

Use Attainability Analysis

1 Water Body Name	Middle Fork One Hundred and Two River
2 Segment Description	Iowa-Missouri state line to Hwy. 148 bridge crossing
3 Segment Length (mi)	17.9
4 Drainage Area (sq. mi.)	61.3
5 Segment Start Latitude, Longitude (DD)	40.57376, -94.82339
6 Segment End Latitude, Longitude (DD)	40.75767, -94.73791
7 Route of Flow (Next Downstream Adopted Designated Use)	Middle Fork One Hundred and two River (A2, proposed, BWW2, existing to A1, proposed, BWW2, existing, to A2, proposed, BWW2, existing) to the Iowa-Missouri state line
8 NPDES Facility and Permit Number (if Applicable)	Gravity, City of (Southern Iowa Rural Water Assn.) (8728001)
9 Sample Site ID(s)	1249-2, 1249-3, 1249-4
10 Segment County Name(s)	Taylor
11 Field Work Date(s)	8/10/2017

12 Aquatic Life Use Attainability Analysis - Conclusion

Recommended Highest Attainable Use: Aquatic Life Use	N/A
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13 Recreational Use Attainability Analysis - Conclusion

Recommended Highest Attainable Use: Recreational Use	A1 (confluence with unnamed tributary to confluence with unnamed tributary)
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 (Iowa-Missouri state line to confluence with unnamed tributary) (confluence with unnamed tributary to Hwy. 148 bridge crossing)
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. The pool that was >30 inches at 1249-3 is not representative of the entire segment. Therefore, the highest attainable recreational use is A2.

14 Flow

Field Work Date	Description
8/10/2017	USGS stream gage data for the area indicated stream flows were slightly lower than the 25th percentile at the time of assessment, as the stream flow at the gage was 0.46 cfs and the corresponding 25th percentile flow at the gage is 0.61 cfs. However, light rain was observed in the area on the day of and days leading up to the assessment and the difference in depth measurements are not expected to change the outcome of the analysis appreciably given the small difference in flow below the 25th percentile (0.15 cfs).

Use Attainability Analysis - Data
Site Observations

Use	Site parameter	Site ID #1249-2
AL/R	15 Latitude, Longitude (DD)	40.74128, -94.75646
AL/R	16 Average Depth (in)	3
AL/R	17 Maximum Depth (in)	15.6
AL/R	18 Stream Width (ft)	8
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	N/A

Use	Site parameter	Site ID #1249-3
AL/R	15 Latitude, Longitude (DD)	40.66630, -94.78076
AL/R	16 Average Depth (in)	11.5
AL/R	17 Maximum Depth (in)	>39
AL/R	18 Stream Width (ft)	22
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)	Fishing line with fish head on overhead wire
AL/R	26 Additional Description	Vacuum, futon frame and other trash in the river below the bridge. Steep banks. Large pooled area above and below bridge with small riffle immediately below bridge.

Use	Site parameter	Site ID #1249-4
AL/R	15 Latitude, Longitude (DD)	40.59086, -94.82277
AL/R	16 Average Depth (in)	7
AL/R	17 Maximum Depth (in)	26.4
AL/R	18 Stream Width (ft)	18
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 #1249-4
	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	Steep banks.

