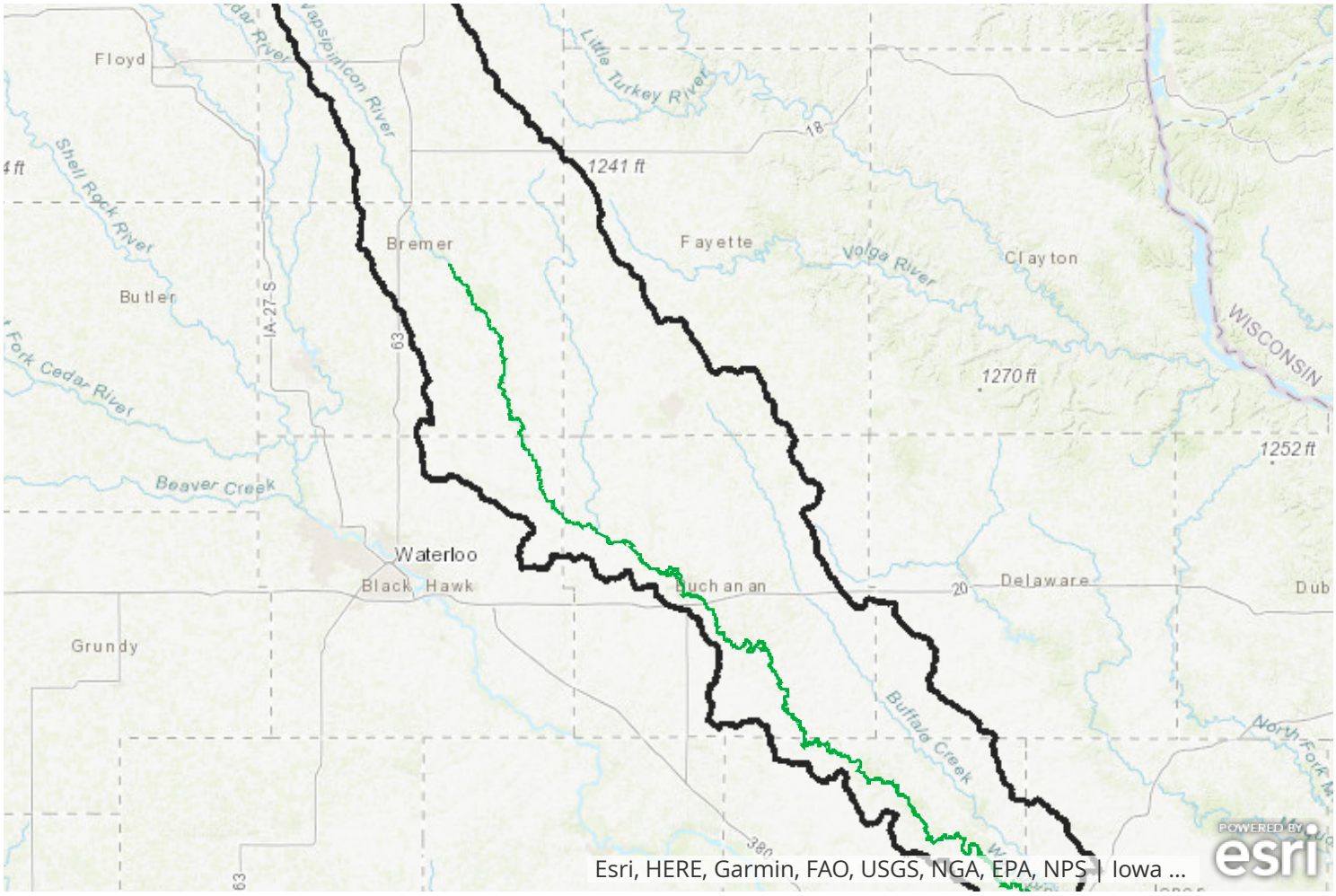
Upper Wapsipinicon Stream and River Designations

This story was made with Esri's Story Map Journal.
Read the interactive version on the web at https://arcg.is/SWv0b.



