

Use Attainability Analysis

1 Water Body Name	Tarkio River
2 Segment Description	Iowa-Missouri state line to confluence with East Tarkio Creek
3 Segment Length (mi)	35.8
4 Drainage Area (sq. mi.)	207
5 Segment Start Latitude, Longitude (DD)	40.57891, -95.23312
6 Segment End Latitude, Longitude (DD)	41.06124, -95.11003
7 Route of Flow (Next Downstream Adopted Designated Use)	Tarkio River (A2, proposed, BWW2, existing to A1, BWW1, HH, proposed) to Iowa-Missouri state line
8 NPDES Facility and Permit Number (If Applicable)	Stanton, City of STP (6965001)
9 Sample Site ID(s)	1229-1, 1229-2, 1229-3, 1229-4, 1229-5, 1229-6
10 Segment County Name(s)	Page/Montgomery
11 Field Work Date(s)	8/9/2017

12 Aquatic Life Use Attainability Analysis - Conclusion

Recommended Highest Attainable Use: Aquatic Life Use	BWW1 (Iowa-Missouri state line to 1229-2)
Physical conditions and flow are sufficient to support a viable community of game fish. Diverse species and age ranges are present, indicating a reproducing population (see Supplemental Data table). Therefore, the highest attainable aquatic life use for this stream segment is BWW1.	

13 Recreational Use Attainability Analysis - Conclusion

Recommended Highest Attainable Use: Recreational Use	A1 (Iowa-Missouri state line to 1229-2)
40 CFR 131.10(g)(2) (Flow)	Water levels and flow are sufficient to support full body immersion (see Site Observations Table). Therefore, the highest attainable recreational use for this stream segment is A1.

Recommended Highest Attainable Use: Recreational Use	A2 (1229-2 to confluence with East Tarkio Creek)
40 CFR 131.10(g)(2) (Flow)	The natural low flow conditions and water levels of the stream segment prevent the attainment of an A1 recreational use (see Site Observations Table). An A1 designation requires the ability for full body immersion. Therefore, the highest attainable recreational use is A2.

Additional Recommended Designation(s) - Conclusion

Recommended Highest Attainable Use: Human Health	HH (Iowa-Missouri state line to 1229-2)
As this stream segment is receiving a BWW1 designation, an additional Human Health designation shall also be applied.	

14 Flow

Field Work Date	Description
8/9/2017	USGS stream gage data for the area indicated stream flows were normal at the time of assessment.
7/4/1992	USGS stream gage data for the area indicated stream flows were normal at the time of assessment.

Use Attainability Analysis - Data

Site Observations

Use	Site parameter	Site ID #1229-1
AL/R	15 Latitude, Longitude (DD)	41.05964, -95.10992
AL/R	16 Average Depth (in)	5.5
AL/R	17 Maximum Depth (in)	20.4
AL/R	18 Stream Width (ft)	17
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	N/A
	21 Game Fish Present and Counts (Species (Size Range): Number)	N/A
	22 Stream Habitat (See also: #29 Site Photos)	N/A
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No
	24 Evidence of Use by Children? (Yes*/No)	No
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	No
AL/R	26 Additional Description	Some trash under the bridge.

Use	Site parameter	Site ID #1229-2
AL/R	15 Latitude, Longitude (DD)	40.98719, -95.11159
AL/R	16 Average Depth (in)	22
AL/R	17 Maximum Depth (in)	43.2
AL/R	18 Stream Width (ft)	20
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	Not sampled
	21 Game Fish Present and Counts (Species (Size Range): Number)	Not sampled
	22 Stream Habitat (See also: #29 Site Photos)	Stream flow too slow to measure. Stream backed up downstream.
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No
	24 Evidence of Use by Children? (Yes*/No)	No
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	Resident fishes/seins/minnow traps a couple times a year. Fishing line in a tree downstream of the bridge.
AL/R	26 Additional Description	Graffiti on the bridge, some trash.

