

## FIGURES

This page was intentionally left blank.

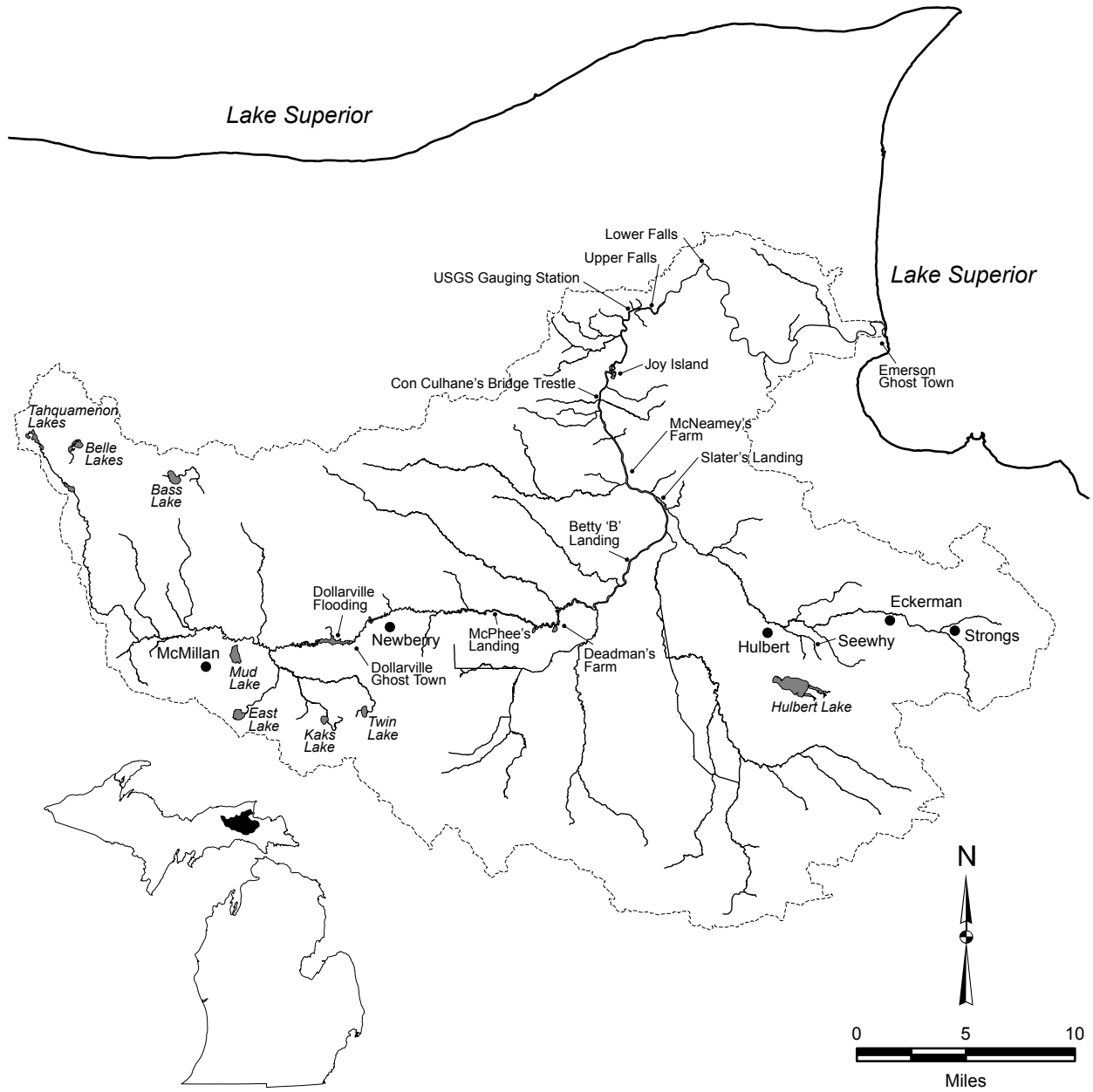
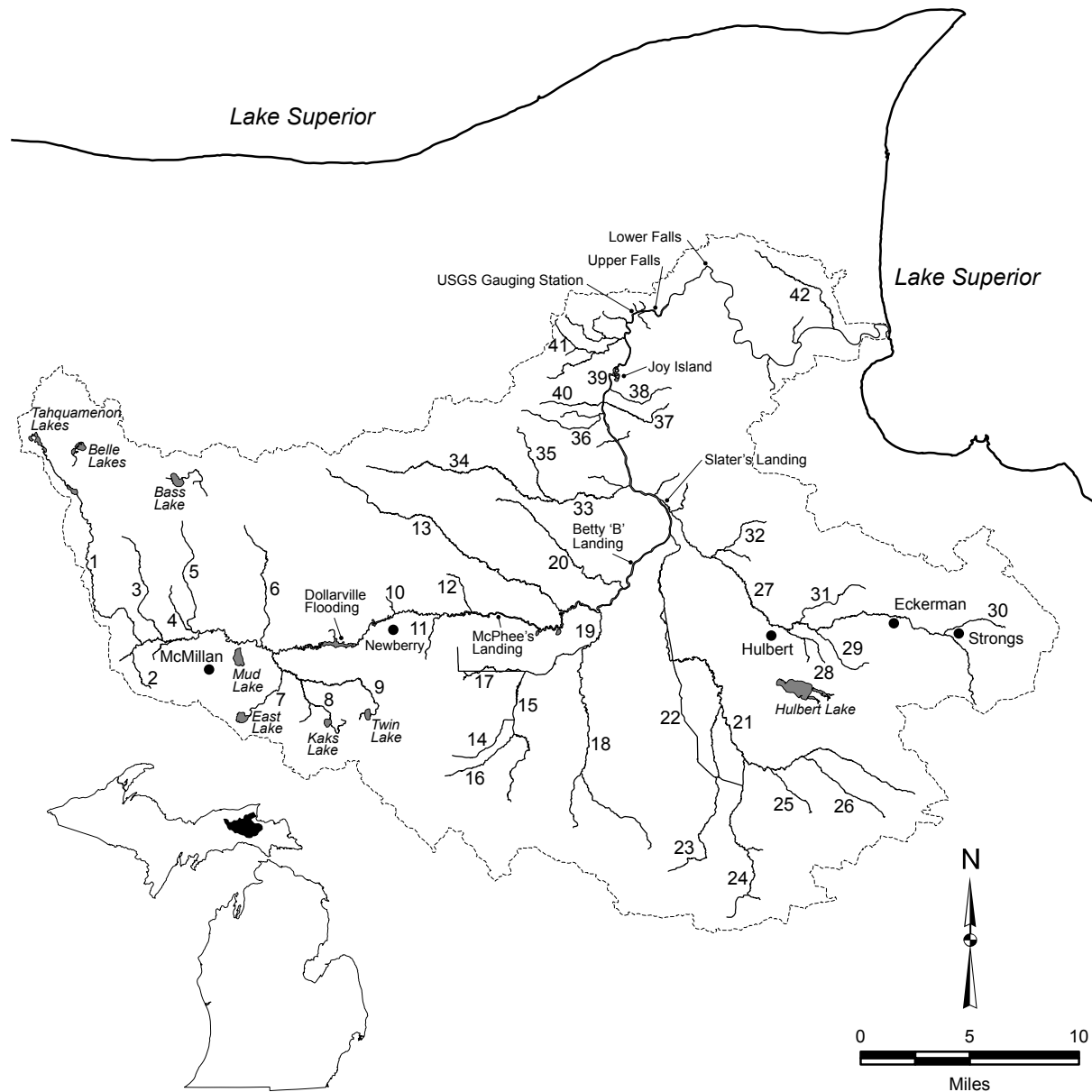


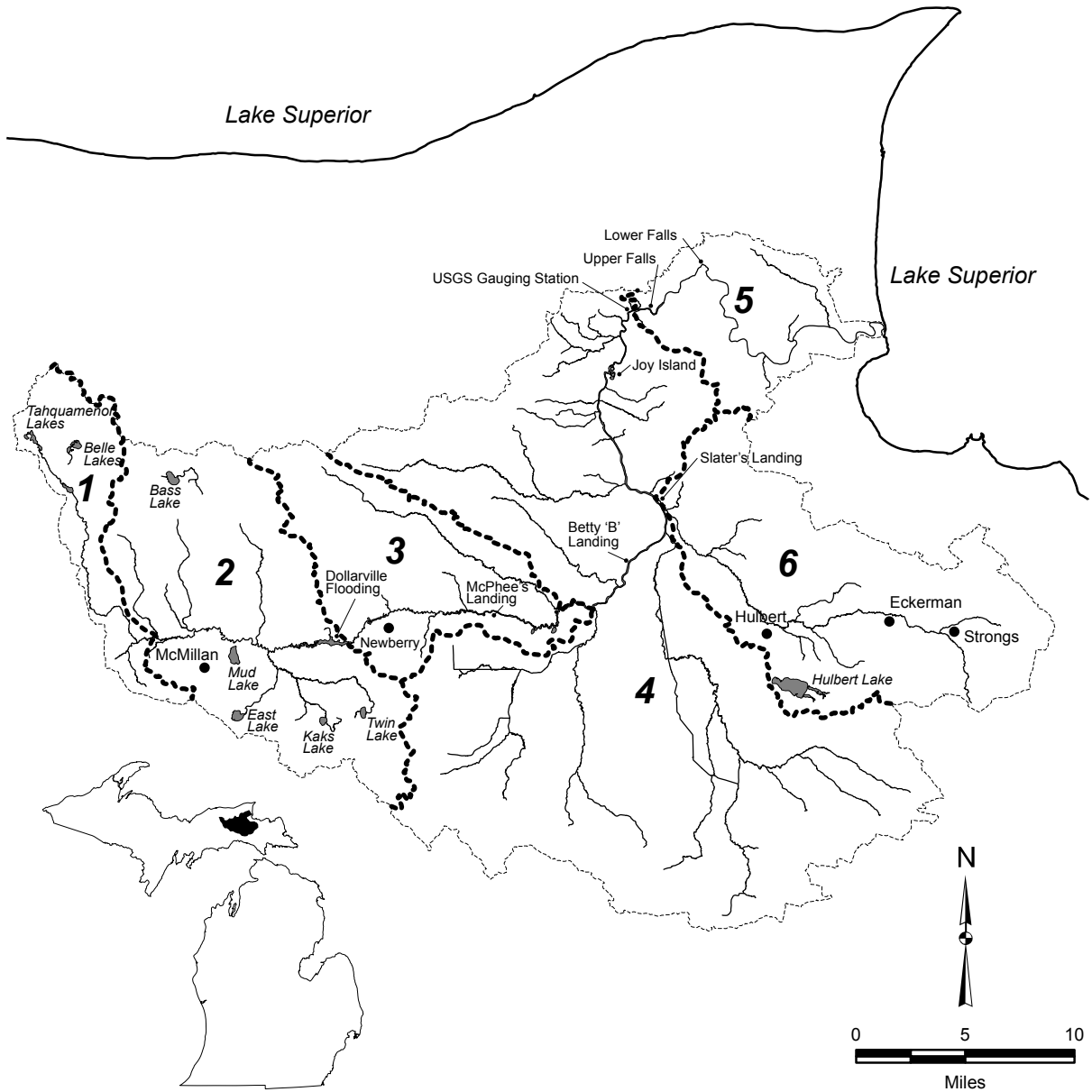
Figure 1.-The Tahquamenon River watershed.