About 140 miles of the Upper Wapsipinicon River are designated as an Iowa Protected Water Area (PWA). According to the Iowa DNR, the PWA program is intended to,

> *"maintain, preserve and protect outstanding natural and scenic qualities of select waters and their adjacent land areas".*

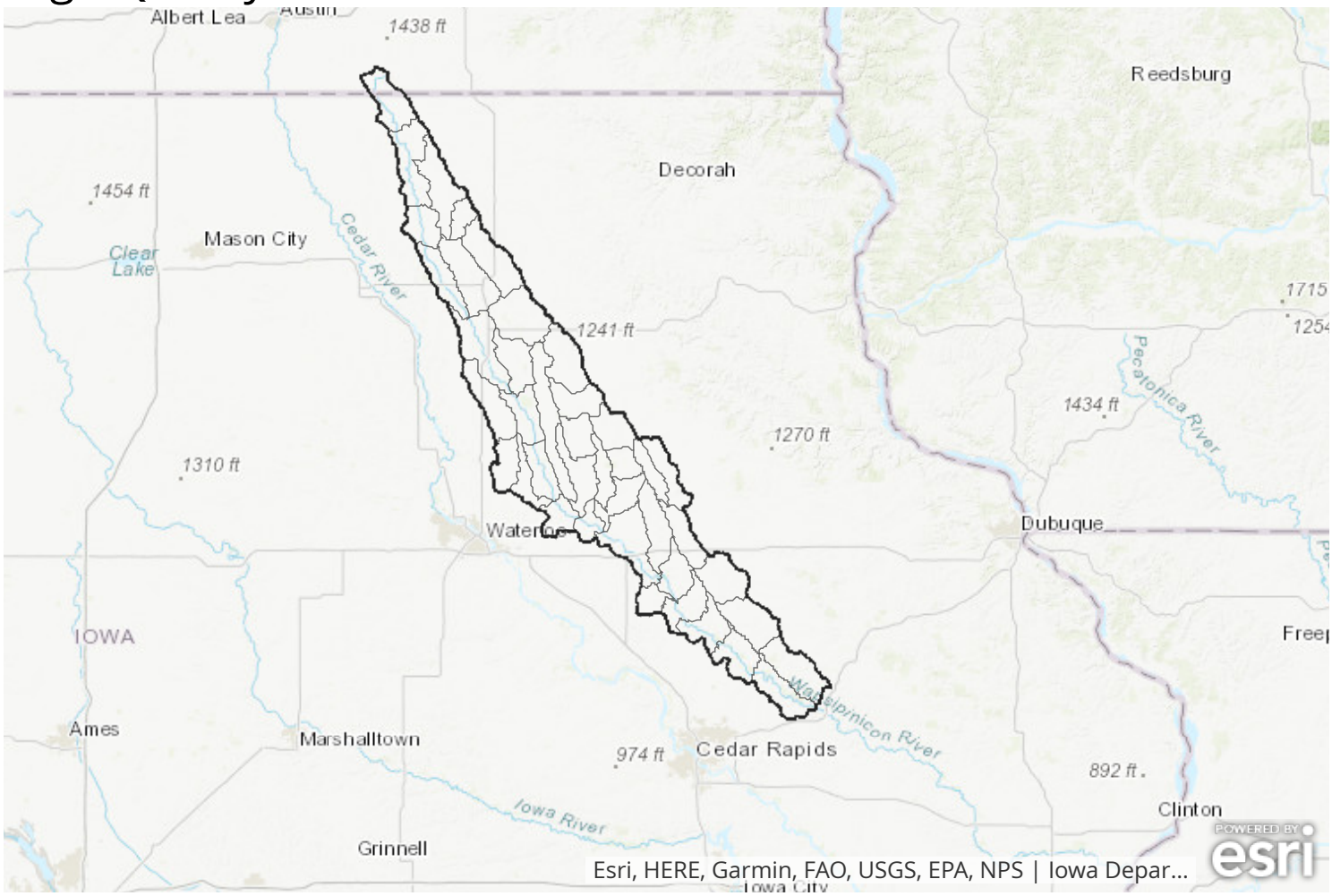
Sections of only five Iowa rivers have been selected for designation as PWAs, including a 140-mile section of the Upper Wapsi River from Sweet Marsh Wildlife Management Area to and through the southern boundary associated with the Upper Wapsipinicon River Watershed in Anamosa, Iowa. (Note: The PWA continues along the Wapsipinicon River until it empties into the Mississippi River). When the Iowa DNR was working on this designations for the entire Wapsipinicon River they stated, the

> *"Wapsipinicon River has the longest continuous stretch of natural and scenic river corridor in [the area], and quite possible in the entire state."*