Use	Site parameter	Site ID #1229-3
AL/R	15 Latitude, Longitude (DD)	40.91548, -95.12613
AL/R	16 Average Depth (in)	>39
AL/R	17 Maximum Depth (in)	>39
AL/R	18 Stream Width (ft)	Not measured
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	Not sampled
	21 Game Fish Present and Counts (Species (Size Range): Number)	Not sampled
	22 Stream Habitat (See also: #29 Site Photos)	Downstream substrate all broken riprap.
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No
	24 Evidence of Use by Children? (Yes*/No)	No

Use	Site parameter	Site ID #1229-3
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	No
AL/R	26 Additional Description	Low head dam downstream of the bridge creating a pool upstream and a riffle downstream.

Use	Site parameter	Site ID #1229-4
AL/R	15 Latitude, Longitude (DD)	40.84315, -95.17047
AL/R	16 Average Depth (in)	14
AL/R	17 Maximum Depth (in)	26.4
AL/R	18 Stream Width (ft)	31
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	N/A
	21 Game Fish Present and Counts (Species (Size Range): Number)	N/A
	22 Stream Habitat (See also: #29 Site Photos)	Steep banks.
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No
	24 Evidence of Use by Children? (Yes*/No)	No
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	No
AL/R	26 Additional Description	N/A

Use	Site parameter	Site ID #1229-5
AL/R	15 Latitude, Longitude (DD)	40.71206, -95.20983
AL/R	16 Average Depth (in)	Too deep to assess
AL/R	17 Maximum Depth (in)	>39
AL/R	18 Stream Width (ft)	Not measured
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	N/A
	21 Game Fish Present and Counts (Species (Size Range): Number)	N/A
	22 Stream Habitat (See also: #29 Site Photos)	Steep banks.
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No
	24 Evidence of Use by Children? (Yes*/No)	No
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	No
AL/R	26 Additional Description	Low head dam downstream of the bridge.

Use	Site parameter	Site ID #1229-6
AL/R	15 Latitude, Longitude (DD)	40.58149, -95.23220
AL/R	16 Average Depth (in)	Too deep to assess
AL/R	17 Maximum Depth (in)	>39
AL/R	18 Stream Width (ft)	Not measured
AL/R	19 Pools Observed?	Yes
AL only	20 Non-Game Fish Present and Counts (Species: Number)	N/A
	21 Game Fish Present and Counts (Species (Size Range): Number)	N/A
	22 Stream Habitat (See also: #29 Site Photos)	N/A
R only	23 Evidence of Use for Primary Contact Recreation? (Yes*/No)	No

Use	Site parameter	Site ID #1229-6
	24 Evidence of Use by Children? (Yes*/No)	No
	25 Evidence of Use for Secondary Contact Recreation? (Yes*/No)	No
AL/R	26 Additional Description	Low head dam just downstream of the bridge.

