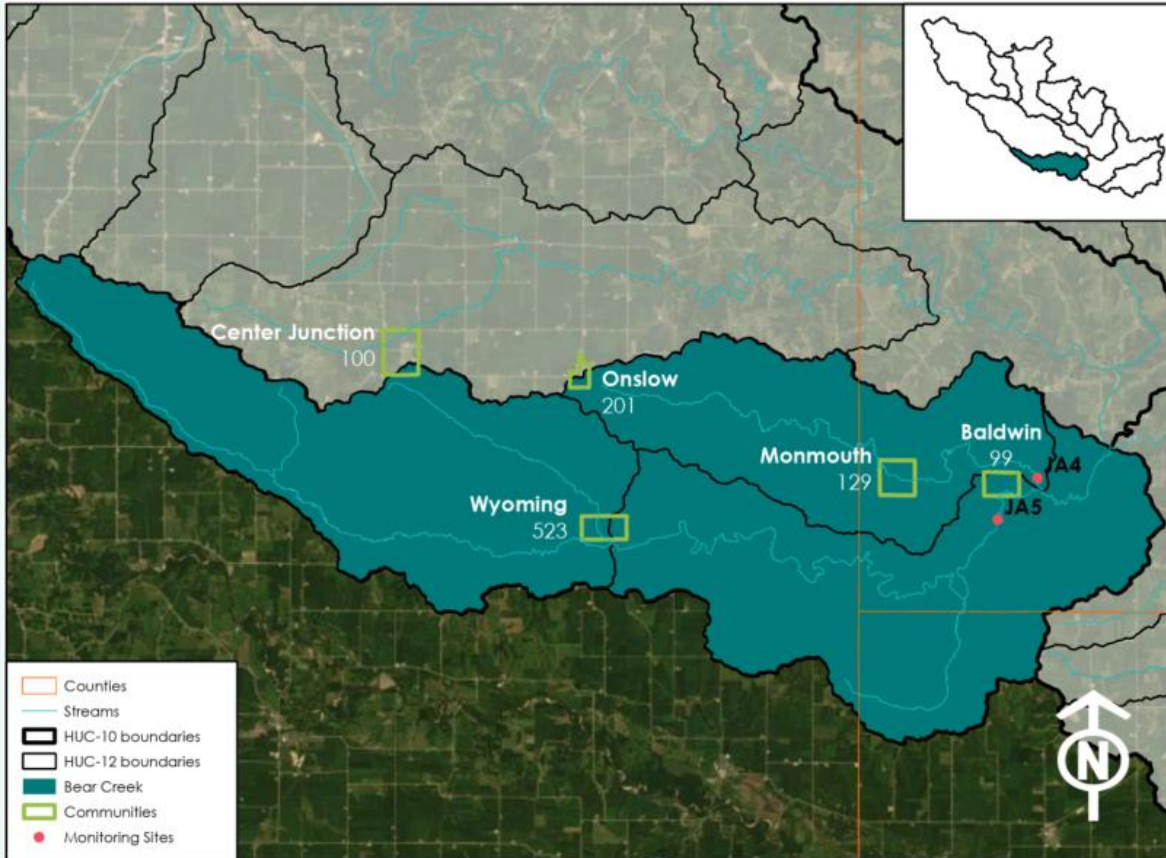


HUC-10 Profile: Bear Creek

Bear Creek is in the southeast portion of the Maquoketa River Watershed. It comprises 70,917 acres and three HUC-12s. This sub-watershed contains all or parts of five communities and three counties (Jackson, Jones, and Clinton). Notable features include Eden Valley Refuge, a destination for camping and hiking, and Baldwin Marsh, a 67-acre area with a restored wetland and native plantings.



- Relatively low flood risk throughout Bear Creek HUC-10.
- Less population and urban area at risk of flooding.



- Medium priority for nitrate and phosphorous pollution throughout.
- High runoff potential with few existing management practices.

