A SOLID FOUNDATION: EXISTING IOWA WATER TRAILS

More than 1,500 miles of waterways have been selected as state designated and developing water trails in Iowa during the first three years of the state water trails program (Figure 4 and Table 1).

Figure 4.
State Designated and Under Development Water Trails and Iowa's Protected Water Areas

Nearly all stream reaches within Iowa's Protected Water Areas have been included in a state designated trail. Future directions of the program include both the designation of more trail miles as well as a thoughtful balancing of resources, geography and resources to achieve the program's vision. The existing trail system includes geographic diversity and access to many areas of high population.

The landscape settings of water trails contribute much to paddlers' experiences. Ten different sub-ecoregions occur in Iowa, each including unique landforms, soils and features. Waterway character varies among ecoregions as well. The deep loess deposits in western and southern Iowa often result in deeply incised channels with steep streambanks. Landscapes of the Paleozoic Plateau in northeastern Iowa are the oldest in the state in terms of geologic activity. Many of the state's prized rock outcroppings on rivers are found here. Soils in the Des Moines Lobe include some of the most poorly-drained soil types in the state, resulting in a high density of agricultural drainage tile systems.

State-designated water trails are currently located in six of the ten sub-ecoregions, suggesting a fairly complete representation of Iowa's landscape types (Figure 5). The Des Moines Lobe and the Southern Iowa Rolling Loess Prairies subregions include the highest number of trail miles (Table 2).

The majority of state designated water trails are located near urban populations, although exceptions exist in nearly all sections of the state (Figure 6). The average segment length between existing access points varies between 2.4 miles and 16.5 miles (Table 1). Forty dams requiring portage are located on state designated water trails, notably 8 on designated sections of the Des Moines River and 5 on designated sections of the Wapsipinicon River.

Waterbody	Designated Length (Miles)	Average Segment Length (Miles)
Black Hawk Creek	40.0	8.0
Boone River	26.6	5.3
Cedar River	52.9	2.4
Des Moines River	174.7	4.2
East Branch of West Nishnabotna	26.8	6.7
Grand River	45.6	15.2
Iowa River	126.1	3.3
Lizard Creek	13.9	4.6
Maquoketa River	80.1	4.0
Maquoketa River, North Fork	49.6	16.5
Middle Raccoon River	28	3.5
Mississippi River	38.2	3.2
North Raccoon River	157.6	5.3
North Skunk River	22.7	7.6
Odessa Water Trail	17.8	17.8
Raccoon River	30.9	6.2
South Fork Iowa River	38.7	7.7
South Raccoon River	17.6	5.9
South Skunk River	55.4	5.0
Turkey River	85.9	5.7
Upper Iowa River	119.5	4.6
Wapsipinicon River	183.3	4.0
West Fork Des Moines River	33.1	3.7
Winnebago River	26.1	3.7
Yellow River	22.3	3.7
Total Miles	1513.6	

Table 1.
Iowa's State Designated and Developing Water Trail Summary

Ecoregion Areas in Iowa	Designated Water Trail Length (Miles)
Central Irregular Plains	103.9
Des Moines Lobe	467.9
Interior River Lowland	143.8
Iowan Surface	173.7
Loess Hills	0
Loess Hills and Rolling Plains	26.8
Missouri Alluvial Plain	0
Northwest Iowa Loess Prairies	0
Paleozoic Plateau	234.6
Southern Iowa Rolling Loess Prairies	362.8
Total Miles	1513.6