AL = Aquatic Life

R = Recreation

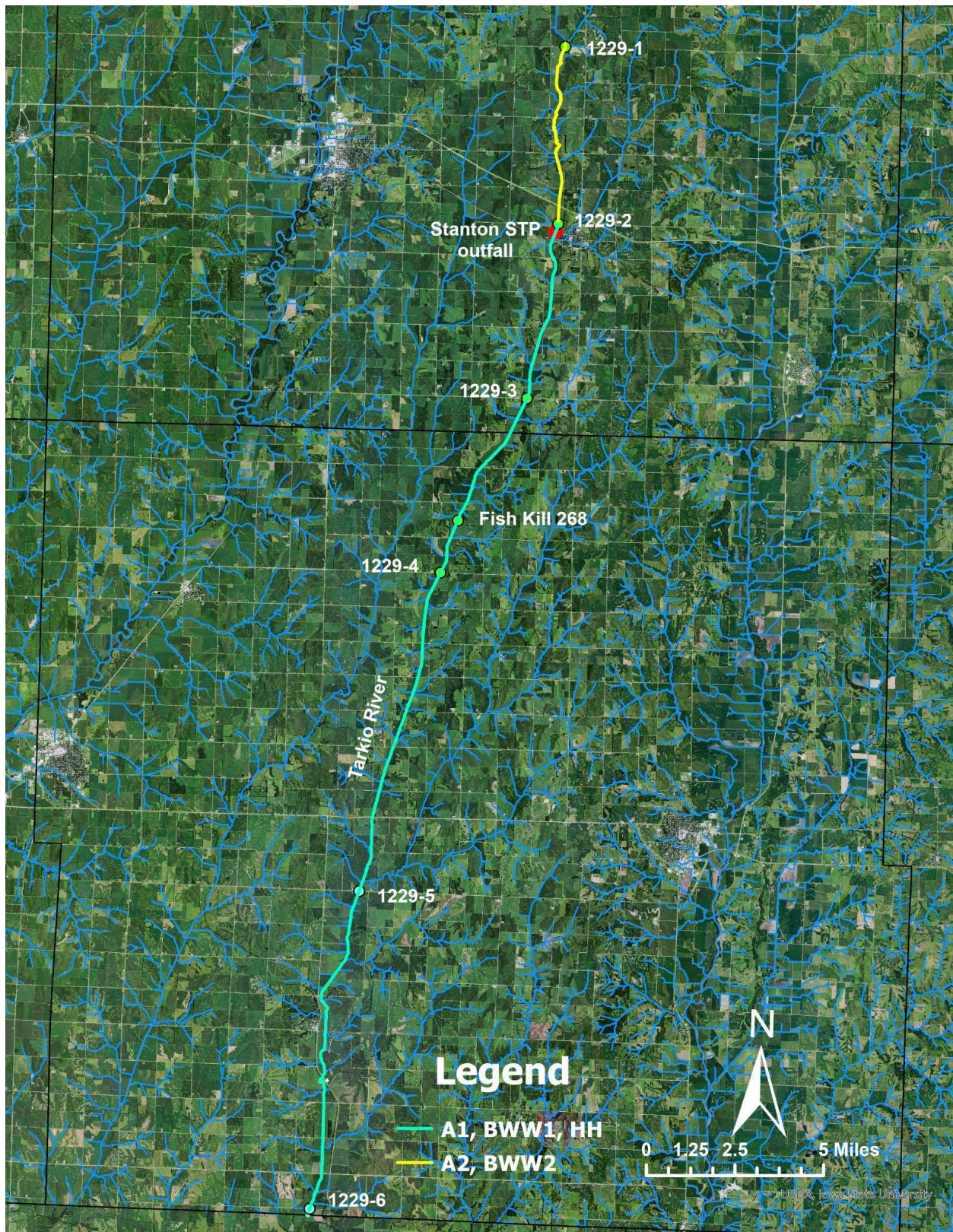
*If yes, elaborate.

27 Supplemental Data

The lower reaches of this river are currently designated as BWW2. However, gamefish have been documented during fish kills that will result in the designation being upgraded to BWW1.

Use	Site parameter	
AL/R	Latitude, Longitude (DD)	40.86436, -95.16119
AL/R	Field Work Date	7/4/1992
AL only	Non-Game Fish Present and Counts (Species: Number)	Carp: 100 Carp sucker: 100 Green sunfish: 2
	Game Fish Present and Counts (Species (Size Range): Number)	Channel catfish (4" - 20"): 100
AL/R	Additional Description	https://programs.iowadnr.gov/fishkill/Events/268

28 Map of Segment, Outfall, and Site(s)



29 Site Photos



Figure 1. 1229-1. Recreational use assessment midpoint looking upstream.



Figure 2. 1229-1 Recreational use assessment midpoint looking downstream.



Figure 3. 1229-1 Recreational use assessment upstream looking upstream.



Figure 4. 1229-1 Recreational use assessment upstream looking downstream.



Figure 5. 1229-1 Recreational use assessment downstream looking upstream.



Figure 6. 1229-1 Recreational use assessment downstream looking downstream.



Figure 7. 1229-2 Recreational use assessment midpoint looking upstream.

