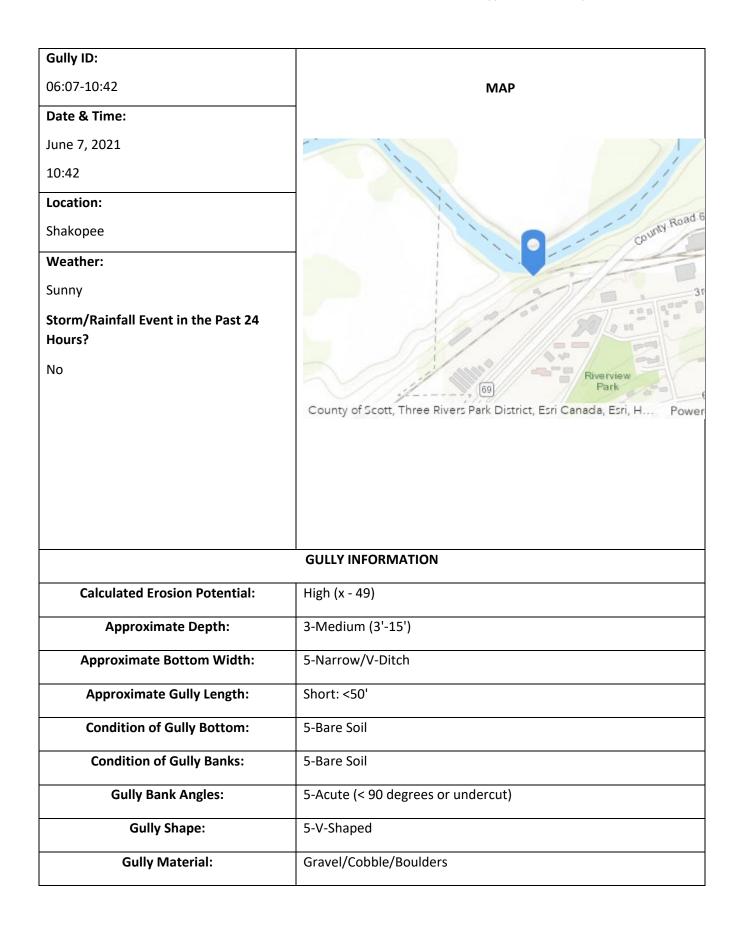
Photo2



Photo2 View Direction: View Upstream

Photo2 Caption

Pipe at top of gully, likely feeds from nearby building



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		5-Severe
Aggradation:		0-No aggradation
Slumping:		0-No slumping
Additional Notes:	Classification? High (x - 49) Notes/Comments: Looks like part of the trail got heavily eroded, roots hanging off the side and very steep bank	



Photo1 View Direction: View Downstream

Photo1 Caption

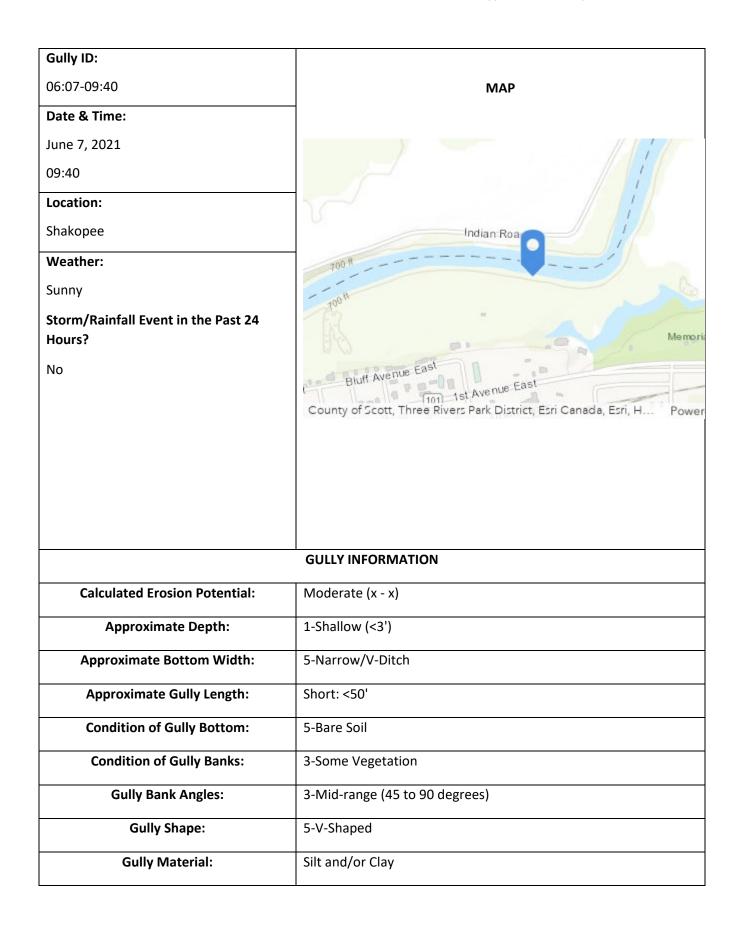
Downstream view of right bank.