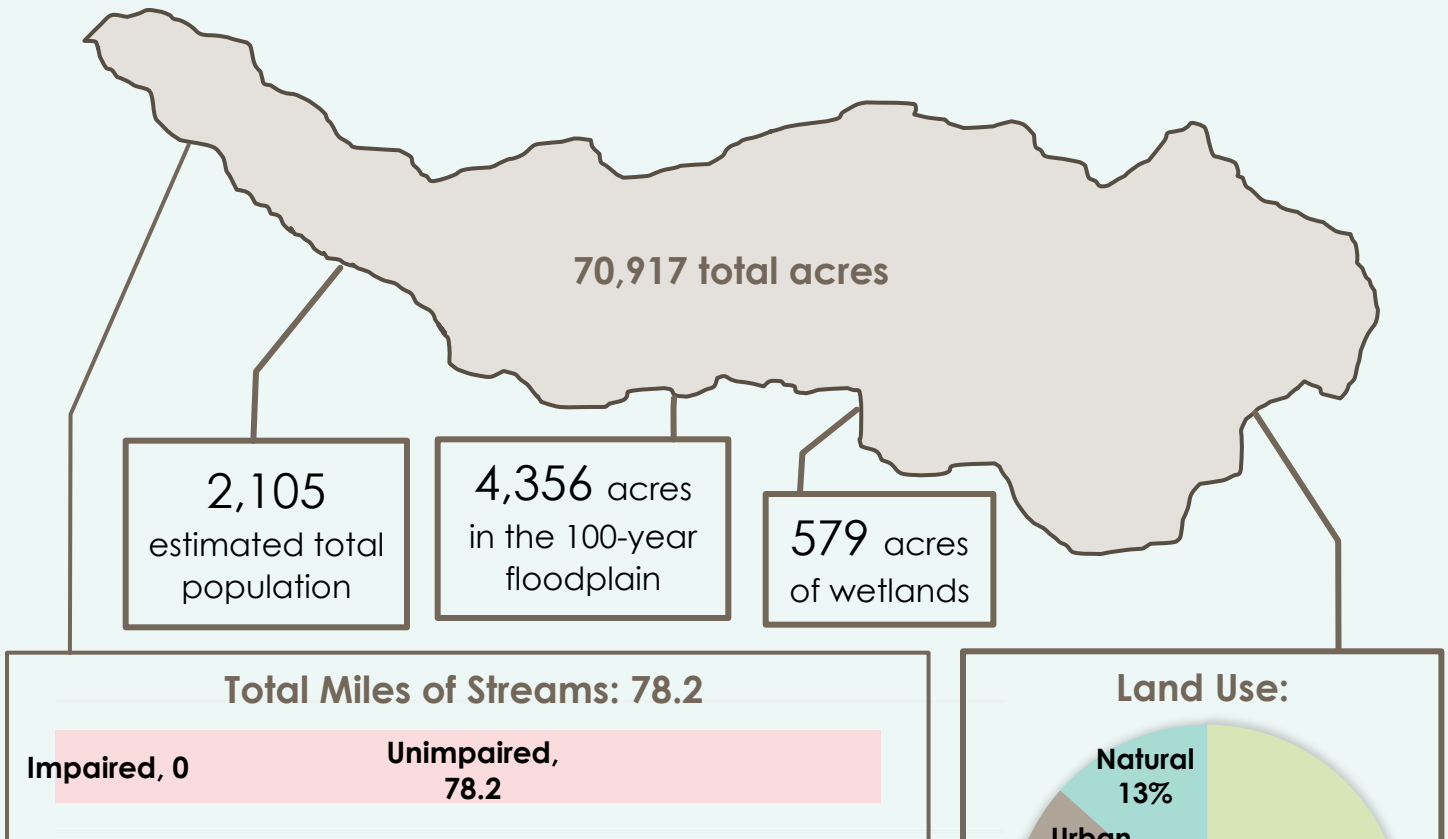


- All HUC-12's have relatively good recreational opportunities.
- Few wetlands and public lands are in this sub-watershed but no impaired streams.

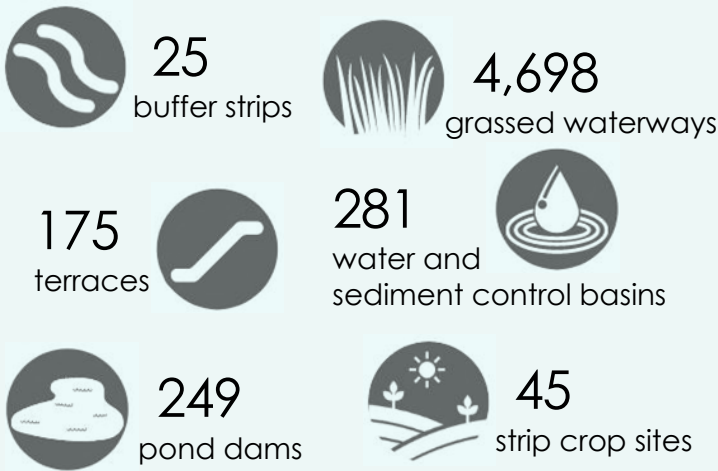
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



