# Use Attainability Analysis

| | |
|---|---|
| **1 Water Body Name** | East Branch West Nishnabotna River |
| **2 Segment Description** | Mouth to confluence with Lone Willow Creek |
| **3 Segment Length (mi)** | 33 |
| **4 Drainage Area (sq. mi.)** | 225 |
| **5 Segment Start Latitude, Longitude (DD)** | 41.44447, -95.35704 |
| **6 Segment End Latitude, Longitude (DD)** | 41.75493, -95.04608 |
| **7 Route of Flow (Next Downstream Adopted Designated Use)** | East Branch West Nishnabotna River (A2, BWW1, HH, proposed, to A1, BWW1, HH, proposed) to West Nishnabotna River (A1, BWW1, HH) |
| **8 NPDES Facility and Permit Number (If Applicable)** | DNR Prairie Rose State Park (8300900) |
| **9 Sample Site ID(s)** | 1023-4, 1023-5, 1023-6 |
| **10 Segment County Name(s)** | Pottawattamie/Shelby/Audubon |
| **11 Field Work Date(s)** | 7/30/2014 |

## 12 Aquatic Life Use Attainability Analysis - Conclusion

| | |
|---|---|
| **Recommended Highest Attainable Use: Aquatic Life Use** | BWW1 |
| **40 CFR 131.10(g)(2) (Flow)** | 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 Site Observations 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 (mouth to confluence with unnamed tributary) |
| **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 (confluence with unnamed tributary to confluence with Lone Willow 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. |

| | |
|---|---|
| **Recommended Highest Attainable Use: Human Health** | HH |
| As this stream segment is receiving a BWW1 designation, an additional Human Health designation shall also be applied. | |

## 14 Flow

| Field Work Date | Description |
|---|---|
| 7/30/2014 | USGS stream gage data for the area indicated stream flows were slightly above normal (near the 75$^{th}$ percentile) at the time of assessment. |

## Use Attainability Analysis - Data

**Site Observations**

| Use | Site parameter | Site ID #1023-4 |
|---|---|---|
| AL/R | 15 Latitude, Longitude (DD) | 41.64543, -95.22840 |
| AL/R | 16 Average Depth (in) | 12 |
| AL/R | 17 Maximum Depth (in) | 30 |
| AL/R | 18 Stream Width (ft) | 68 |
| AL/R | 19 Pools Observed? | Yes |
| AL only | 20 Non-Game Fish Present and Counts (Species: Number) | Not sampled. See supplemental data. |
| | 21 Game Fish Present and Counts (Species (Size Range): Number) | Not sampled. See supplemental data. |
| | 22 Stream Habitat (See also: #29 Site Photos) | Sand substrate. |
| 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 #1023-5 |
|---|---|---|
| AL/R | 15 Latitude, Longitude (DD) | 41.55640, -95.28178 |
| AL/R | 16 Average Depth (in) | 15.5 |
| AL/R | 17 Maximum Depth (in) | 27 |
| AL/R | 18 Stream Width (ft) | 76 |
| AL/R | 19 Pools Observed? | Yes |
| AL only | 20 Non-Game Fish Present and Counts (Species: Number) | Not sampled. See supplemental data. |
| | 21 Game Fish Present and Counts (Species (Size Range): Number) | Not sampled. See supplemental data. |
| | 22 Stream Habitat (See also: #29 Site Photos) | Sand substrate. |
| 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 in power lines. |
| AL/R | 26 Additional Description | N/A |

| Use | Site parameter | Site ID #1023-6 |
|---|---|---|
| AL/R | 15 Latitude, Longitude (DD) | 41.47634, -95.33006 |
| AL/R | 16 Average Depth (in) | 15 |
| AL/R | 17 Maximum Depth (in) | 28 |
| AL/R | 18 Stream Width (ft) | 75 |
| AL/R | 19 Pools Observed? | Yes |
| AL only | 20 Non-Game Fish Present and Counts (Species: Number) | Not sampled. See supplemental data. |
| | 21 Game Fish Present and Counts (Species (Size Range): Number) | Not sampled. See supplemental data. |
| | 22 Stream Habitat (See also: #29 Site Photos) | Sand substrate. |
| R only | 23 Evidence of Use for Primary Contact Recreation? (Yes*/No) | No |
| | 24 Evidence of Use by Children? (Yes*/No) | Yes, swimming. |
| | 25 Evidence of Use for Secondary Contact Recreation? (Yes*/No) | Yes, fishing. |

| Use | Site parameter | Site ID #1023-6 |
|---|---|---|
| **AL/R** | **26 Additional Description** | City pool next to the river. Nearby park, bench by river, resident by river with chair and fishing pole. West Nishnabotna River water trail access site. 3 kids swimming in the river nearby. |

AL = Aquatic Life
R = Recreation
*If yes, elaborate.