Photo2



Photo2 View Direction: View Downstream

Photo2 Caption Downstream view of left bank.



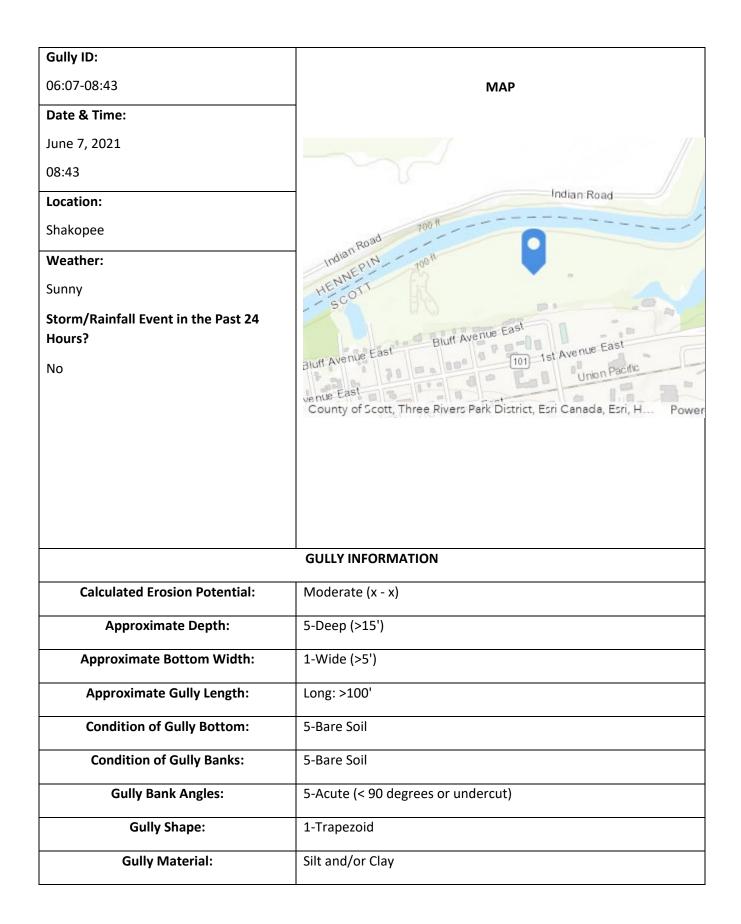
Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		3-Moderate
Aggradation:		0-No aggradation
Slumping:		0-No slumping
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Small gully leading into the Minnesota river, pipe outfall near gully but shows no sign of erosion, channel is pretty steep	



Photo1 View Direction: View Downstream

# Photo1 Caption

Gully in middle with decent erosion clearing path, pipe hanging to the right, but no indications of water exiting it



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		0-No degradation
Aggradation:	0-No aggradation	
Slumping:	3-Moderate	
Additional Notes:	Classification? Moderate (x - x) Notes/Comments: Fast moving water that meets the end of another gully found. Tree roots exposed on banks, and little vegetation	



Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of right bank.