Existing Point-Source Pollution:

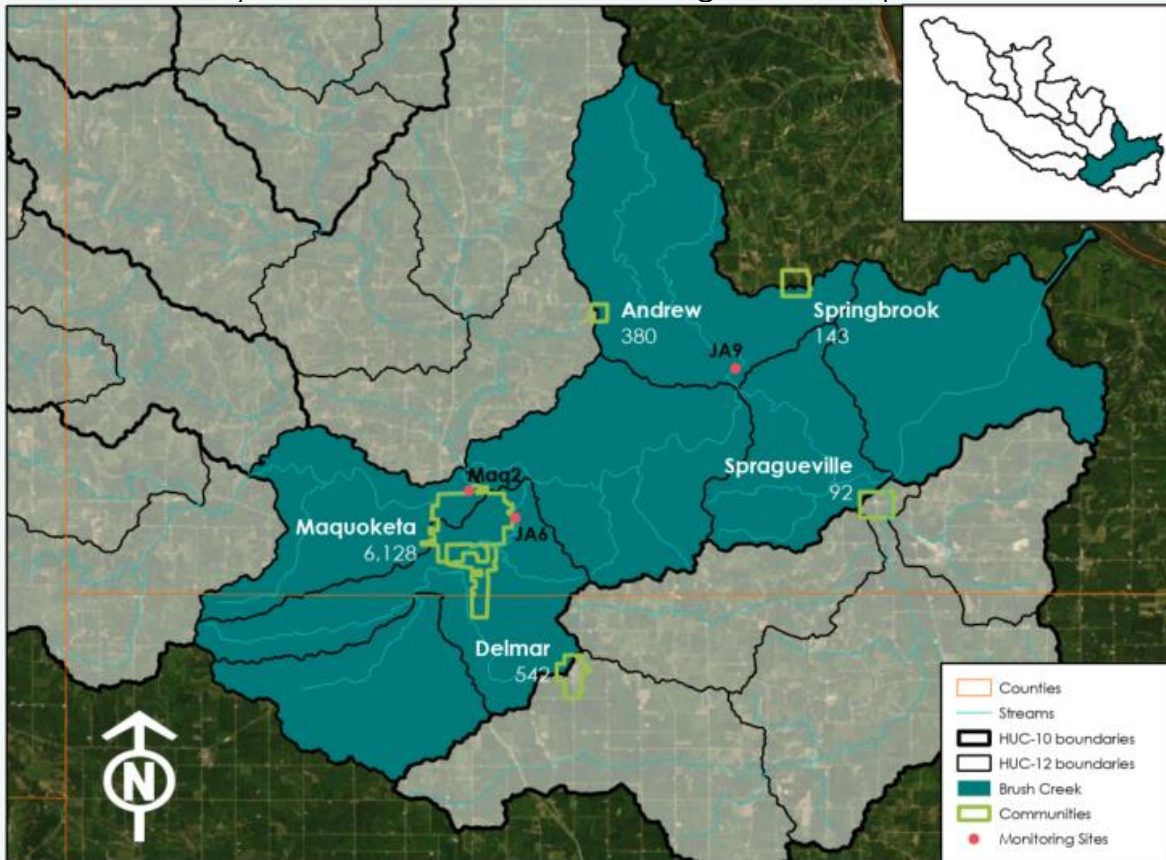
- 9 Permitted CAFOs and Open Feed Lots
- 3 Permitted wastewater treatment facilities

Water Quality Monitoring Results (2019-2021 average)						
Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
JA4	14.51	0.26	1,635.56	3.52	15.76	40.67
JA5	12.88	0.25	4,247.13	3.52	14.79	36.61
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Brush Creek

Brush Creek is in the southern portion of the Maquoketa River Watershed and drains the watershed to the Mississippi River. It comprises 130,889 acres and seven HUC-12s. This sub-watershed contains the City of Maquoketa as well as all or part of four other smaller incorporated cities and is split between Jackson and Jones counties. Notable features include the Prairie Creek Recreation Area, a 273-acre area that features limestone bluffs and woodlands, and the Jackson County Recreation Trail, a 7-mile long limestone path.



- Relatively low flood risk throughout this HUC-10.
- Due to more built-up area, the HUC-12 around Maquoketa is higher priority.



- This HUC-10 is low priority for nitrate and phosphorous pollution.
- Water quality monitoring does not capture the entire HUC-10 area.