Tahquamenon River Assessment



- |                        |                                    |                                |
|------------------------|------------------------------------|--------------------------------|
| 1 – Tahquamenon River  | 15 – West Branch Sage River        | 29 – Grant Creek               |
| 2 – Kings Creek        | 16 – Third Creek                   | 30 – Creek #8                  |
| 3 – Syphon Creek       | 17 – Big Ditch                     | 31 – Creek #14                 |
| 4 – Red Creek          | 18 – East Branch Sage River        | 32 – Big Beaver Creek          |
| 5 – East Creek         | 19 – Sage River                    | 33 – Murphy Creek              |
| 6 – Silver Creek       | 20 – Gimlet Creek                  | 34 – West Branch Murphy Creek  |
| 7 – East Lake Creek    | 21 – Hendrie River                 | 35 – North Branch Murphy Creek |
| 8 – Carlson Drain      | 22 – McLeod Ditch                  | 36 – Baird Creek               |
| 9 – Teaspoon Creek     | 23 – West Branch Hendrie River     | 37 – O’Keefe Creek             |
| 10 – Otto Brandt Creek | 24 – South Branch Hendrie River    | 38 – Schouts Creek             |
| 11 – 39 Creek          | 25 – Quinn Creek                   | 39 – Linton Creek              |
| 12 – Sixteen Creek     | 26 – Naugle Creek                  | 40 – South Branch Linton Creek |
| 13 – Auger River       | 27 – East Branch Tahquamenon River | 41 – West Branch Linton Creek  |
| 14 – First Creek       | 28 – Rileys Creek                  | 42 – Cheney Creek              |

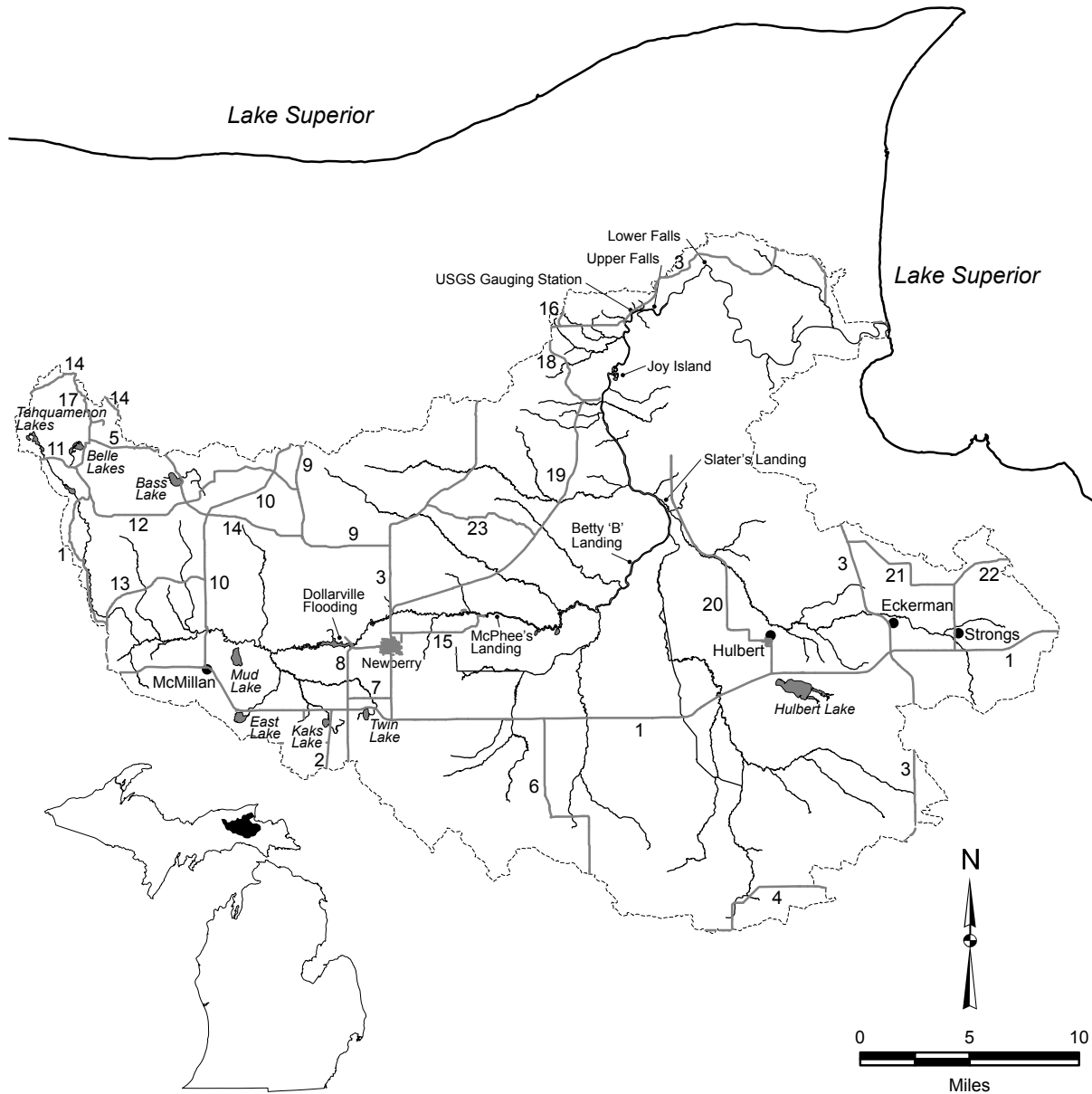
Figure 2.—Named tributaries to the Tahquamenon River. Names were taken from the United States Geological Survey (USGS) topographic maps and county maps produced by the Michigan Department of Natural Resources (MDNR) Engineering, Cartographic Services.



- 1 – Upper River Segment
- 2 – Dollarville Segment
- 3 – Marsh Drainage Segment
- 4 – Middle River Segment
- 5 – Lower River Segment
- 6 – East Branch Tahquamenon River

Figure 3.–Mainstem and East Branch valley segments of the Tahquamenon River.

Tahquamenon River Assessment



- |                     |                      |                         |
|---------------------|----------------------|-------------------------|
| 1 – M-28            | 9 – County Road 407  | 17 – Belle Lake Road    |
| 2 – M-117           | 10 – County Road 415 | 18 – Camp 7 Road        |
| 3 – M-123           | 11 – County Road 421 | 19 – Charcoal Grade     |
| 4 – H-40            | 12 – County Road 422 | 20 – North Hulbert Road |
| 5 – County Road 371 | 13 – County Road 442 | 21 – North Road         |
| 6 – County Road 373 | 14 – County Road 455 | 22 – Salt Point Road    |
| 7 – County Road 402 | 15 – County Road 462 | 23 – Skyline Road       |
| 8 – County Road 405 | 16 – County Road 500 |                         |

Figure 4.–Major roads within the Tahquamenon River watershed.

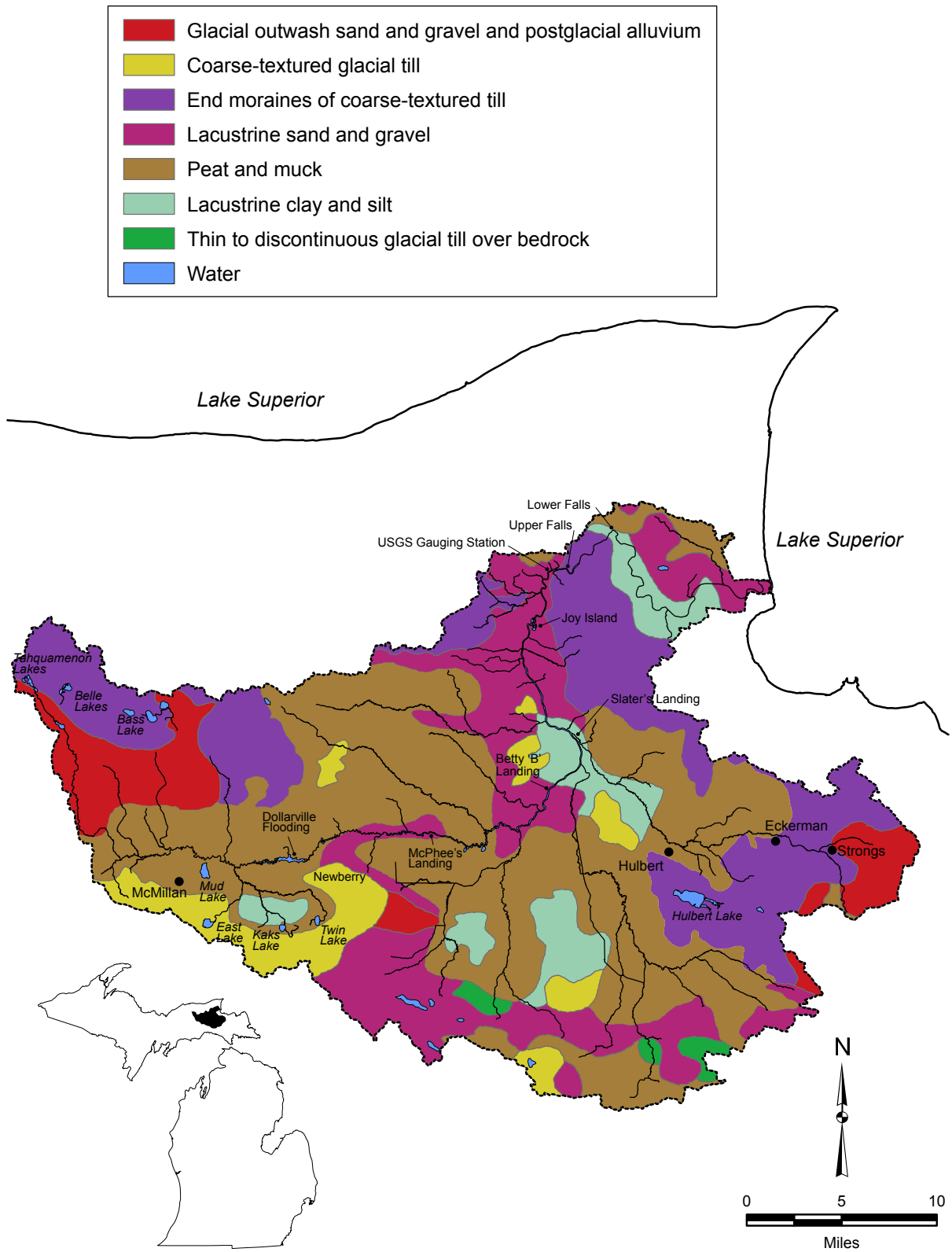


Figure 5.—Surface geology of the Tahquamenon River watershed. Data from Farrand and Bell (1982).