According to the Iowa DNR, 28% of Iowa Resource Enhancement and Protection funding is allocated annually for state acquisition and development of lands and waters and

> *"One-twentieth of the 28% is available to the PWA program, which acquires land along designated PWA rivers to maintain their scenic and natural qualities".*

High Quality Waters



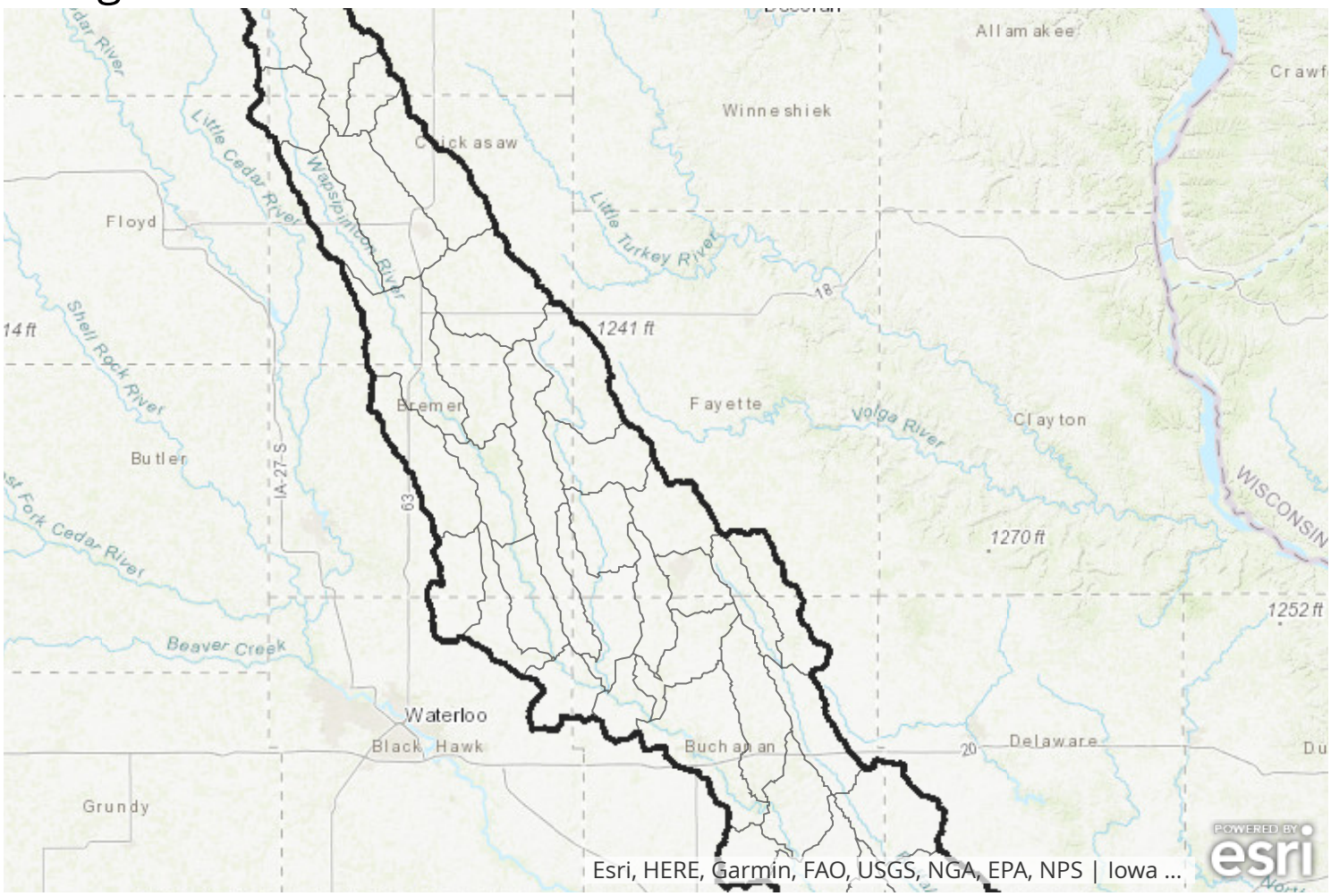
The Upper Wapsipinicon River Watershed contains 627 stream and river miles of High Quality Waters (HQ) and High Quality Resource Waters (HQR). (Rivers_HQHQR GIS layer) According to the Iowa DNR, High Quality Waters demonstrate

> *"exceptionally better quality than the levels specified in the Water Quality Standards" and have "exceptional recreational and ecological importance." The Iowa DNR notes that, "Special protection is warranted to maintain the unusual, unique or outstanding physical, chemical, or biological characteristics which these waters possess."*

According to the Iowa DNR,

"High Quality Resource Waters (HQR) are waters of substantial recreational or ecological significance which possess unusual, outstanding or unique physical, chemical, or biological characteristics which enhance the beneficial uses and warrant special protection."