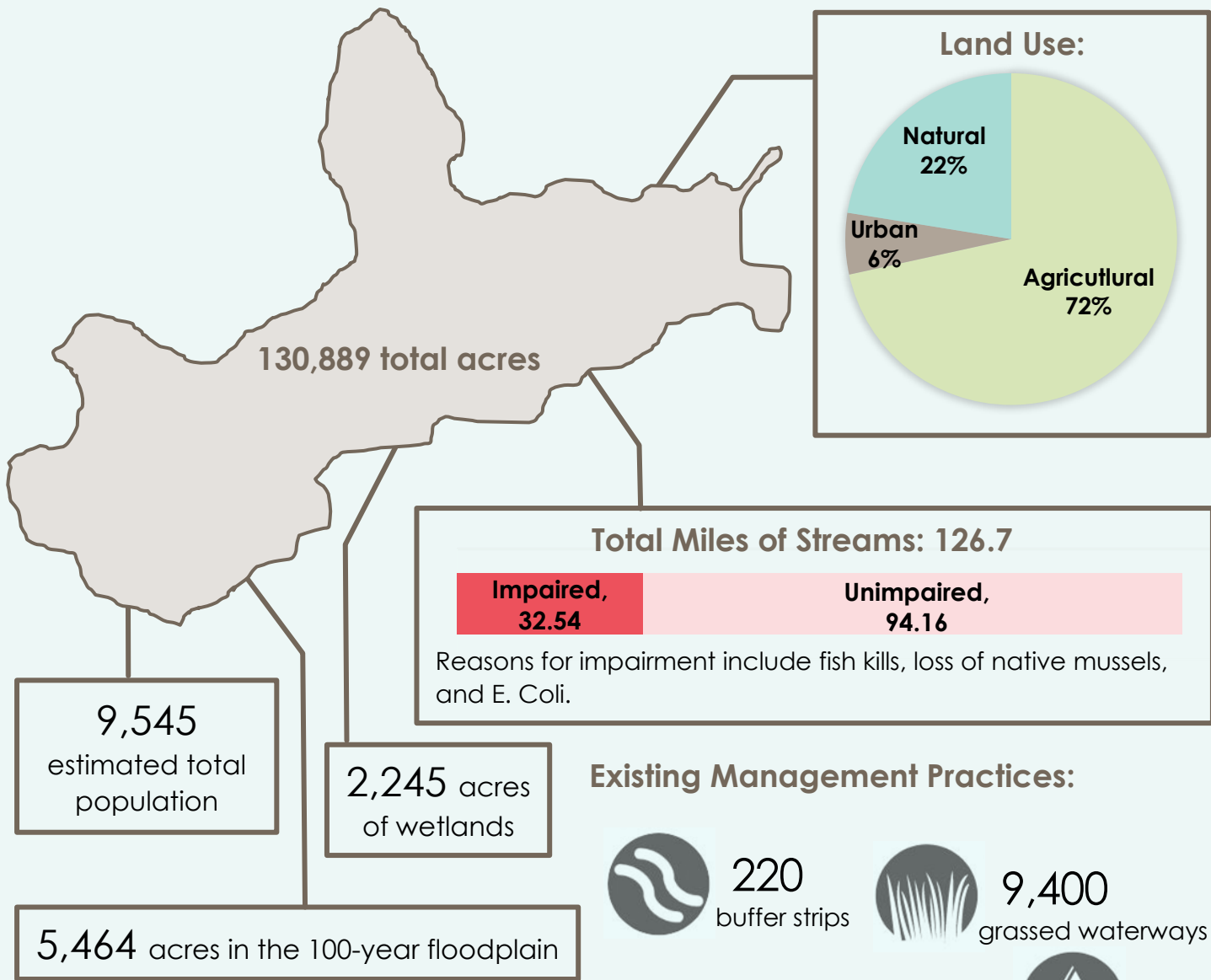


- All HUC-12's have relatively good recreational opportunities.
- Recreation is not significantly impacted by water quality issues in this sub-watershed.