Table 2.
Iowa's Designated and Developing Water Trail Miles per Ecoregion

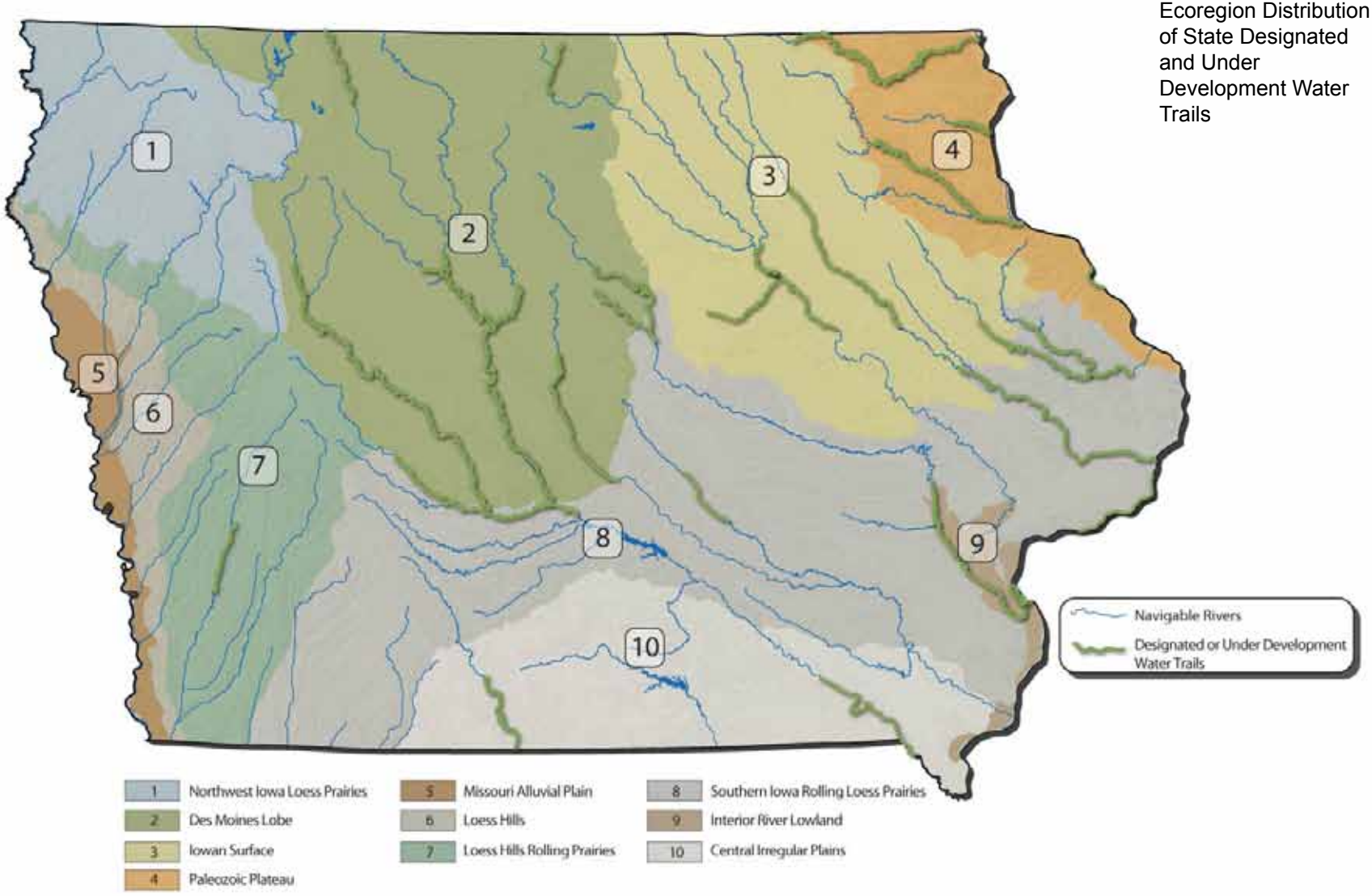

Figure 5.
Ecoregion Distribution of State Designated and Under Development Water Trails