Photo2



Photo2 View Direction: View Downstream

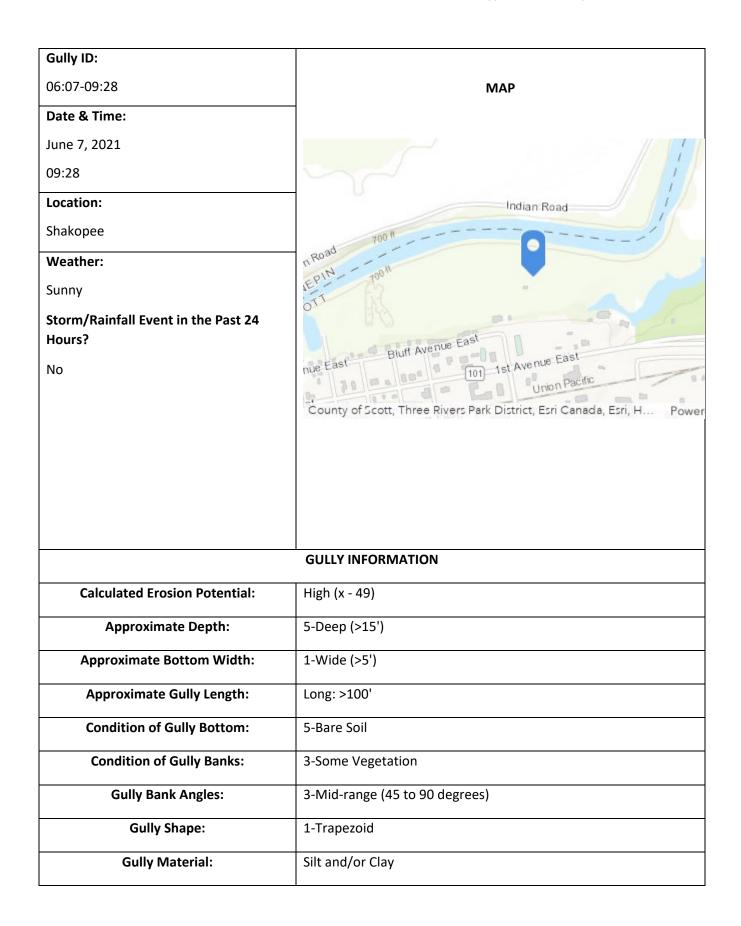
Photo2 Caption Downstream view of left bank.



Photo3 View Direction: View Upstream

# Photo3 Caption

View upstream with lots of fallen branches.



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	Yes	
Degradation:		3-Moderate, 5-Severe
Aggradation:	0-No aggradation	
Slumping:	5-Severe	
Additional Notes:	Classification? High (x - 49) Notes/Comments: Lots of trees fallen further downstream, lots of exposed roots, has pipe connection on other side	



Photo1 View Direction: View Downstream

**Photo1 Caption** 

View from on top of trail over pipe, showing lots of degradation through exposed roots on right bank, and lots of fallen trees further downstream Photo2