Designation for Recreational Use



This watershed contains 506 miles of Class A Waters designated for recreational use or other uses that may result in direct or indirect contact with the water. Tens of thousands of residents and visitors annually utilize the Upper Wapsipinicon River and its corridor for recreational activities including canoeing, kayaking, fishing, tubing, wildlife watching, camping and other activities. In addition, businesses on and near the river are dependent on their clients and customers being able to access water recreation, including canoe liveries, guides, convenience stores, campgrounds and others. According to a survey by ISU's Center for Agriculture and Rural Development, visitors made approximately 226,801 trips to the Upper Wapsipinicon River in 2009 and spent $6M on outdoor recreation activities.

The Upper Wapsipinicon River Watershed encompasses 338 miles of stream and river resources that support warm water game fish species and warm water nongame and invertebrate species [Class B(WW-1)], and 165 miles of class B(WW-2) waters that support a resident aquatic community that include a variety of native non game fish and invertebrate species. Flow and other physical characteristics limit the habitat for maintaining warm water game fish species. (Iowa DNR) (Classifications as of September 2010. For current classifications see 567 IAC 61 at

http://www.legis.state.ia.us/IAC.html.)

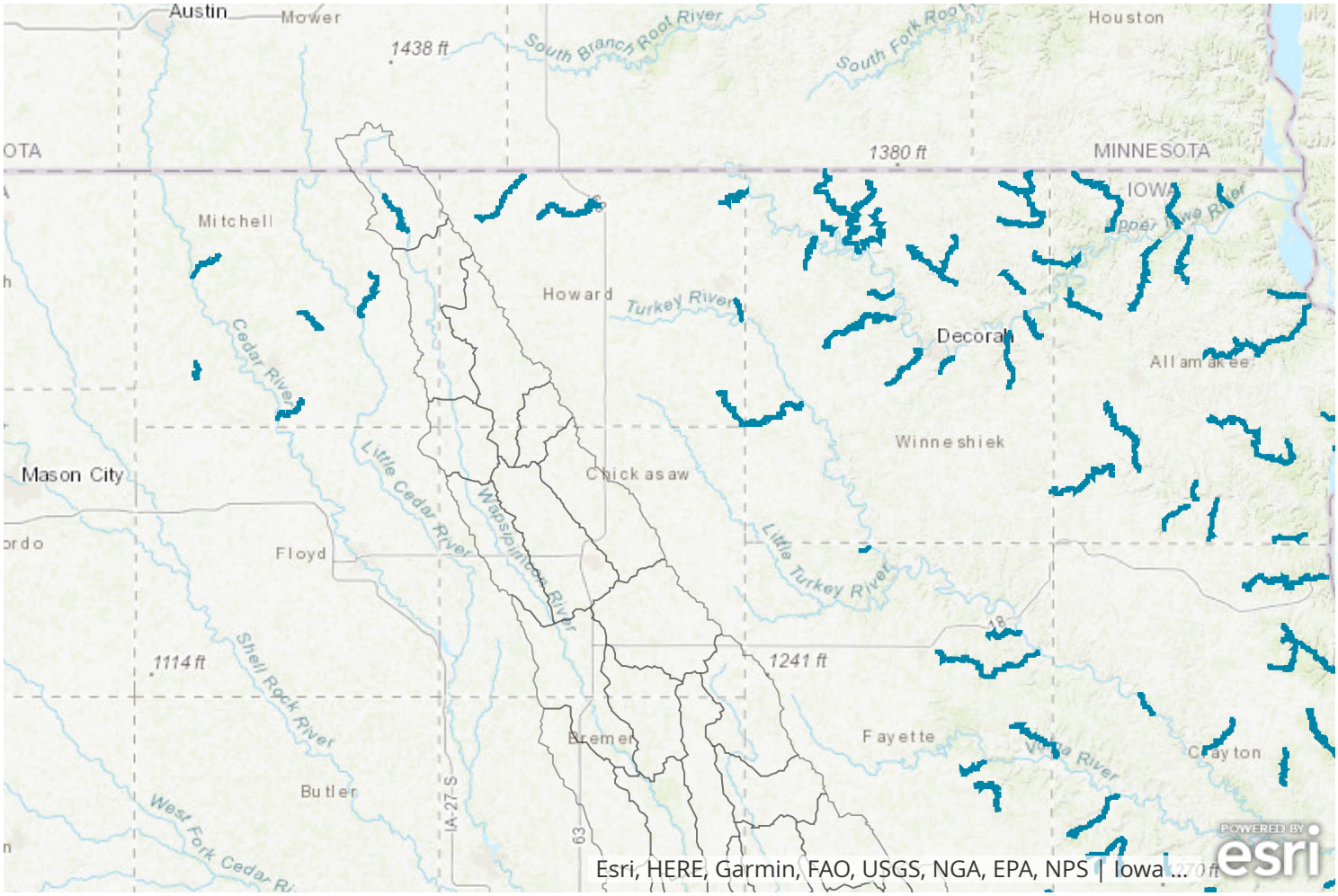
Legend

Designation

recreation

- A1
- A1/A2
- A2
- A3
- GU
- Upper Wapsipinicon River Watershed

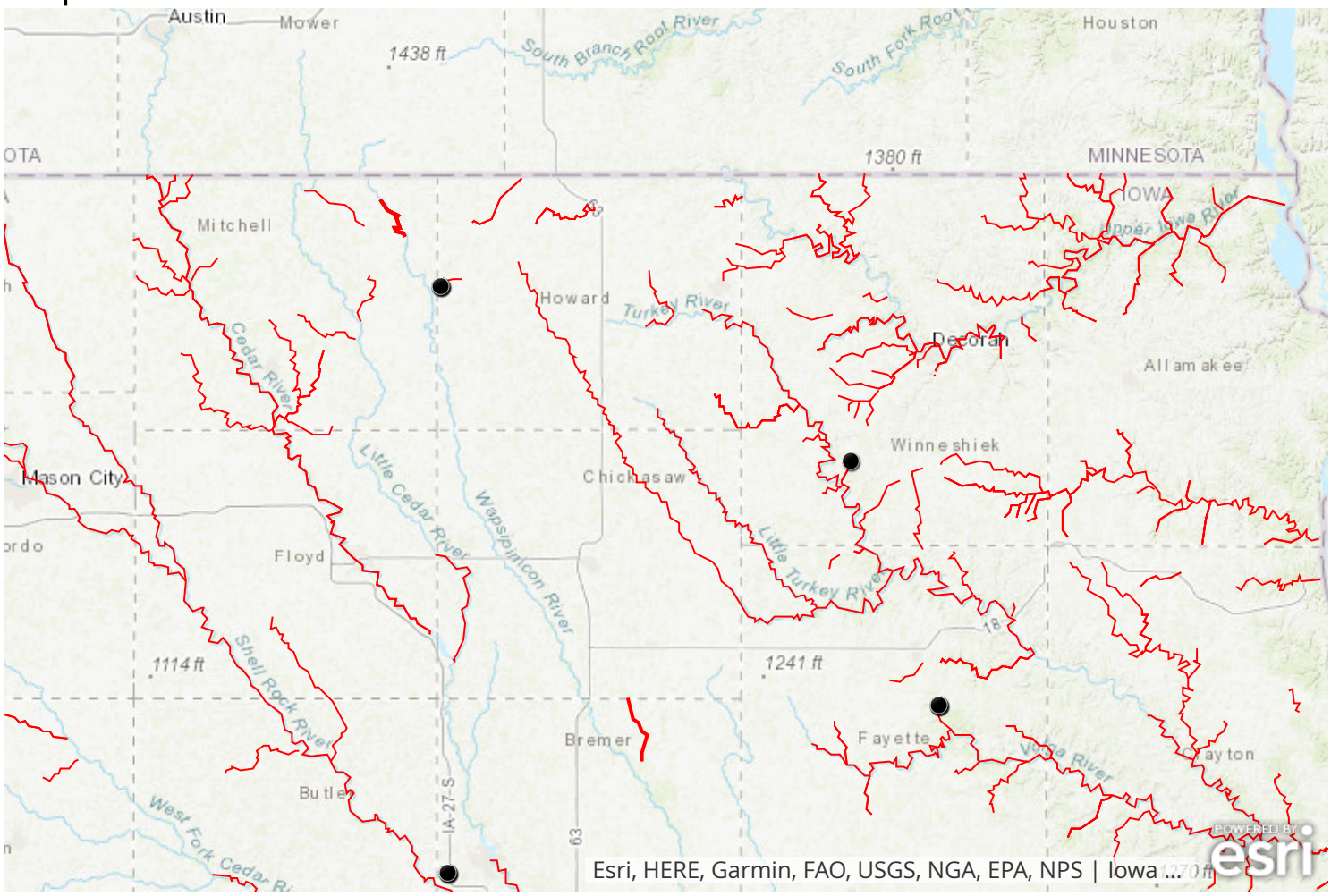
Cold Water Streams



The Upper Wapsipinicon River Watershed Includes one, five-mile stretch of the Upper Wapsipinicon River that is designated as a high quality class B(CW1) cold water stream. This section of the river maintains a flow and temperature that are suitable for a variety of cold water game species

including reproducing and non-reproducing populations of trout and associated aquatic communities. This is the only cold water section in the Upper Wapsipinicon River Watershed where trout are stocked by the Iowa DNR. This cold water section of the river is located in the northern-most portion of the watershed and is fed by springs that are part of the Upper Wapsipinicon headwaters.

Impaired Waters



Impaired Waters of Iowa - Impaired_Lakes_2016

- ●

Impaired Waters of Iowa - Impaired_Streams_2016

- Wapsipinicon River
- East Branch Buffalo Creek
- East Fork Wapsipinicon River
- Other