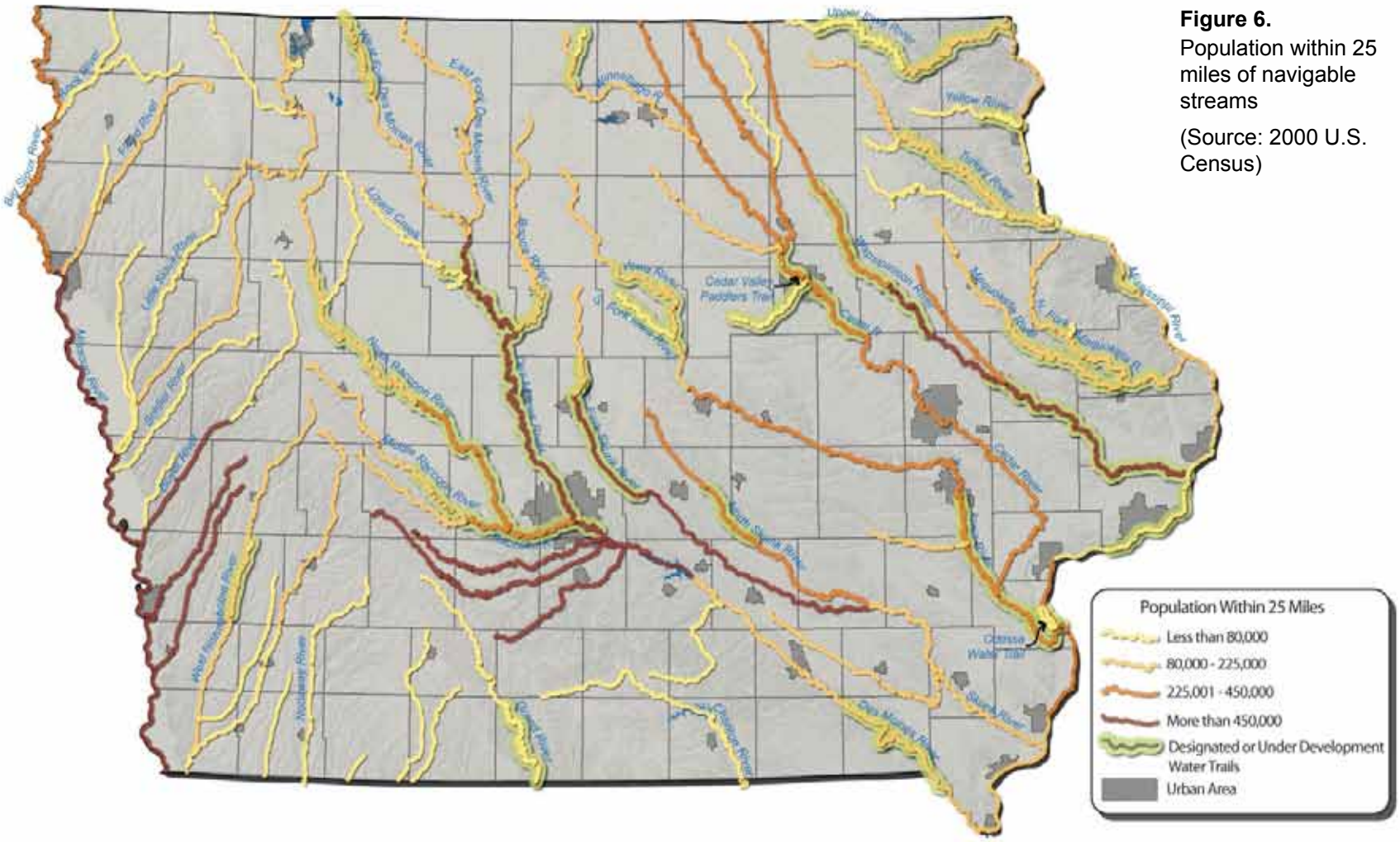

Figure 6.
Population within 25 miles of navigable streams

(Source: 2000 U.S. Census)

Waterbody Name	Dams Requiring Portage
Black Hawk Creek	0
Boone River	0
Cedar River	3
Des Moines River	8
Grand River	0
Iowa River	3
Lizard Creek	1
Maquoketa River	2
Maquoketa River, North Fork	1
Middle Raccoon River	3
Mississippi River	2
North Raccoon River	1
North Skunk River	1
Odessa Water Trail	0
Raccoon River	1
South Fork Iowa River	0
South Raccoon River	0
South Skunk River	3
Turkey River	3
Upper Iowa River	2
Wapsipinicon River	5
West Fork Des Moines River	1
West Nishnabotna	0
Winnebago River	0
Yellow River	0
Total Number of Dams	40

Table 3.
Summary of Dams Requiring Portage on State Designated and Developing Water Trails

Recreational Use of Iowa Streams

Data collection on how many people use river segments in the state and what activities they engage in are in the beginning stages of collection and analysis. ISU's Center for Agricultural and Rural Development (CARD) sampled Iowan's use of navigable rivers for recreation purposes in 2009. Their study estimated the number of trips taken by households to each of 73 individual river segments in the state. Participants were also asked to indicate the frequency of different activities related to these trips including fishing, hunting, power boating, canoe and kayaking, inner tubing and swimming.