What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Point-Source Pollution:

- 17 Permitted CAFOs and Open Feed Lots
- 4 Permitted wastewater treatment facilities

Existing Management Practices:

- 220 buffer strips
- 9,400 grassed waterways
- 285 terraces
- 494 water and sediment control basins
- 446 pond dams
- 41 strip crop sites

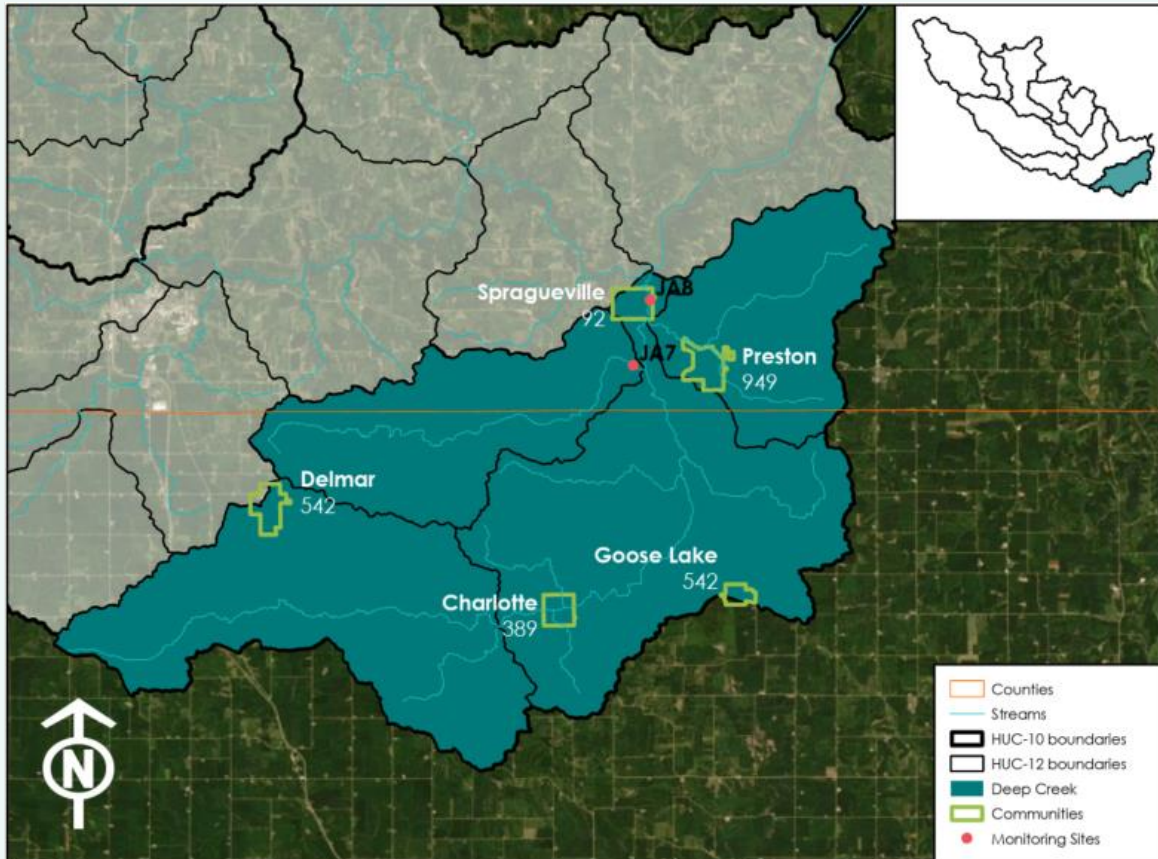
Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
JA6	18.21	0.24	661.88	4.47	19.28	36.33
JA9	13.14	0.27	4,054.13	4.75	15.06	25.83
Maq2	15.09	0.08	131.00	3.62	19.19	25.67
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Deep Creek

Deep Creek is the southern most HUC-10 in the Maquoketa River Watershed. It comprises 88,709 acres and four HUC-12s. This sub-watershed contains all or part of five smaller incorporated cities and is split between Jackson and Clinton County. Notable features include the Goose Lake Wildlife Management Area, a 1,290-acre area with marsh and forested area, and Jackson County Recreation Trail, a 7-mile long limestone path.



- All HUC-12's within this area are low or medium priority for flooding.



- The southeastern HUC-12 is high priority for nitrate and phosphorous pollution, while the remaining HUC-12's are lower priority.