HUC12_lookup

- Upper Wapsipinicon

Watersheds

Watershed Boundary Dataset

HUC 08

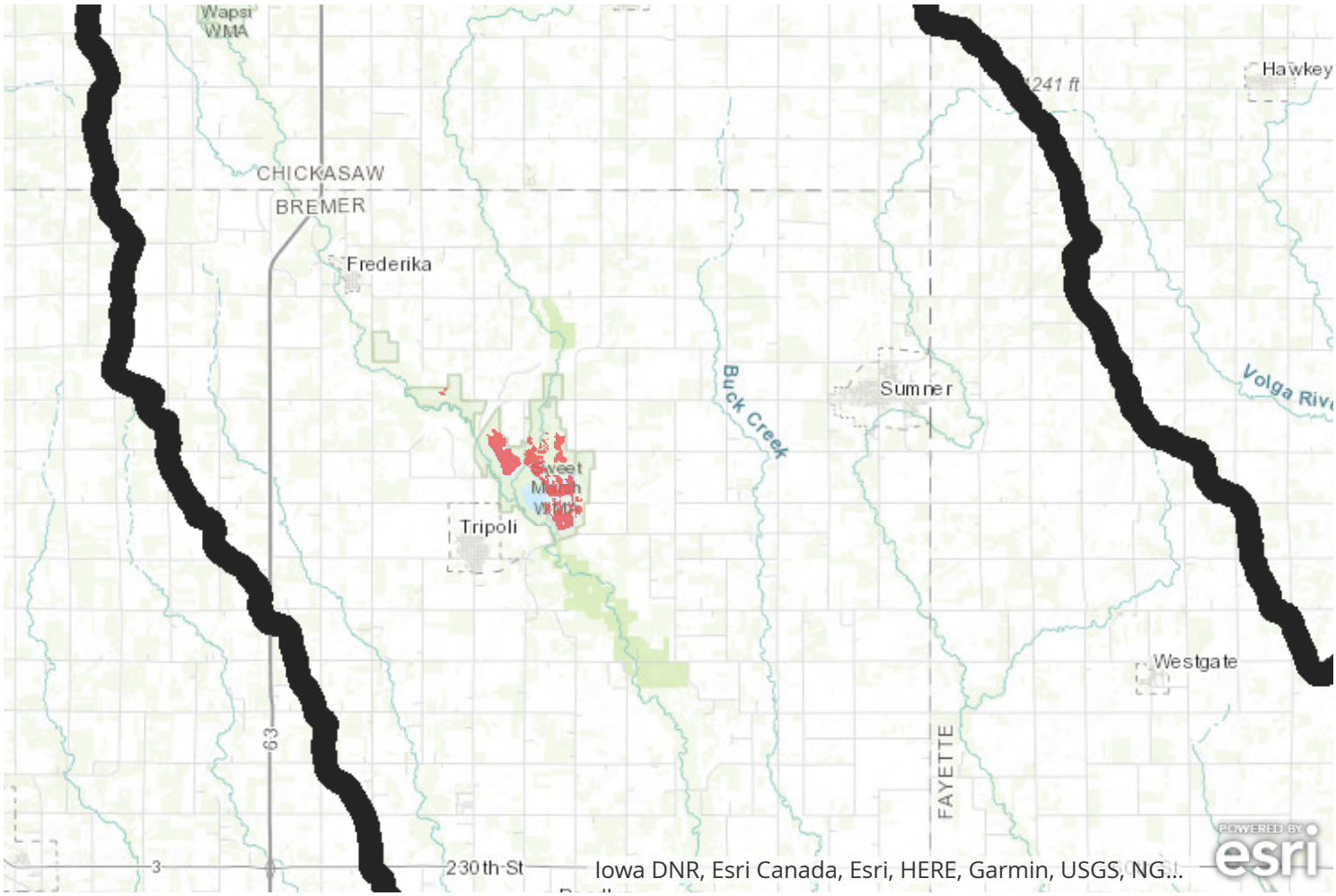
- ☐ 07080102
- Other

Just under 100 miles of streams and rivers in the Upper Wapsipinicon River Watershed were listed on the Iowa's 303(d) Impaired Waters Listings in 2016. According to Iowa DNR, in order for a stream or body of water to be impaired it

> *"must fail to meet its designated use; such as, recreational use, like swimming or fishing, drinking water source, or for maintaining a healthy population of fish and other aquatic life. If a stream or river fails to comply with its designated use, then it is placed on the "303(d)" list, known as the "Impaired waters list," which is based on the Clean Water Act."*

The Clean Water Act requires States to identify and restore impaired waters. The primary tool for addressing impaired waters is a pollution reduction plan referred to as a Total Maximum Daily Load, or TMDL. After impaired use(s) have been identified, the TMDL development process identifies all sources of each pollutant. The plan then determines how much each source must reduce its contribution in order to meet the designated water quality standard. Because it indicates there is a need for water quality improvement, an impairment designation qualifies local Soil and Water Conservation Districts for specific, competitive, state and federal grants that can be utilized to provide technical assistance and/or financial incentives to landowners within the watershed of the impaired water body. All of the impaired listings in the UWR Watershed are due to high levels of fecal indicator bacteria or fish kills caused by animal waste. Reductions in fecal indicator bacteria and fish kills in other watershed have been achieved by limiting livestock access to streams and rivers, and through nutrient and manure management. Urban wastewater and stormwater system upgrades, particularly when those systems are old and failing, have also helped reduce fecal indicator bacteria in some surface waters.