**27 Supplemental Data**

| Use | Site parameter | BioNet Site ID #472 |
|---|---|---|
| **AL/R** | **Latitude, Longitude (DD)** | 41.6434, -95.22982 |
| **AL/R** | **Field Work Date** | 8/4/2005 |
| **AL/R** | **Average Depth (in)** | Not measured |
| **AL/R** | **Maximum Depth (in)** | Not measured |
| **AL/R** | **Pools Observed?** | Not measured |
| **AL only** | **Non-Game Fish Present and Counts (Species: Number)** | Bigmouth shiner: 9<br>Creek chub: 32<br>Flathead chub: 13<br>Goldeye: 1<br>Red shiner: 28<br>Sand shiner: 73<br>Suckermouth minnow: 18<br>Stonecat: 4 |
| | **Game Fish Present and Counts (Species (Size Range): Number)** | Channel catfish (4-6”): 4<br>Channel catfish (7-9”): 11 |
| **AL/R** | **Additional Description** | https://programs.iowadnr.gov/bionet/Sites/472 |

| Field Work Date | Description |
|---|---|
| 8/4/2005 | USGS stream gage data for the area indicated stream flows were normal at the time of assessment. |

| Use | Site parameter | BioNet Site ID #16 |
|---|---|---|
| **AL/R** | **Latitude, Longitude (DD)** | 41.5222, -95.30444 |
| **AL/R** | **Field Work Date** | 7/27/2020 |
| **AL/R** | **Average Depth (in)** | 9.84 |
| **AL/R** | **Maximum Depth (in)** | 46.8 |
| **AL/R** | **Pools Observed?** | Yes |
| **AL only** | **Non-Game Fish Present and Counts (Species: Number)** | Freshwater drum: 3<br>Gizzard shad: 1<br>Grass carp: 1<br>Red shiner: 4<br>River carpsucker: 3<br>Sand shiner: 2<br>Shorthead redhorse: 17<br>Shortnose gar: 2<br>Stonecat: 2<br>Suckermouth minnow: 6 |