Photo2 View Direction: View Downstream

**Photo2 Caption** 

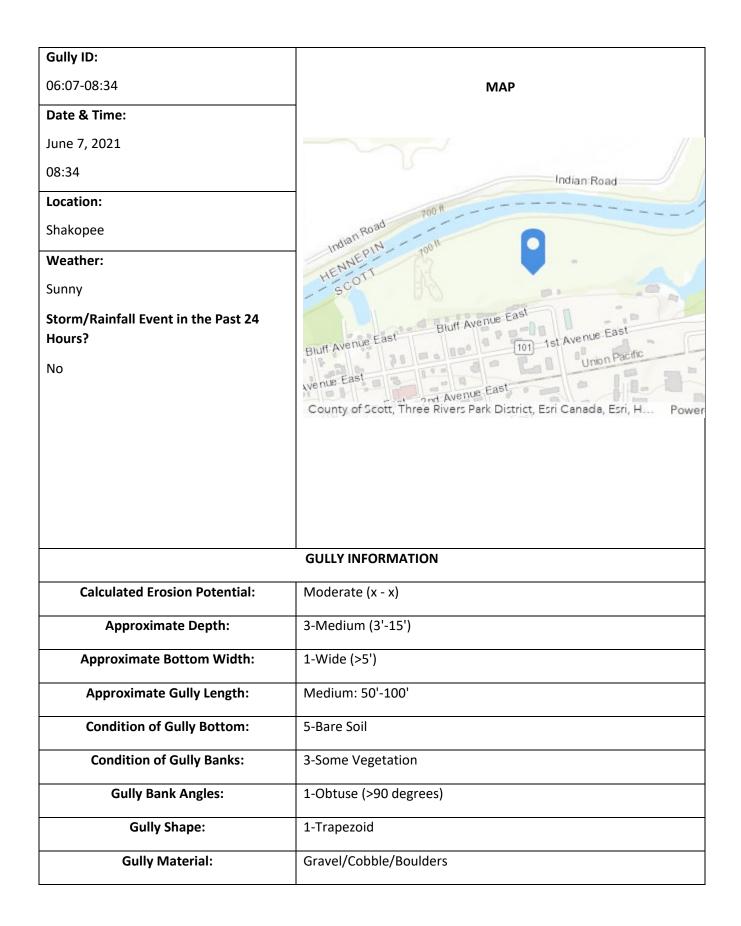
Pile of fallen trees downstream.



Photo3 View Direction: View Upstream

Photo3 Caption

Upstream view of pipe which is armored and doesn't show signs of erosion.



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	Yes	
Degradation:	·	0-No degradation, 1-Low
Aggradation:	0-No aggradation	
Slumping:	5-Severe	
Additional Notes:	Classification? Moderate (x - x)	
	Notes/Comments: Pipe outfall armored with large rocks, there are some smaller rocks along part of the gully bank and bottom, but would not consider it armored. This gully leads into a creek. plarge pipe so area must get a lot of water	



Photo1 View Direction: View Downstream

#### Photo2



Photo2 View Direction: View Upstream

#### **Photo1 Caption**

View from above pipe outfall showing the armoring around the pipe. There is a fallen tree on the right bank and trees slumping on both banks.

### **Photo2 Caption**

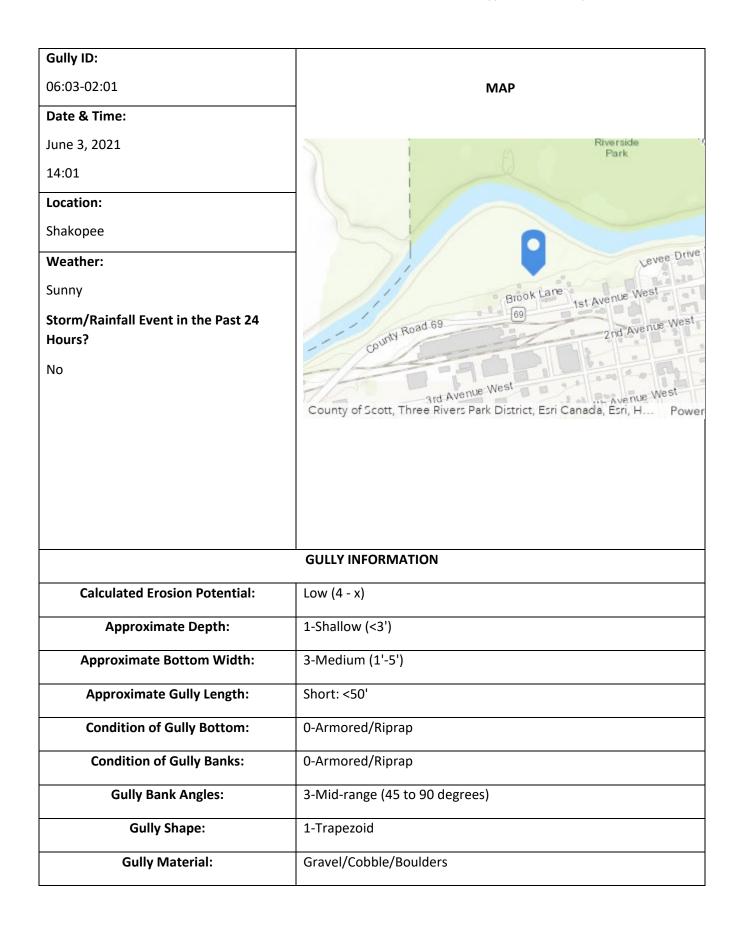
View upstream from bridge over the gully, just downstream of the bridge this gully connects to the other gully/creek. Can see two ,ore fallen trees on the right bank.