More than 2800 participants reported nearly 25,800 trips to Iowa's rivers. Already state designated segments of the Des Moines, Cedar, and the Mississippi Rivers were reported to have the highest number of overall visits (Figure 7). Fewer visits to upstream segments of rivers compared to downstream segments were nearly always reported. An exception to this included segments of the Iowa River upstream of Iowa City.

River segments with a higher number of visits involving canoe and kayak activities differed compared to those visited most frequently for tubing and swimming. Triptakers reported the highest number of canoeing and kayaking trips on segments of the Des Moines, North Raccoon, Raccoon and Iowa Rivers near the center of the state (Figure 8). Other segments with high numbers of reported trips for canoeing or kayaking included the Big Sioux River in northwestern Iowa and segments of the Wapsipinicon, Maquoketa and Upper Iowa Rivers in eastern Iowa.

Reported inner tubing or swimming visits were the highest frequency on segments of the Des Moines, Cedar, Iowa, Maquoteka, and Mississippi Rivers (Figure 9).

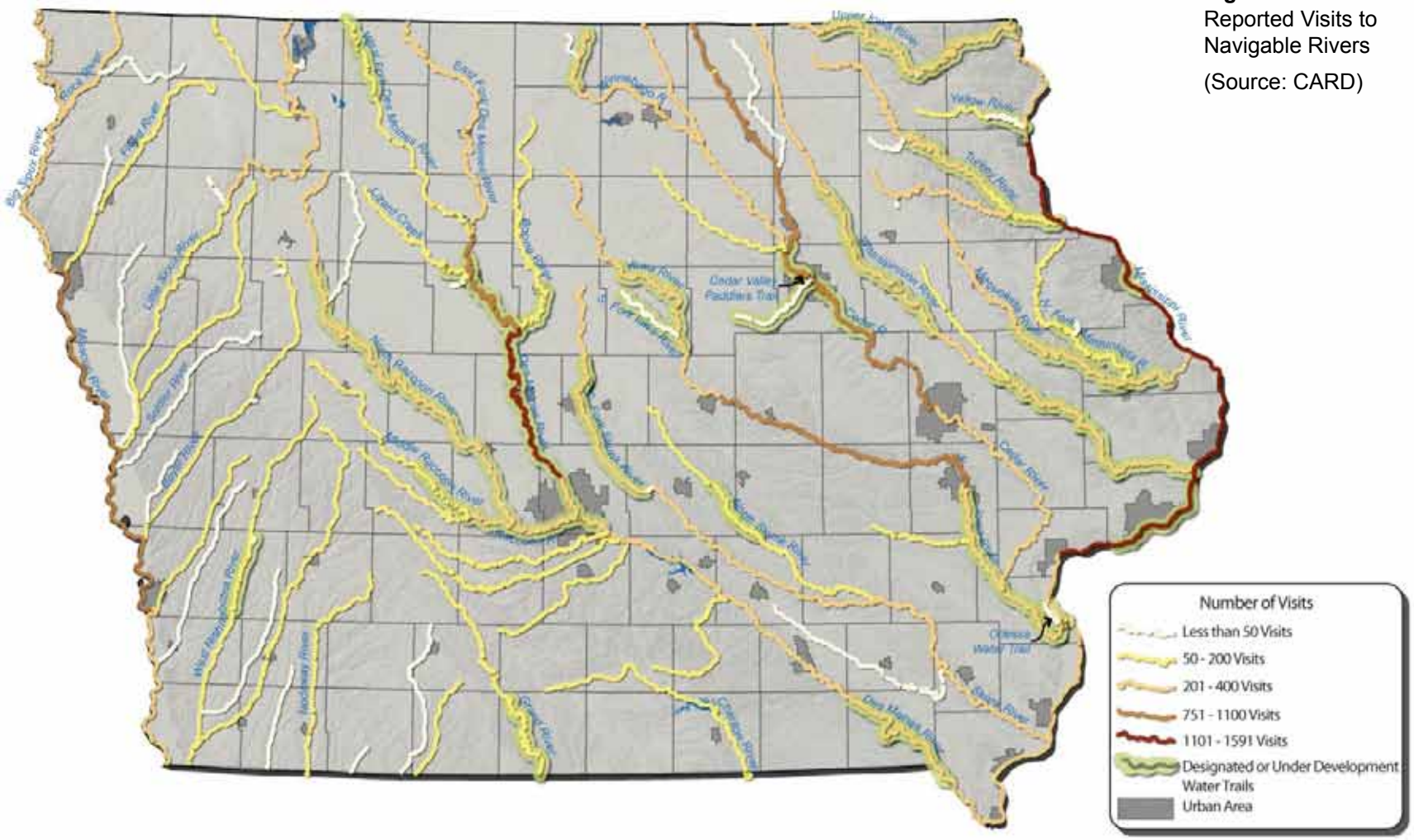

Figure 7.
Reported Visits to Navigable Rivers

(Source: CARD)