Wetlands



designated_wetlands

- DNR
- USFWS

HUC12_lookup

- Upper Wapsipinicon

Watersheds

Watershed Boundary Dataset

HUC 08

- 07080102
- Other

The landform region associated with the UWR Watershed is the Iowan Surface. Typically, the soils in the Iowan Surface are poorly drained and suitable for wetland ecosystems. Natural, restored, and constructed wetlands have multiple ecological, water quality, hydrologic and watershed resiliency benefits.

> *"Although wetlands cover only about 5 percent of the land surface in the lower 48 states, they are home to 31% of plant species."*

(U.S. Fish and Wildlife Service). The majority of the natural wetlands in the UWR Watershed have been tile drained and cultivated. According to the National Landcover Data set from 2011, only 3% of the remaining land surface of the UWR Watershed is identified as wetlands. There are currently

thirty public wetlands in the watershed. Those wetlands comprise portions of 6 public wildlife areas. The largest being Sweet Marsh State Wildlife Management Area northeast of Tripoli, in Bremer County.

Note: The National Landcover Data set is developed by a **Multi-Resolution Land Characteristics (MRLC) Consortium**. The MRLC Consortium is a partnership of Federal agencies, consisting of the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, the U.S. Department of Agriculture (USDA) National Agricultural Statistics Service, the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, the Bureau of Land Management, NASA, and the U.S. Army Corps of Engineers