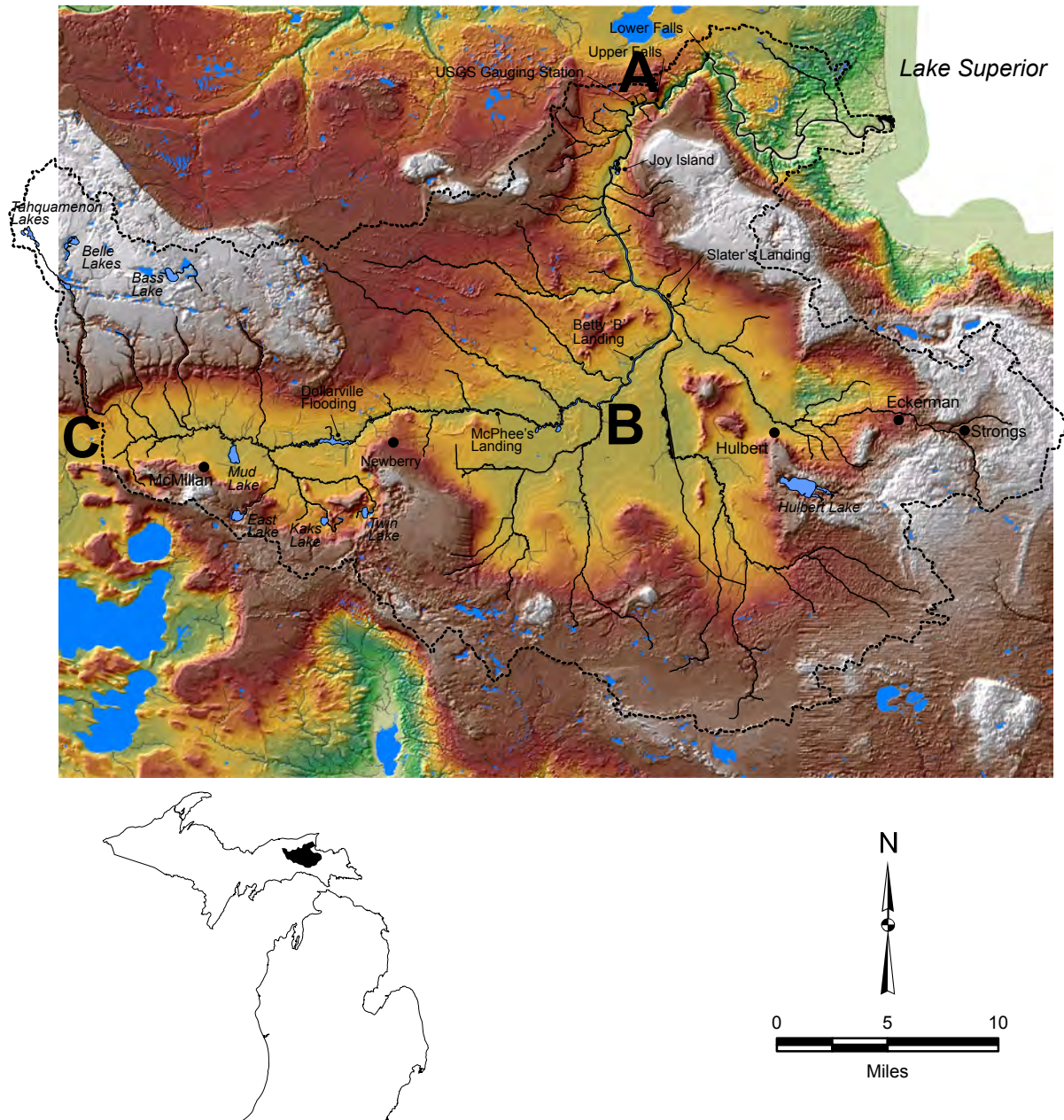


Figure 6.—Surface elevation map of the Tahquamenon River watershed and the local surrounding area. An arc connecting A, B, and C follows a former outlet of glacial Lake Minong (a precursor to Lake Superior). Sand dunes were formed around 10,000 years before present at Site A by glacial Lake Minong as a lower outlet (St. Mary's River) became available. Site B is hypothesized to be a 30-mile wide eddy as the drainageway turned westward toward C, eventually entering into present-day East Branch Fox and Manistique rivers. Site C shows the present divide between the Lake Michigan and Lake Superior watersheds. The horizontal striations along the right side of the picture are due to a data anomaly (Walt Loope, United States Geological Survey, Munising, unpublished data).



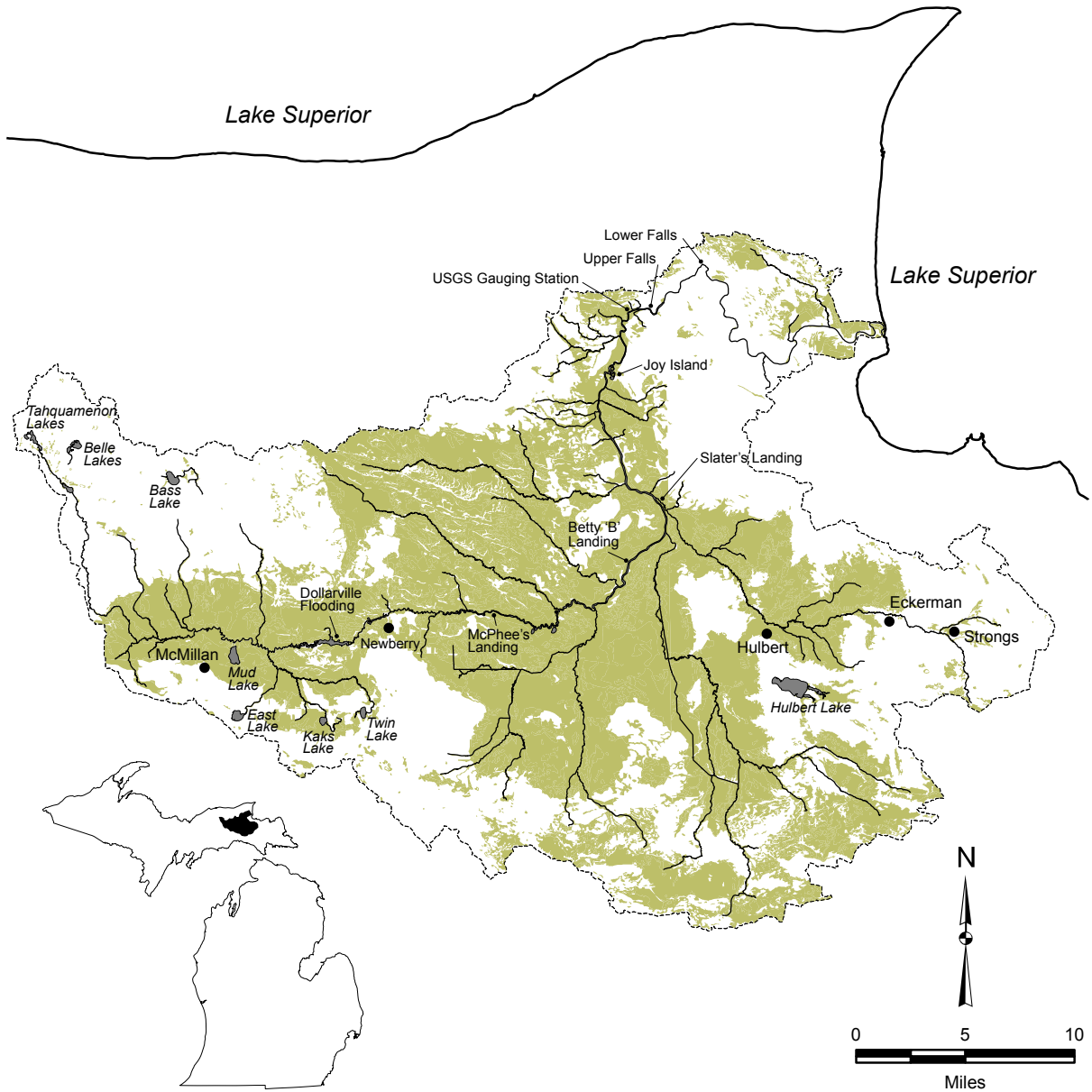


Figure 7.—Wetland composition of the Tahquamenon River watershed, as determined by the Michigan Department of Environmental Quality. Data is from the MDNR Spatial Information Resource Center, unpublished data, 2004.