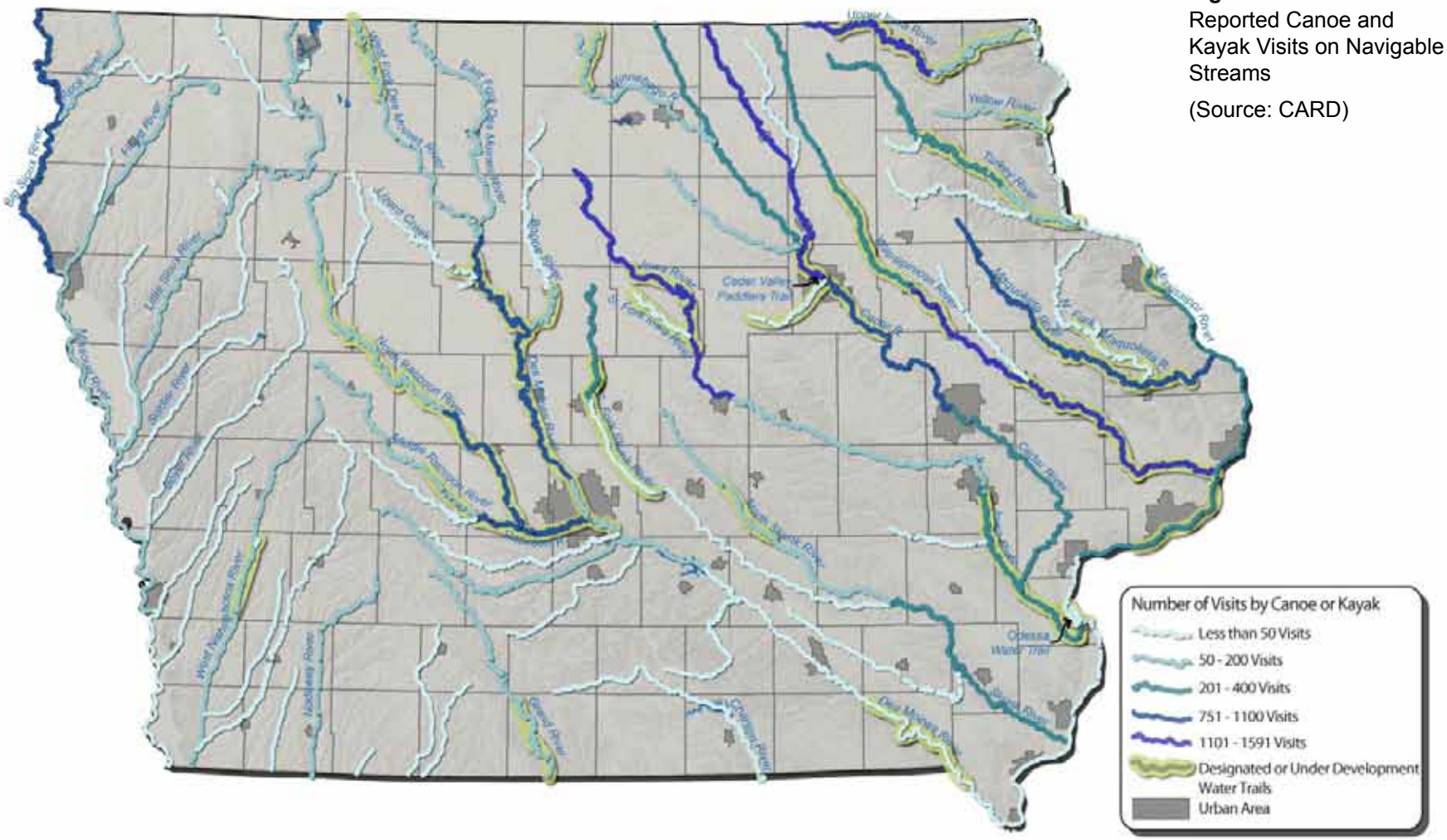

Figure 8.
Reported Canoe and Kayak Visits on Navigable Streams

(Source: CARD)