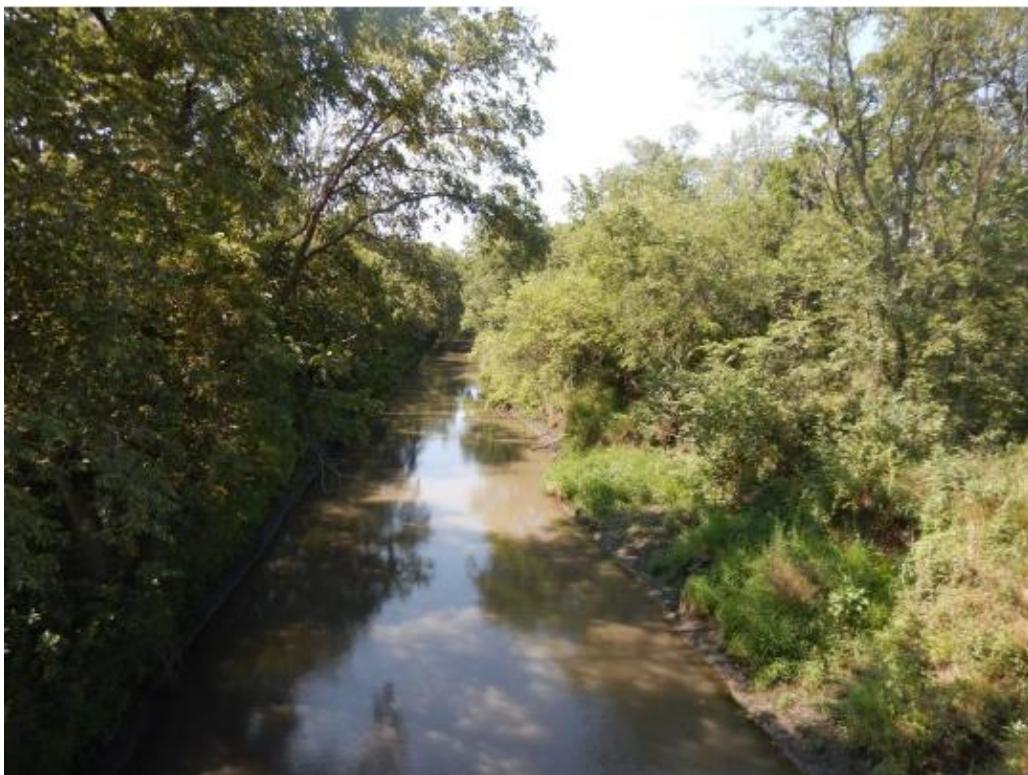


Figure 8. 1229-2 Recreational use assessment midpoint looking downstream.



Figure 9. 1229-2 Recreational use assessment upstream looking upstream.



Figure 10. 1229-2 Recreational use assessment upstream looking downstream.



Figure 11. 1229-2 Recreational use assessment downstream looking upstream.



Figure 12. 1229-2 Recreational use assessment downstream looking downstream.



Figure 13. 1229-3 Recreational use assessment midpoint looking upstream.



Figure 14. 1229-3 Recreational use assessment midpoint looking downstream.



Figure 15. 1229-3 Recreational use assessment upstream looking upstream.



Figure 16. 1229-3 Recreational use assessment upstream looking downstream.



Figure 17. 1229-3 Recreational use assessment downstream looking upstream.



Figure 18. 1229-3 Recreational use assessment downstream looking downstream.



Figure 19. 1229-4 Recreational use assessment midpoint looking upstream.



Figure 20. 1229-4 Recreational use assessment midpoint looking downstream.



Figure 21. 1229-4 Recreational use assessment downstream looking upstream.



Figure 22. 1229-4 Recreational use assessment downstream looking downstream.



Figure 23. 1229-5 Recreational use assessment midpoint looking upstream.



Figure 24. 1229-5 Recreational use assessment midpoint looking downstream.



Figure 25. 1229-5 River level view looking downstream.



Figure 26. 1229-5 Concrete bank enforcement and dam structure - view downstream.



Figure 27. 1229-5 Concrete bank enforcement and dam structure photo 2 - view downstream.



Figure 28. 1229-5 Concrete bank enforcement and dam structure photo 3 - view downstream.



Figure 29. 1229-6 Bridge view upstream.



Figure 30. 1229-6 Bridge view downstream.