AL = Aquatic Life

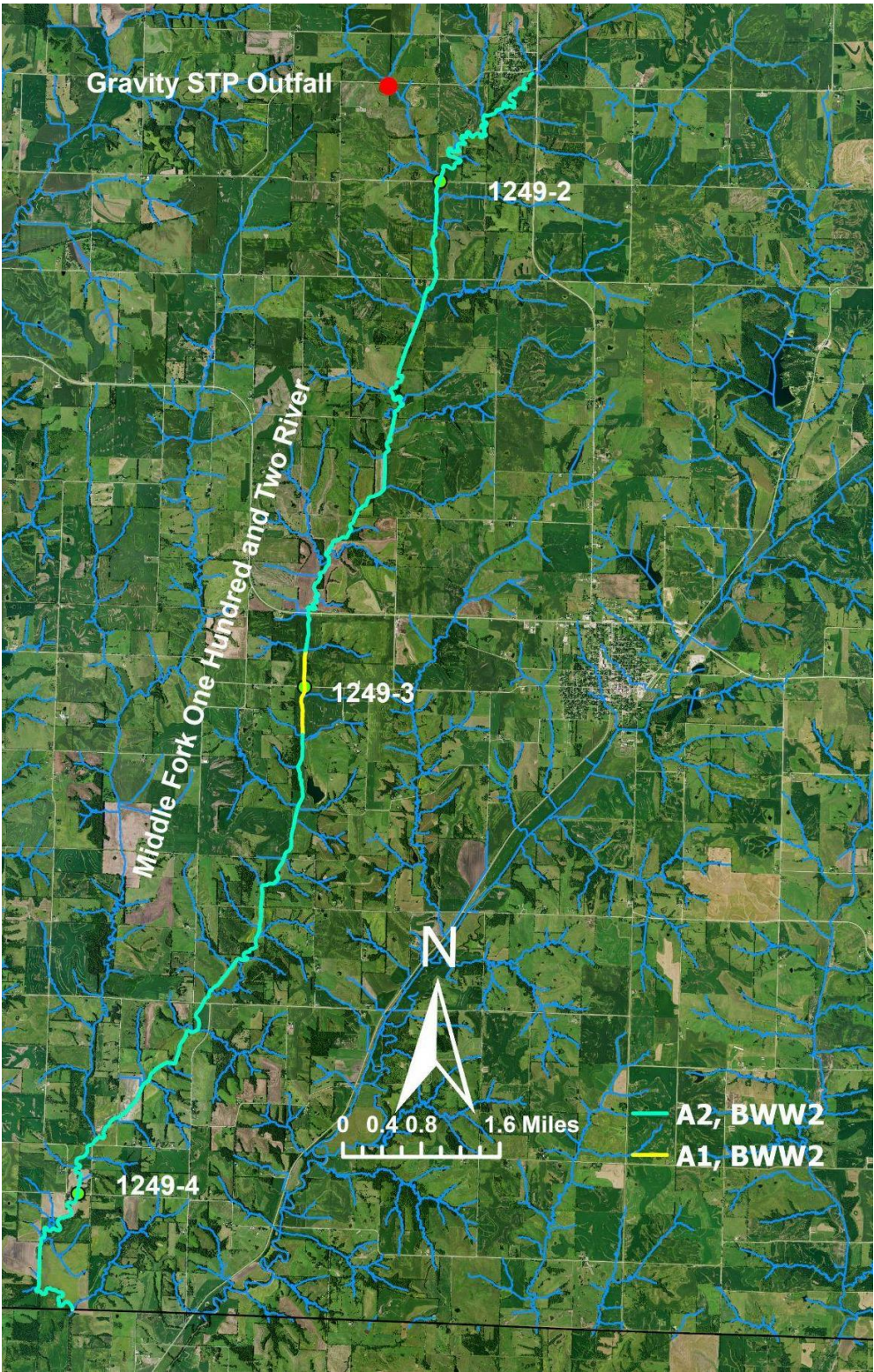
R = Recreation

*If yes, elaborate.

27 Supplemental Data

N/A

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



29 Site Photos



Figure 1. 1249-2 Recreational use assessment midpoint looking upstream.



Figure 2. 1249-2 Recreational use assessment midpoint looking downstream.



Figure 3. 1249-2 Recreational use assessment upstream looking upstream.



Figure 4. 1249-2 Recreational use assessment upstream looking downstream.



Figure 5. 1249-2 Recreational use assessment downstream looking upstream.



Figure 6. 1249-2 Recreational use assessment downstream looking downstream.



Figure 7. 1249-2 Tributary stream entering Middle Fork 102 River 0.1 mile upstream from site 1249-2 – view upstream.



Figure 8. 1249-2 Tributary stream entering Middle Fork 102 River 0.1 mile upstream from site 1249-2 – view downstream.



Figure 9. 1249-3 Recreational use assessment midpoint looking upstream.



Figure 10. 1249-3 Recreational use assessment midpoint looking downstream.



Figure 11. 1249-3 Recreational use assessment upstream looking upstream.



Figure 12. 1249-3 Recreational use assessment upstream looking downstream.



Figure 13. 1249-3 Recreational use assessment downstream looking upstream.



Figure 14. 1249-3 Recreational use assessment downstream looking downstream.



Figure 15. 1249-3 Fishing line caught in tree.



Figure 16. 1249-4 Recreational use assessment midpoint looking upstream.



Figure 17. 1249-4 Recreational use assessment midpoint looking downstream.



Figure 18. 1249-4 Recreational use assessment upstream looking upstream.



Figure 19. 1249-4 Recreational use assessment upstream looking downstream.