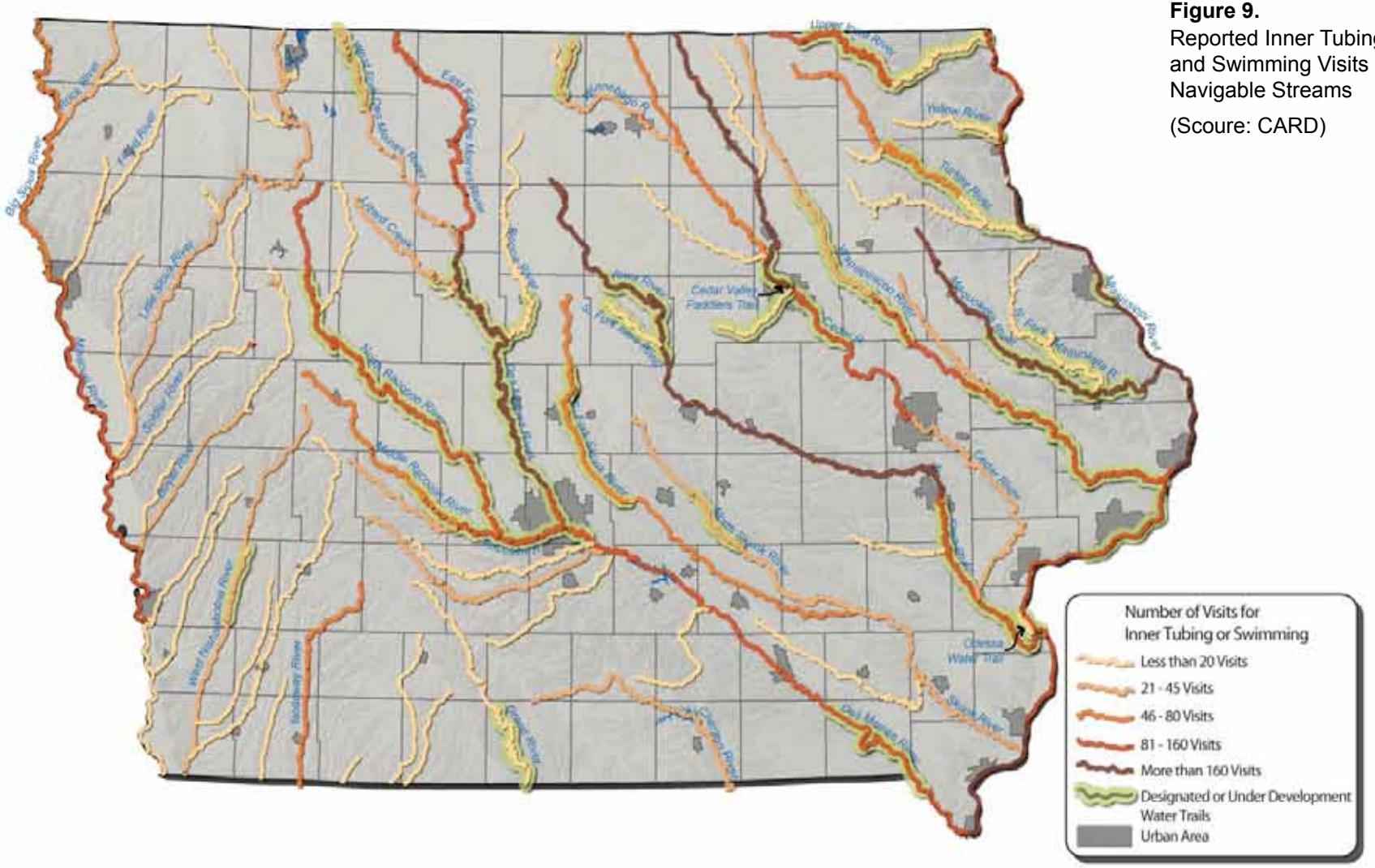

Figure 9.
Reported Inner Tubing and Swimming Visits on Navigable Streams

(Scoure: CARD)

Access and Stream Characteristics of Existing Water Trail Routes

Launches are owned and managed by a variety of agencies and municipalities. Complete data on the characteristics of existing amenities associated with state designated water trails has yet to be compiled. Amenities are often damaged by flooding, making upkeep of records a continual task. This information assists paddlers in finding water trails that meet their needs and interests. Complete information would also be useful in terms of understanding the user experiences represented in the state designated system, prioritizing enhancements, and water trail management. Ideally these data would include capacity and surface of parking area, distance and surface of trail between parking and launch, difficulty of put-in, presence and type of restrooms and length of portage around hazards (if applicable). Table 4 details restrooms reported by water trail managers. Table 5 illustrates the surface of existing launches.

Water conditions also vary. Water levels in Iowa fluctuate widely based on precipitation and snow melt. Water quality can sometimes be less apparent visually than water levels and also fluctuates depending on the amount of water in the stream and time of year. River segments included on Iowa's 2008 EPA 303(d) list for bacteria impaired waters are illustrated in Figure 10.

Waterbody Name	Pit Style	Modern	None	Data on Access Not Reported
Black Hawk Creek Water Trail	3	0	3	0