Photo3 View Direction: View Downstream

# Photo3 Caption

Connection between gully from pipe and gully from creek. Gully from pipe is on the right side.



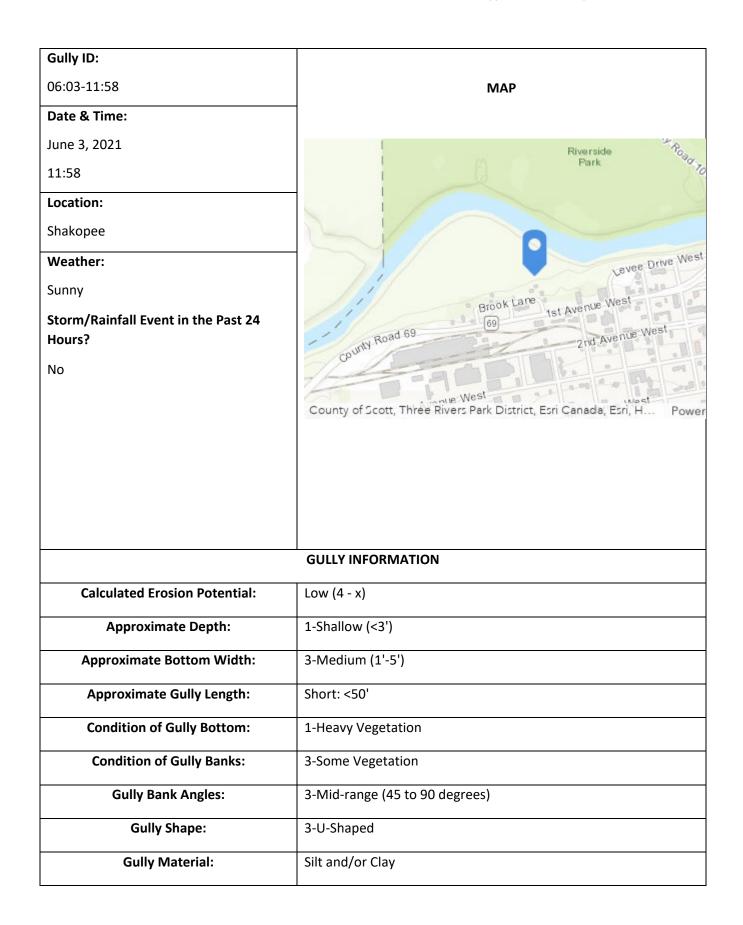
Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		0-No degradation
Aggradation:	0-No aggradation	
Slumping:	0-No slumping	
Additional Notes:	Classification? Low (4 - x)	
	Notes/Comments: Drainage pipe right off trail. Surrounded by lots of riprap and some vegetation growing within.	



Photo1 View Direction: View Upstream

Photo1 Caption

View from trail of drainage pipe, showing lots of rip rap and lack of vegetation.



Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		0-No degradation, 1-Low
Aggradation:		0-No aggradation
Slumping:	0-No slumping	
Additional Notes:	Classification? Low (4 - x) Notes/Comments: Other side of drainage pipe under paved trail. Lots of vegetation and some logs and tree trunks, but doesn't look like the fell into the gully,may have been placed.	



Photo1 View Direction: View Downstream

## **Photo1 Caption**

View of pipe from trail. Can see vegetation and dead branches. Rip rap around pipe opening.