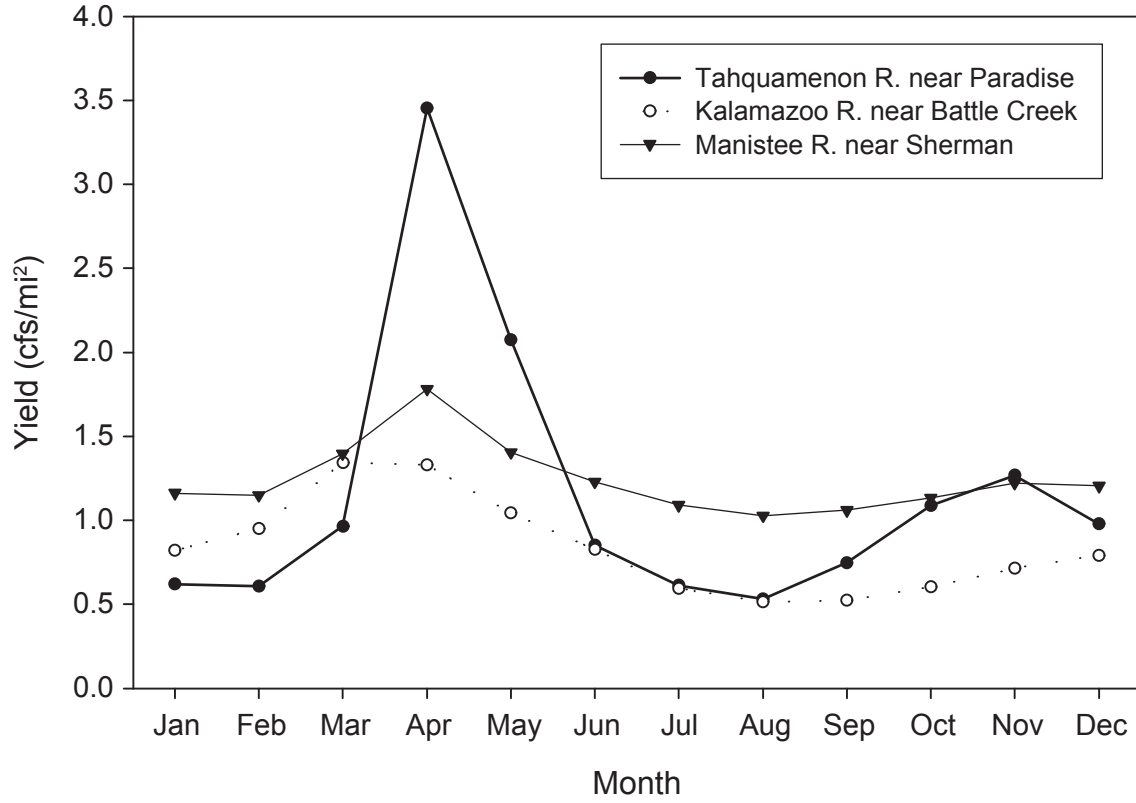


Figure 8.—Average monthly yield (mean monthly flow divided by catchment area) for the period of record at three similarly sized Michigan rivers with USGS gauges. Data from Blumer et al. (2004).

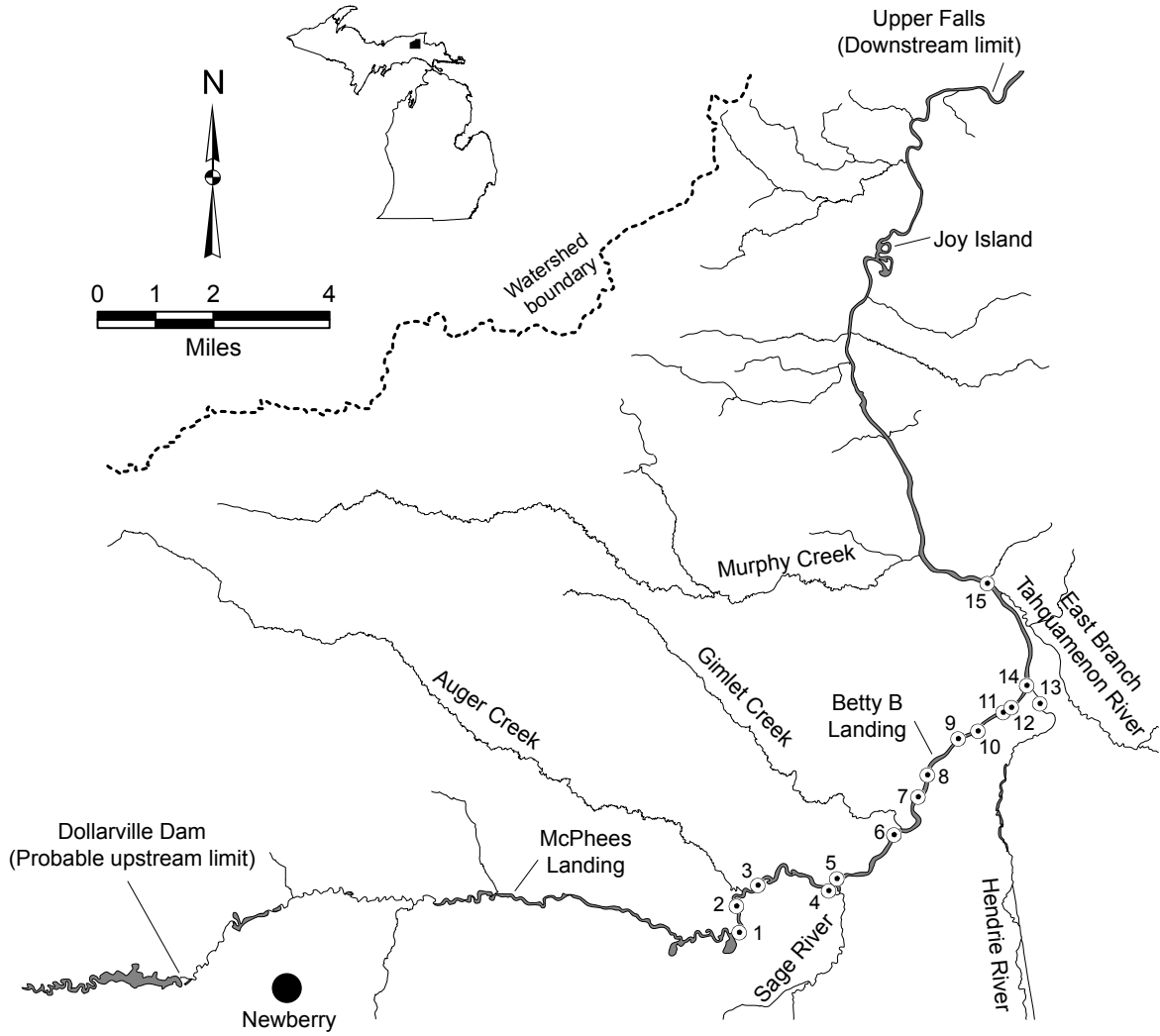


Figure 9.—Sediment sampling locations in the Tahquamenon River, August 22–23, 2005. Samples were taken with a Ponar dredge. Data summary (Table 5) from each site consists of multiple samples taken in cross-section.

Tahquamenon River Assessment

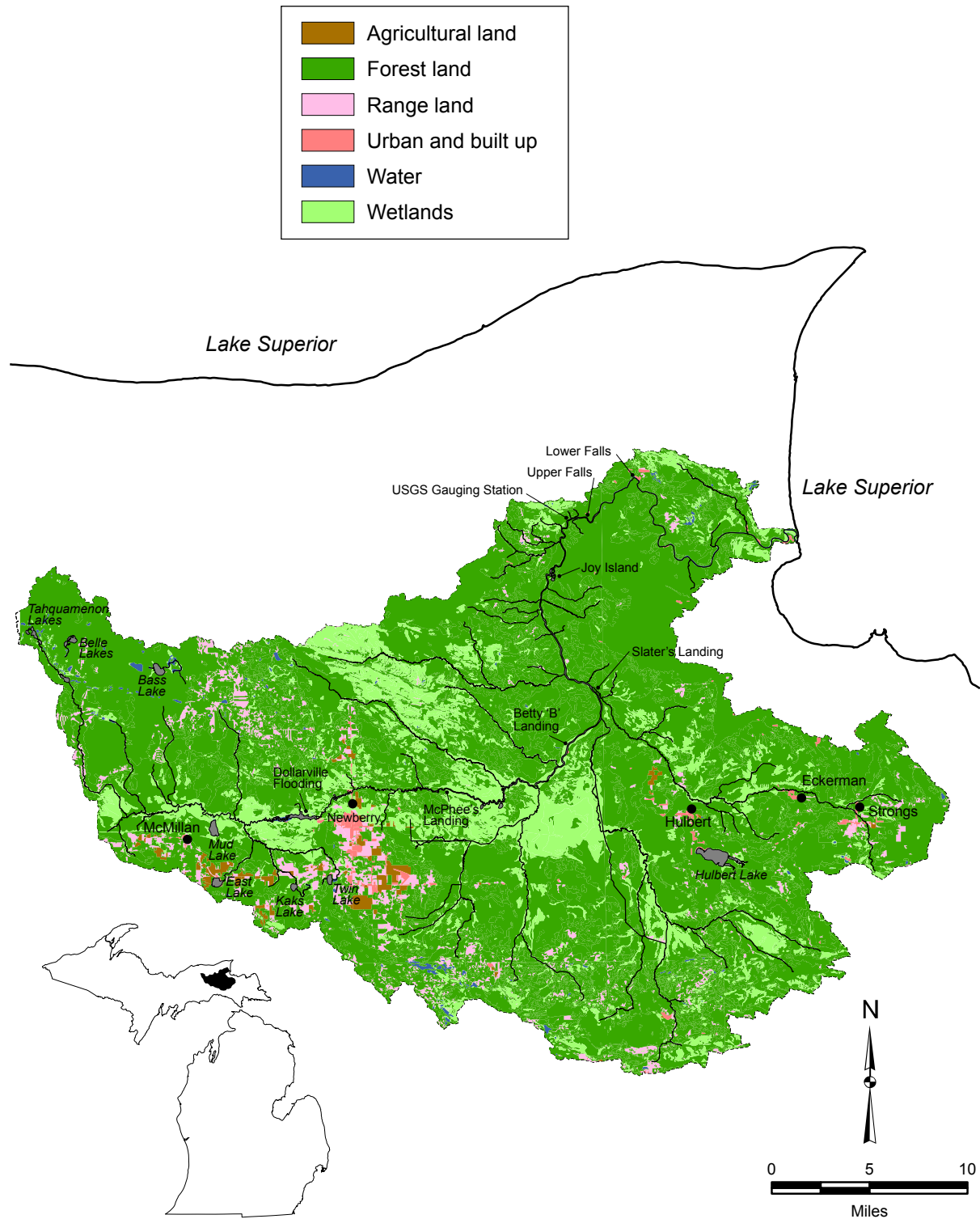


Figure 10.—Land type and use in the Tahquamenon River watershed. Data from MDNR Spatial Information Resource Center, unpublished data, 2004.