Boone River				8
Cedar River / Blackhawk				37
Des Moines River				33
Dubuque Water Trail		3	1	8
Iowa River				34
Lizard Creek / Webster				5
Maquoketa River / Jackson				19
Middle Raccoon River		1	4	13
Middle / South Raccoon River		2	3	1
North Fork Maquoketa River / Jackson				4
North Raccoon River / Calhoun				30
North Skunk / Jasper				2
Quad Cities Water Trails	3	12	5	0
Raccoon River			4	2
Red Rock Lake	1	4	3	0
South Fork Iowa River / Hardin				4
South Skunk River / Story				11
Turkey River / Clayton				17
Upper Iowa River Water Trail	3	1	18	9
West Fork Des Moines River				5
Wapsipinicon River / Blackhawk				36
West Nishnabotna / Pottawattamie				5
Yellow River / Allamakee				11

Table 4.
Compiled Locations of Restrooms on State Designated Water Trails

Waterbody Name	Natural Surface	Hard Surface	Gravel	Data on Access Not Reported
Black Hawk Creek Water Trail	6			0
Boone River				8
Cedar River / Blackhawk				37
Des Moines River				33
Dubuque Water Trail		3	1	8
Iowa River				34
Lizard Creek / Webster				5
Maquoketa River / Jackson				19
Middle Raccoon River	1	1	5	11
Middle / South Raccoon River		5		1
North Fork Maquoketa River / Jackson				4
North Raccoon River / Calhoun				30
North Skunk / Jasper				2
Quad Cities Water Trails	2	18		0
Raccoon River		3	1	2
Red Rock Lake	1	6	1	0
South Fork Iowa River / Hardin				4
South Skunk River / Story				11
Turkey River / Clayton				17
Upper Iowa River Water Trail	19	2	1	9
West Fork Des Moines River				5
Wapsipinicon River / Blackhawk				36
West Nishnabotna / Pottawattamie				5
Yellow River / Allamakee				11