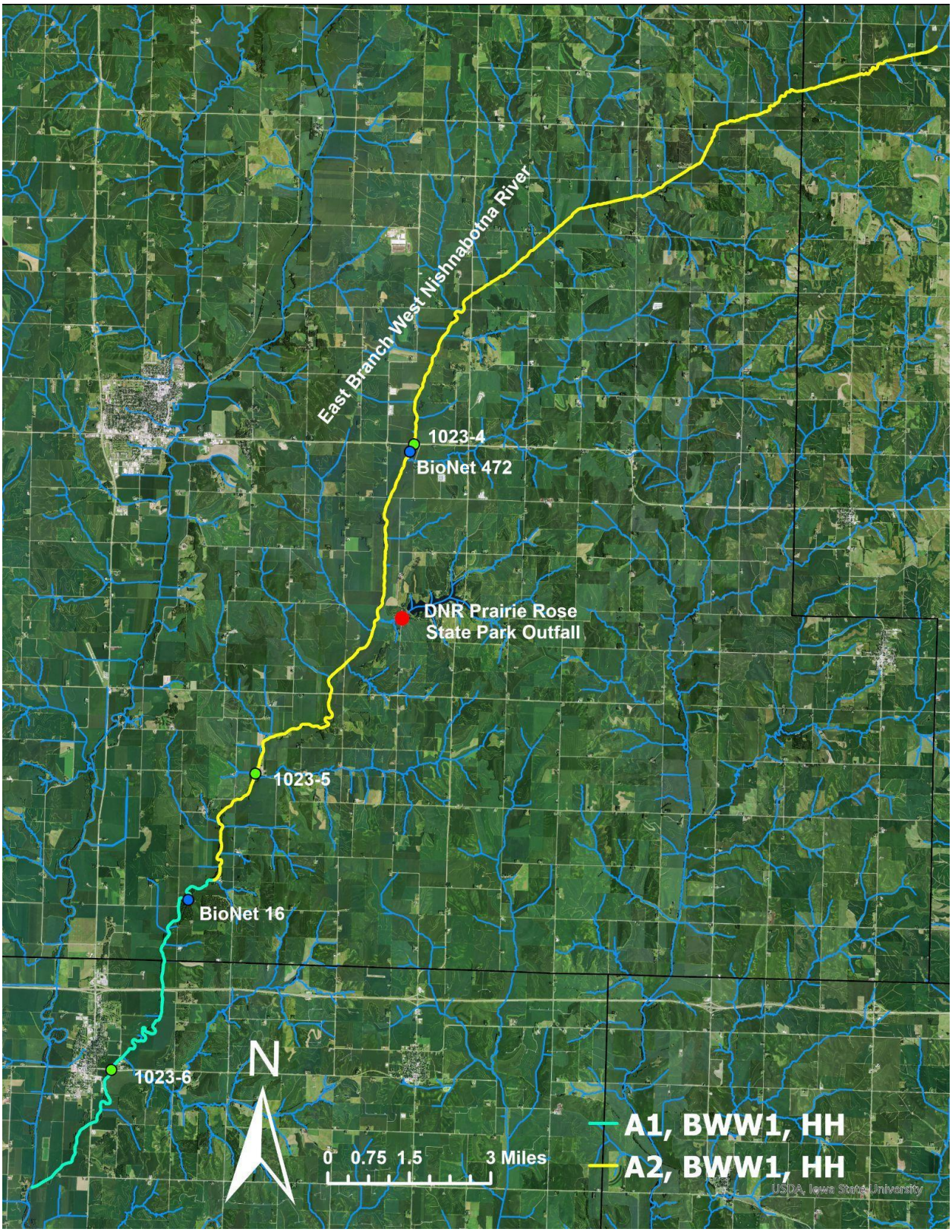
| Use | Site parameter | BioNet Site ID #16 |
|---|---|---|
| | **Game Fish Present and Counts (Species (Size Range): Number)** | Bluegill (1-3”): 1<br>Bluegill (4-6”): 1<br>Channel catfish (1-3”): 1<br>Channel catfish (4-6”): 3<br>Channel catfish (7-9”): 3<br>Channel catfish (10-12”): 2<br>Common carp: 17<br>Walleye (7-9”): 5 |
| **AL/R** | **Additional Description** | https://programs.iowadnr.gov/bionet/Sites/16 |

| Field Work Date | Description |
|---|---|
| 7/27/2020 | USGS stream gage data for the area indicated stream flows were normal at the time of assessment. |

This segment of the East Branch West Nishnabotna River is currently designated as BWW2. However, given that BioNet sites show multiple species and age ranges of game fish, indicating reproducing populations, during normal flows, the highest attainable aquatic life use is BWW1.

Desktop review verified that the UAA field work is still valid.

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



**29 Site Photos**

**Figure 1. 1023-4 Recreational use assessment midpoint looking upstream.**

**Figure 2. 1023-4 Recreational use assessment midpoint looking downstream.**

**Figure 3. 1023-4 Recreational use assessment upstream looking upstream.**

**Figure 4. 1023-4 Recreational use assessment upstream looking downstream.**

**Figure 5. 1023-4 Recreational use assessment downstream looking upstream.**

**Figure 6. 1023-4 Recreational use assessment downstream looking downstream.**

**Figure 7. 1023-5 Recreational use assessment midpoint looking upstream.**

**Figure 8. 1023-5 Recreational use assessment midpoint looking downstream.**

**Figure 9. 1023-5 Recreational use assessment upstream looking upstream.**

**Figure 10. 1023-5 Recreational use assessment upstream looking downstream.**

**Figure 11. 1023-5 Recreational use assessment downstream looking upstream.**

**Figure 12. 1023-5 Recreational use assessment downstream looking downstream.**

**Figure 13. 1023-6 Recreational use assessment midpoint looking upstream.**

**Figure 14. 1023-6 Recreational use assessment midpoint looking downstream.**

**Figure 15. 1023-6 Recreational use assessment upstream looking upstream.**

**Figure 16. 1023-6 Recreational use assessment upstream looking downstream.**

**Figure 17. 1023-6 Recreational use assessment downstream looking upstream.**

**Figure 18. 1023-6 Recreational use assessment downstream looking downstream.**

**Figure 19. 1023-6 Observation deck next to stream.**

**Figure 20. 1023-6 Observation deck over stream.**

**Figure 21. 1023-6 Park next to stream.**

**Figure 22. 1023-6 Streamside resident.**

**Figure 23. 1023-6 Streamside trail.**