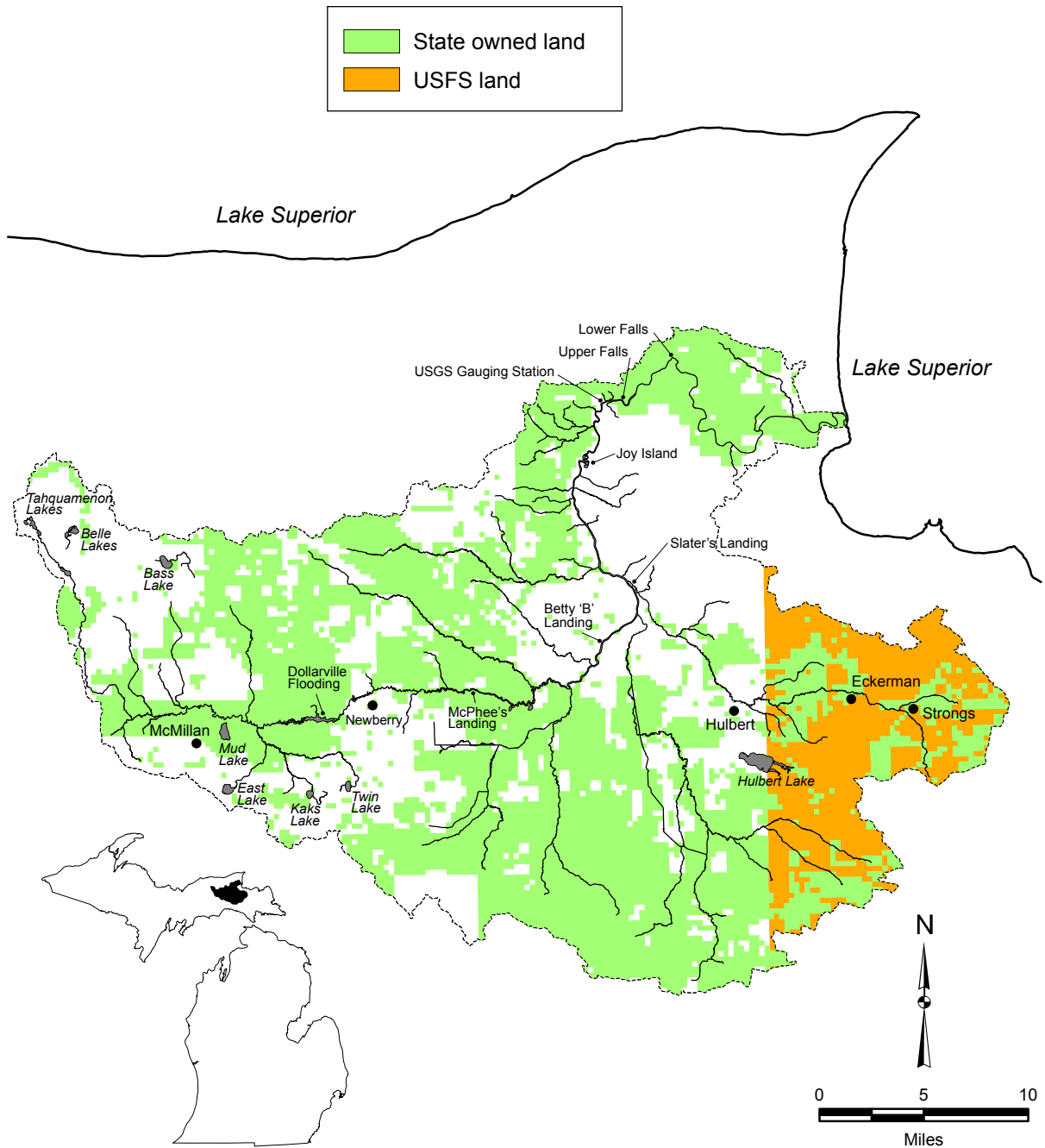


Figure 11.—Public land ownership in the Tahquamenon River watershed. State ownership is from the MDNR Spatial Information Resource Center, unpublished data, 2004. The UFS land ownership is from the U.S. Forest Service Office, Escanaba, Michigan, unpublished shapefile data, 2005.

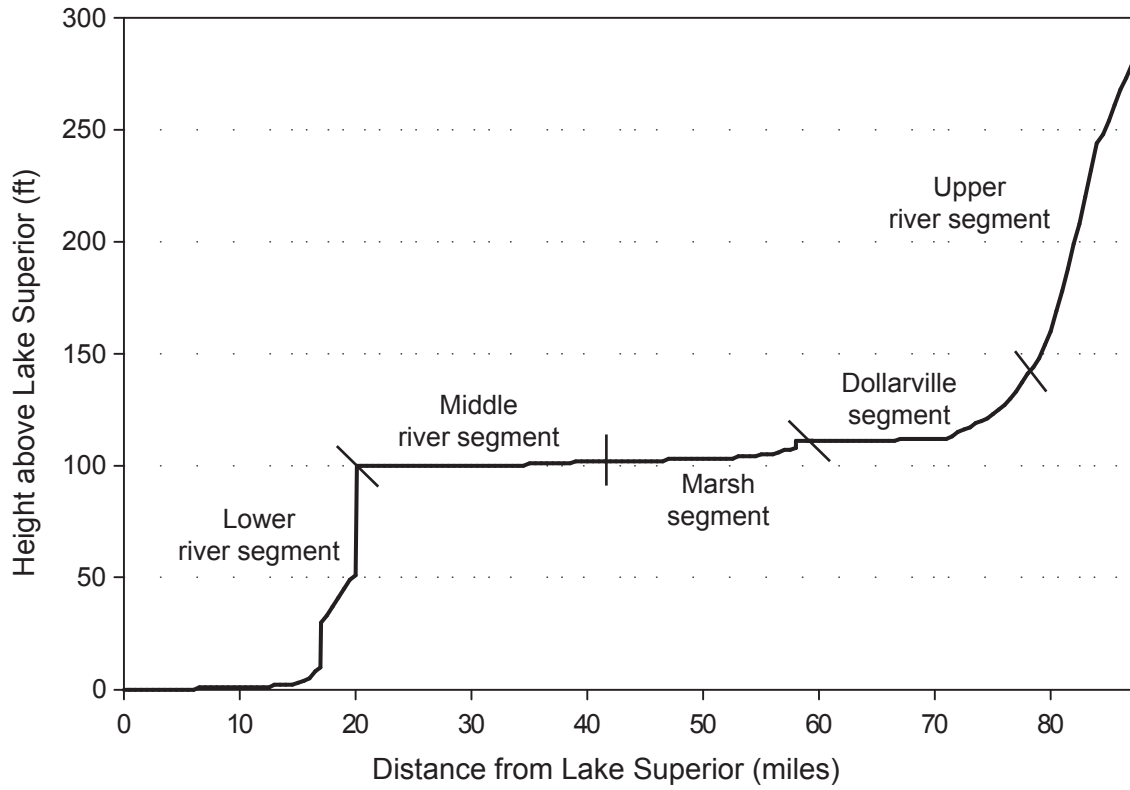


Figure 12.—Mainstem elevation changes from Lake Superior to headwaters. River segments are those described in the Tahquamenon River watershed assessment.

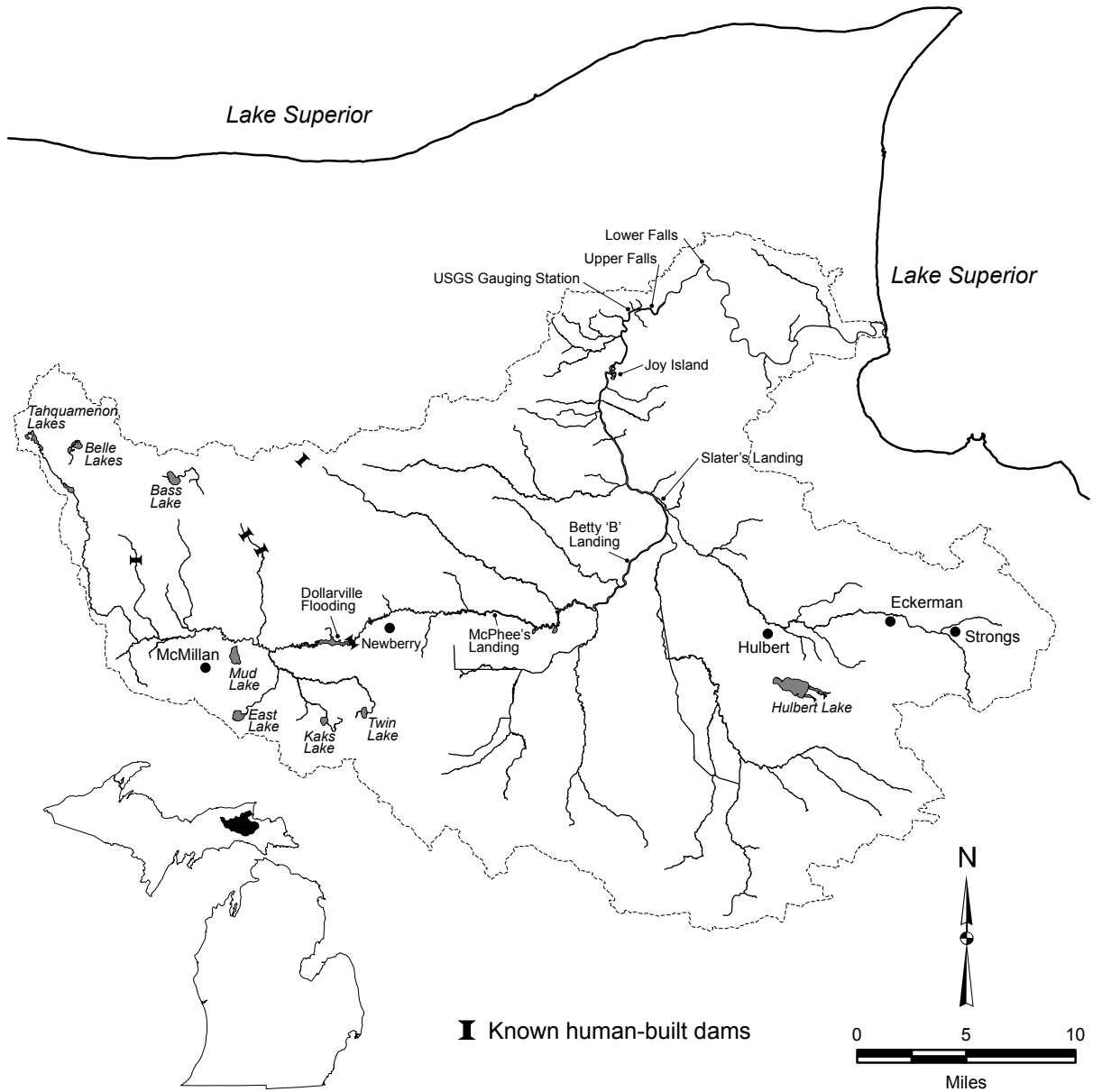


Figure 13.—Dams in the Tahquamenon River watershed (Department of Environmental Quality, Dam Safety Section), modified locally to eliminate earth-bermed, isolated ponds, July 2005.