Table 5.
Compiled Information on Materials Used in Access Construction

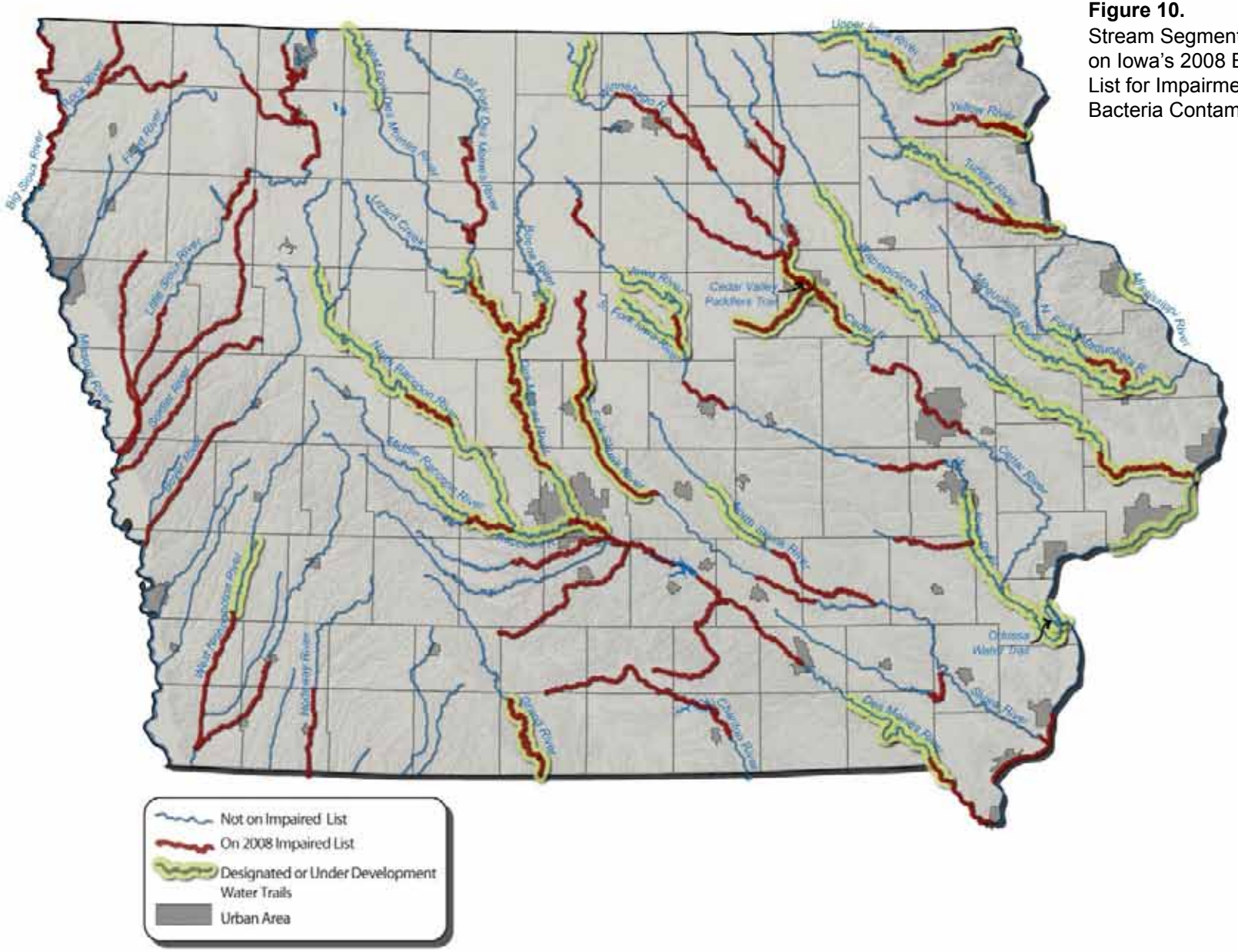

Figure 10.
Stream Segments Included on Iowa's 2008 EPA 303(d) List for Impairment Due to Bacteria Contamination