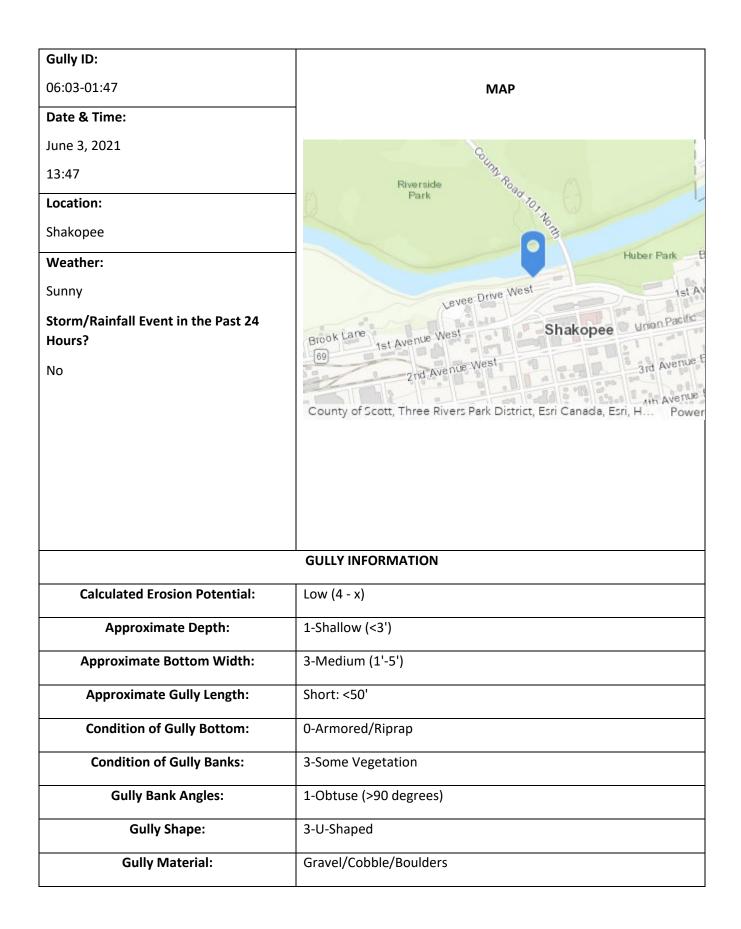
### Photo2



Photo2 View Direction: View Upstream

## **Photo2** Caption

View down from above pipe opening showing heavy vegetation.



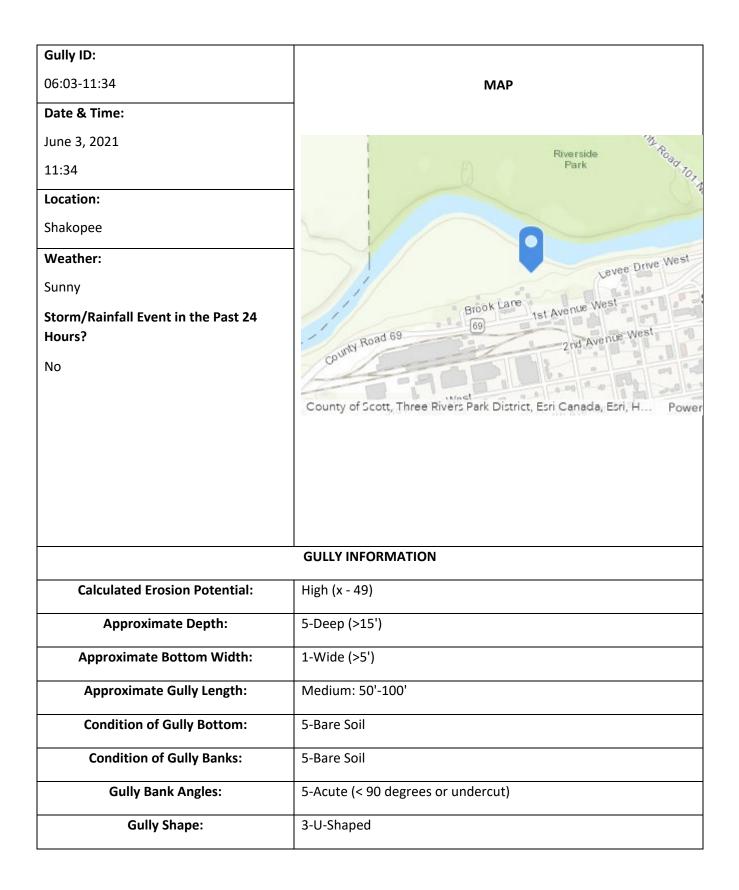
Seep:	No	
Stormwater Inputs:	0-Not present	
Fallen Trees:	No	
Degradation:		0-No degradation
Aggradation:	0-No aggradation	
Slumping:	0-No slumping	
Additional Notes:	Classification? Low (4 - x)	
	Notes/Comments: Pipe comes out onto boulders, causing minor erosion on sides	



Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of armored banks of gully around pipe outfall



Gully Material:	Silt and/or Clay	
Seep:	No	
Stormwater Inputs:	3-Constant high flow	
Fallen Trees:	Yes	
Degradation:	3-Moderate	
Aggradation:	0-No aggradation	
Slumping:	3-Moderate	
Additional Notes:	Classification? High (x - 49)	
	Notes/Comments: Pipe bringing lots of constant water flow into gully, trees fallen on side, low vegetation throughout	



Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of right bank of gully.

#### Photo2



Photo2 View Direction: View Downstream

Photo2 Caption

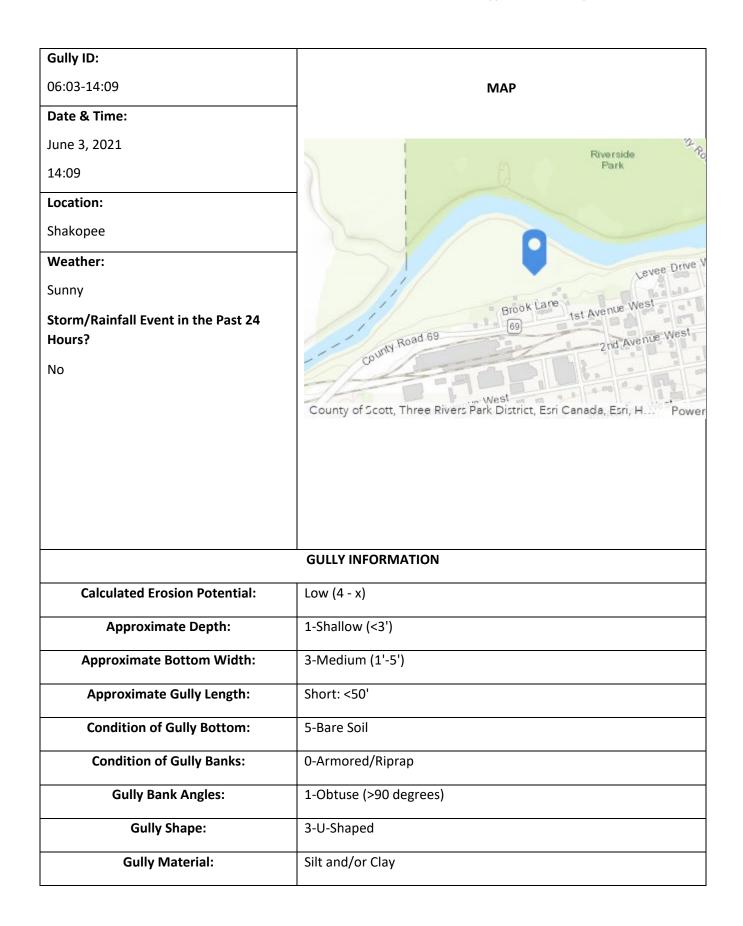
Downstream view of left bank of gully.



Photo3 View Direction: View Upstream

Photo3 Caption

Pipe with high flow of water coming out.



Seep:	No		
Stormwater Inputs:	0-Not present	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: Pipe going under trail causing minor erosion, but boulders on side negate the effects pretty well		



Photo1 View Direction: View Downstream

Photo1 Caption

Downstream view of entire gully and pipe.

### Photo2



Photo2 View Direction: View Upstream

## Photo2 Caption

View of other side of trail where pipe leads to.