Tahquamenon River Assessment

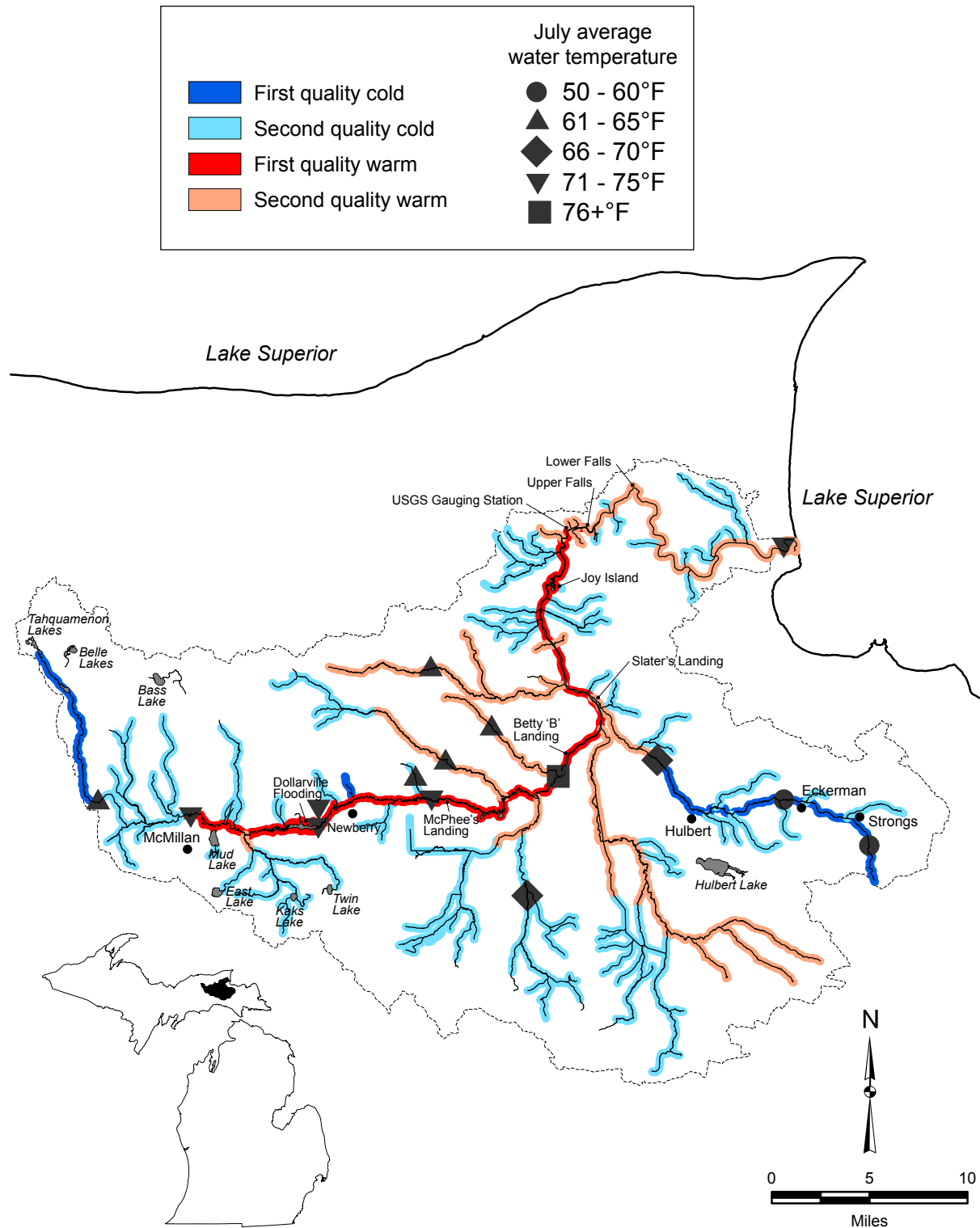
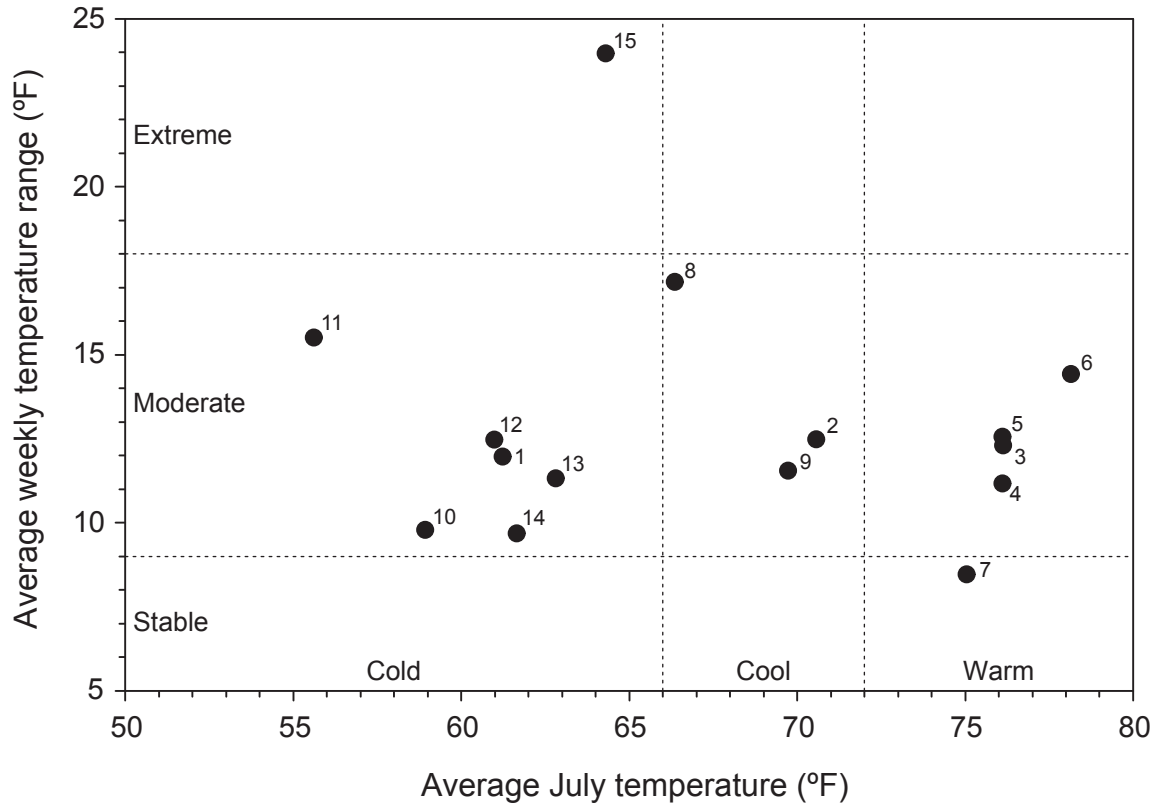


Figure 14.—Stream classification and temperature data logger locations during 2004 and 2005 for the Tahquamenon River watershed. Classes are defined in Anonymous (2000a).





- 1 – Tahquamenon River at County Road 442 Bridge
- 2 – Tahquamenon River at County Road 415 Bridge
- 3 – Tahquamenon River at Dollarville Dam, upstream side
- 4 – Tahquamenon River at Dollarville Dam, downstream side
- 5 – Tahquamenon River at McPhee’s Landing
- 6 – Tahquamenon River about 2 miles downstream from Sage River confluence
- 7 – Tahquamenon River at mouth
- 8 – East Branch Sage River at M-28 Bridge
- 9 – East Branch Tahquamenon River at North Hulbert Road Bridge
- 10 – East Branch Tahquamenon River at old state hatchery site
- 11 – East Branch Tahquamenon River at Salt Point Road
- 12 – Sixteen Creek at Charcoal Grade Bridge
- 13 – Auger Creek at Charcoal Grade Bridge
- 14 – West Branch Murphy Creek at M-123 Bridge
- 15 – Gimlet Creek at Charcoal Grade culverts

Figure 15.–Temperature regime profiles for sites on the Tahquamenon River and selected tributaries. The calculations and format follow the classification system described in Wehrly et al. (1999).

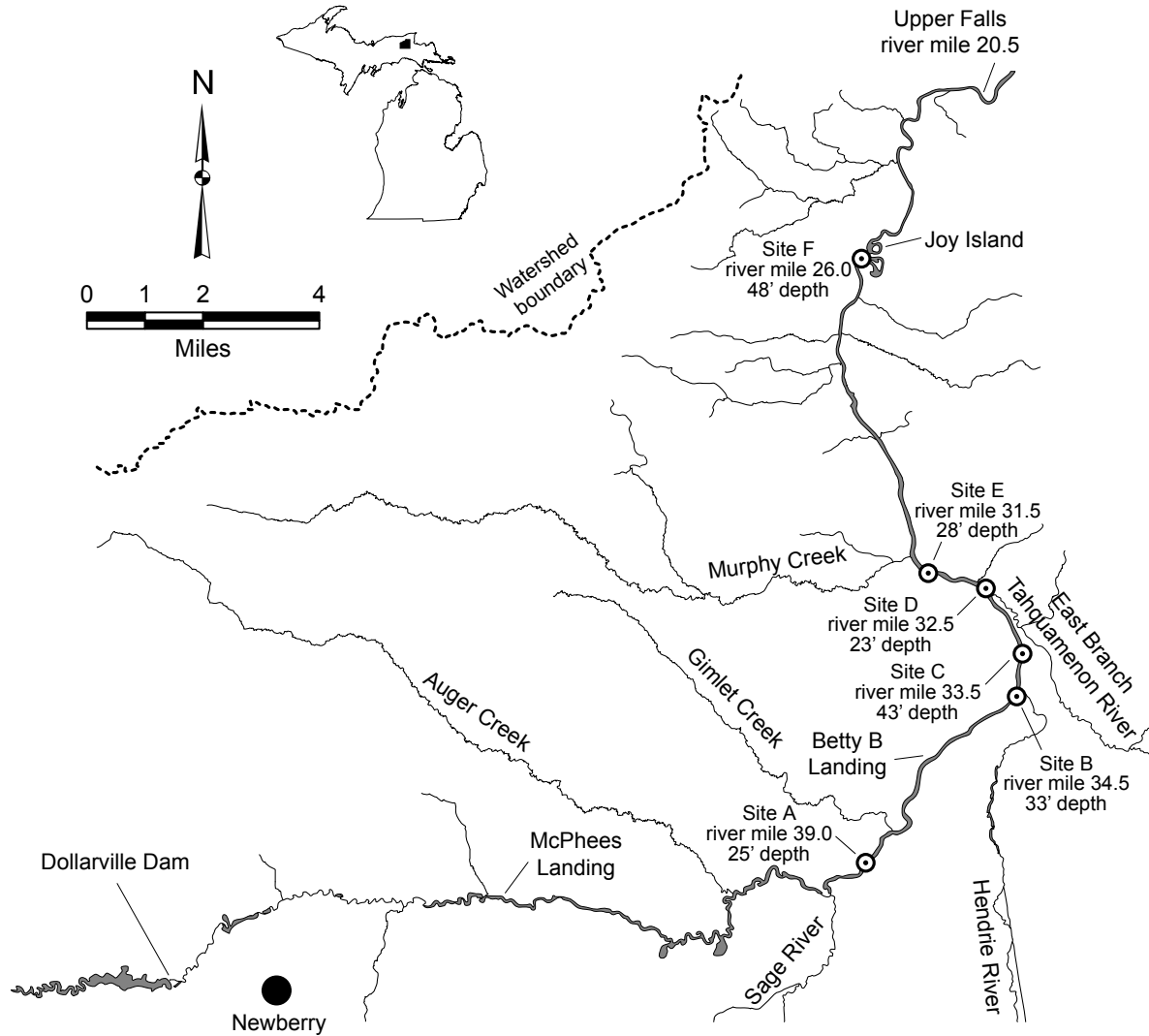


Figure 16.–Limnological vertical profile sites in the Tahquamenon River, September 1, 2006. Data from these sites are shown in Table 15.

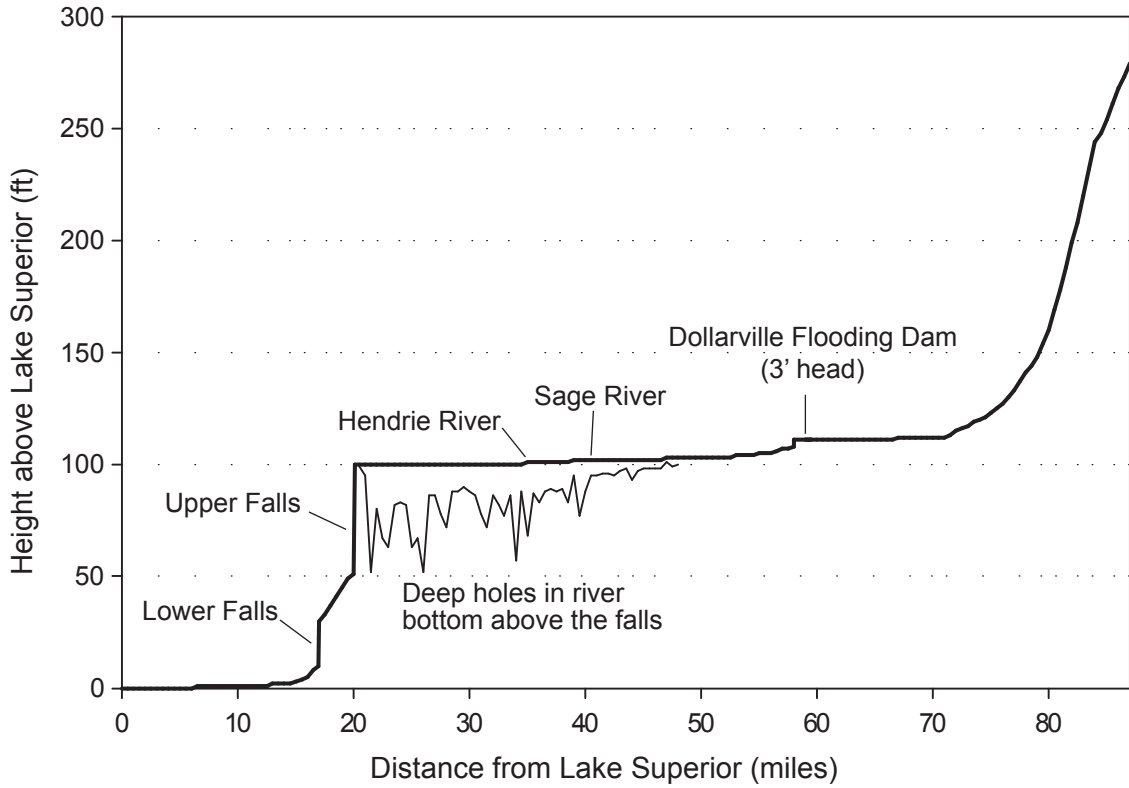


Figure 17.—Deep holes above the Upper Falls documented from survey data. Mainstem elevation changes from Lake Superior to headwaters. Elevation numbers are height above Lake Superior in feet. Most of the known holes are somewhat smaller than the 0.5 mi figure resolution. Also, some holes may be deeper, as there are several very small diameter deep spots that are easily missed during the sonar graphing effort.

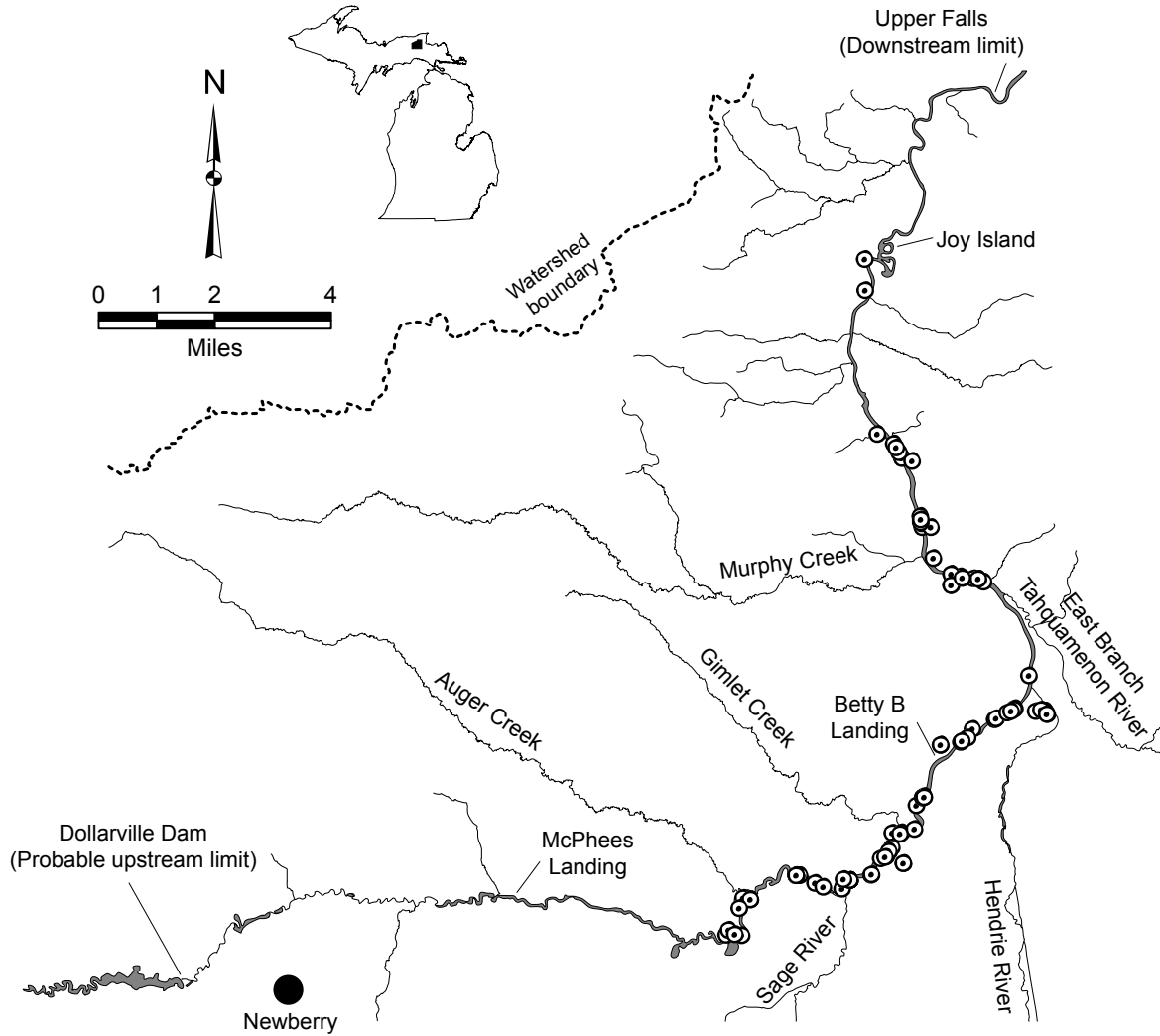


Figure 18.—Walleye locations observed by radio tracking in the Tahquamenon River, Middle River segment during April 2005. Data from 13 fish implanted with radio transmitters during October 2004.

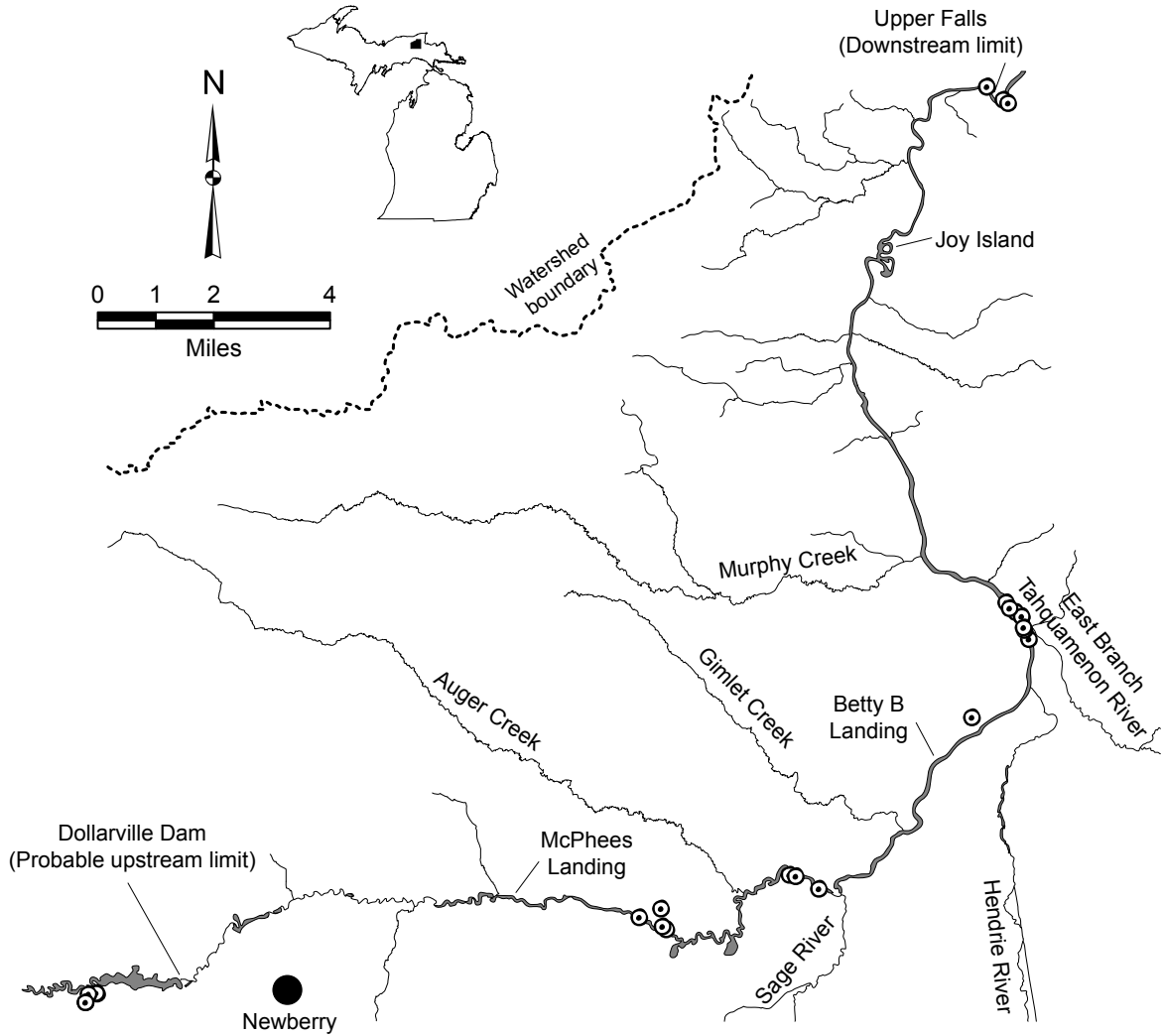


Figure 19.—Muskellunge locations observed by radio tracking in the Tahquamenon River, Middle River segment during May 2005. Data from seven fish implanted with radio transmitters during October 2004.

Tahquamenon River Assessment

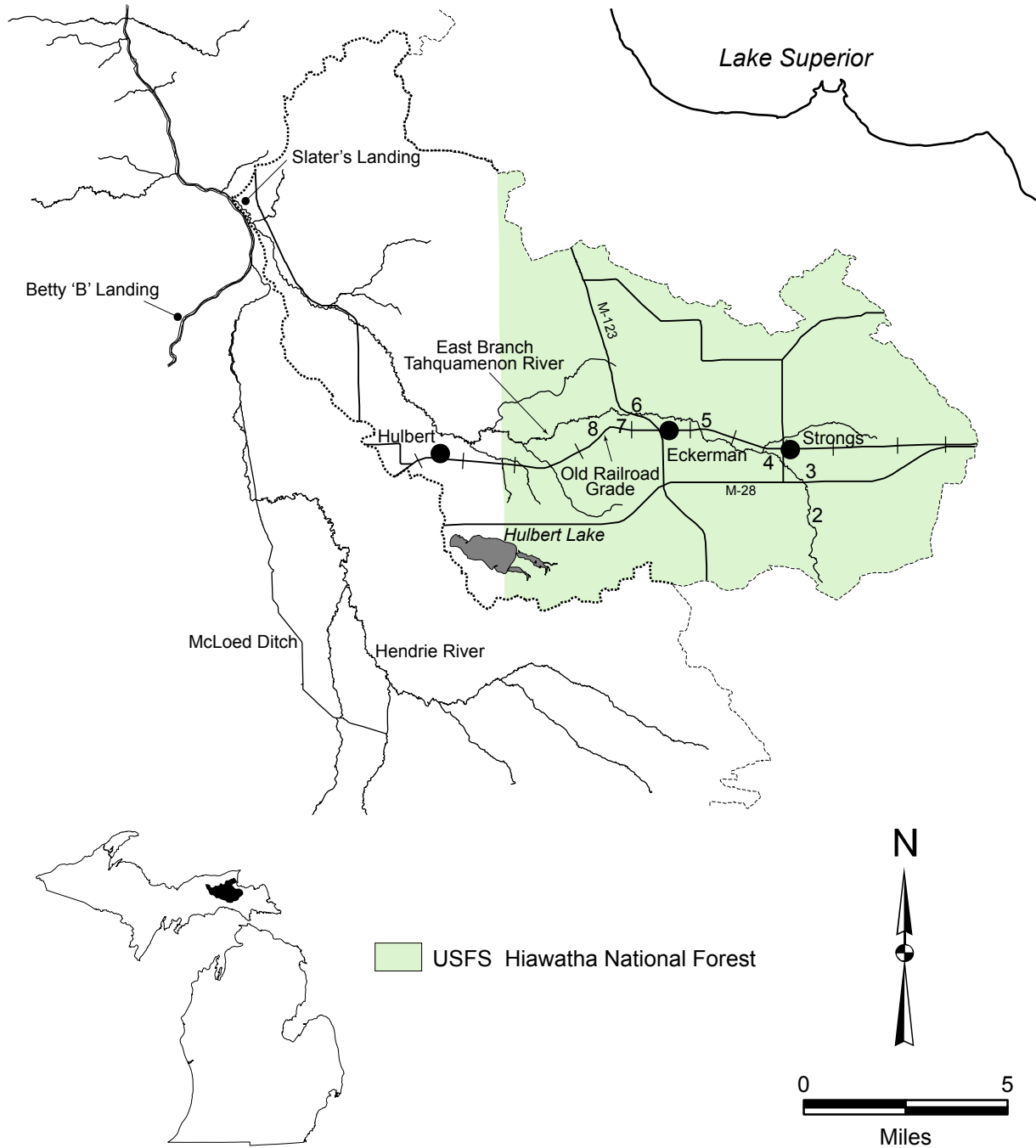


Figure 20.—Location of electrofishing inventory stations in the East Branch Tahquamenon River in 1995 and 2004 (Bassett 2005). There was no Site 1 sampled in 2004. Data from the 2004 survey occur in Table 25.

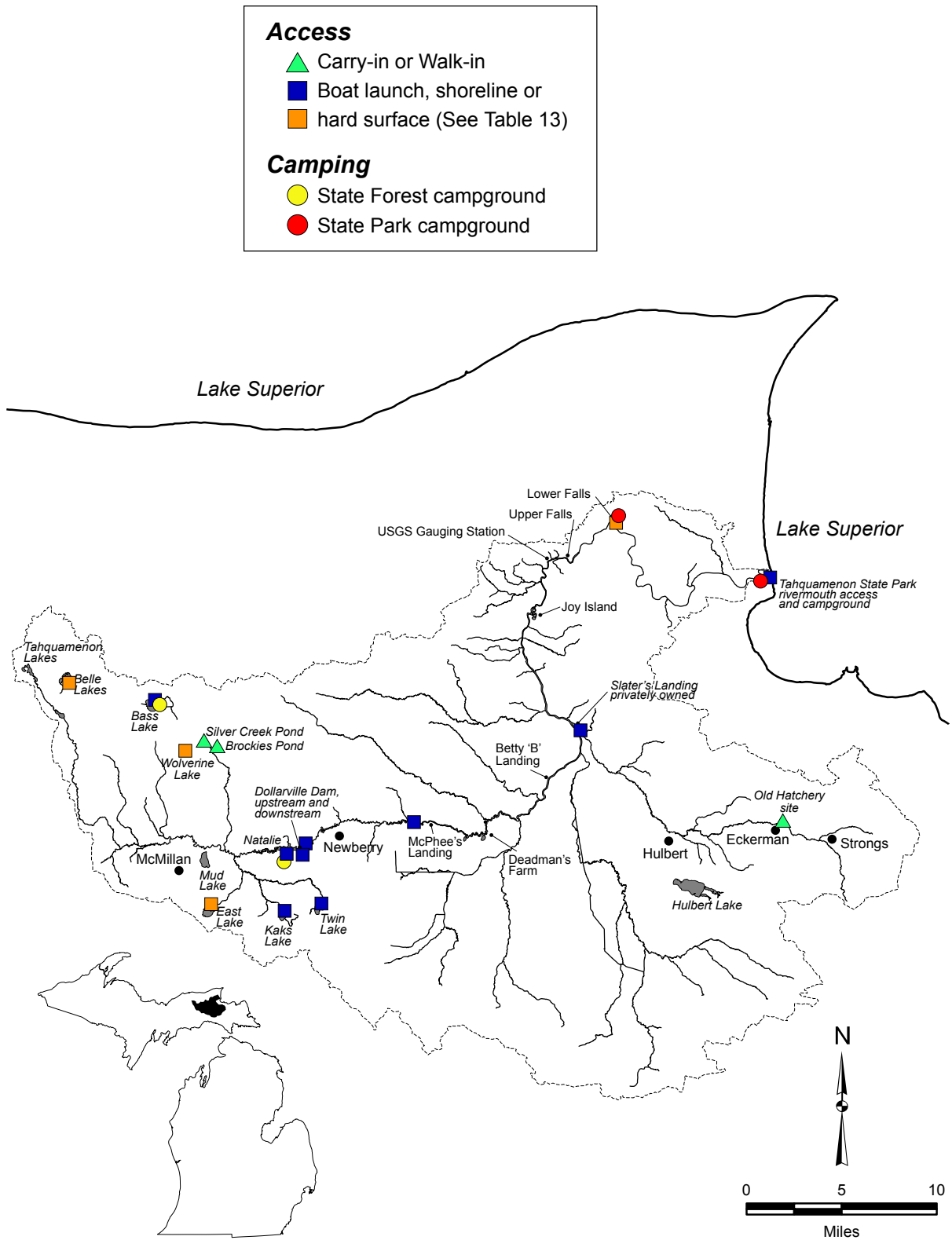


Figure 21.—Tahquamenon River watershed access sites and campgrounds.

This page was intentionally left blank.