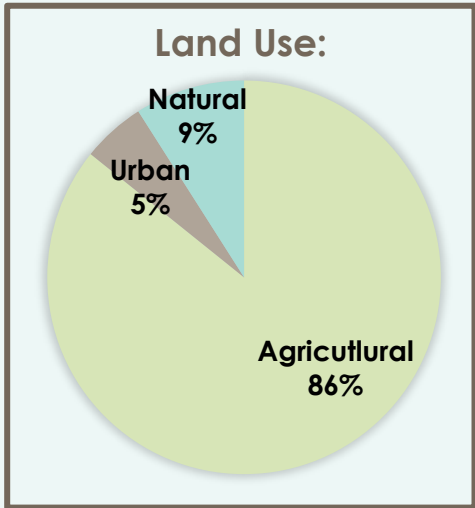
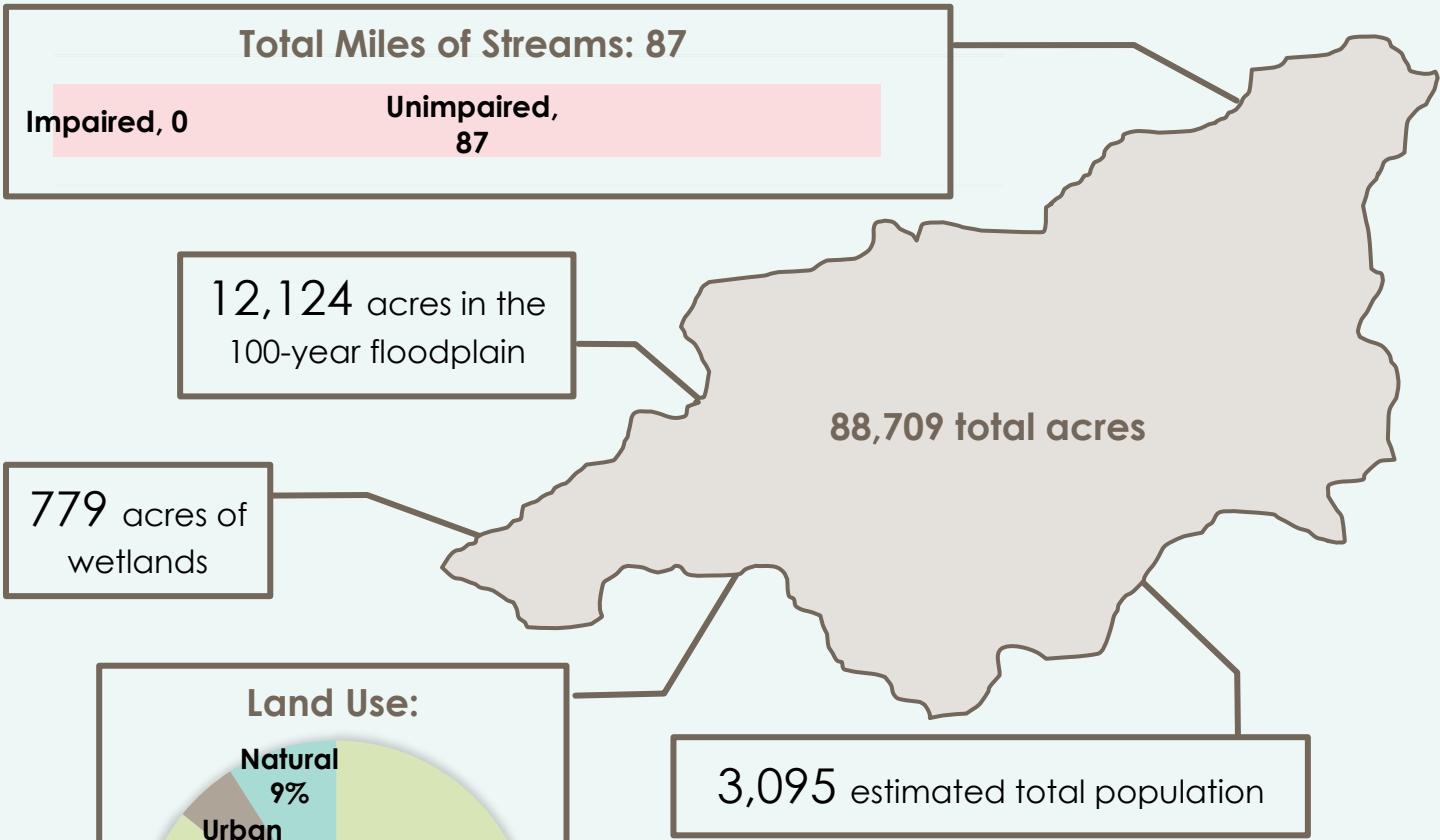


- All HUC-12's have relatively good recreational opportunities.
- Recreation is not significantly impacted by water quality issues in this area.

What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:

- 97 buffer strips
- 5,286 grassed waterways
- 188 terraces
- 174 water and sediment control basins
- 221 pond dams
- 10 strip crop sites

Existing Point-Source Pollution:

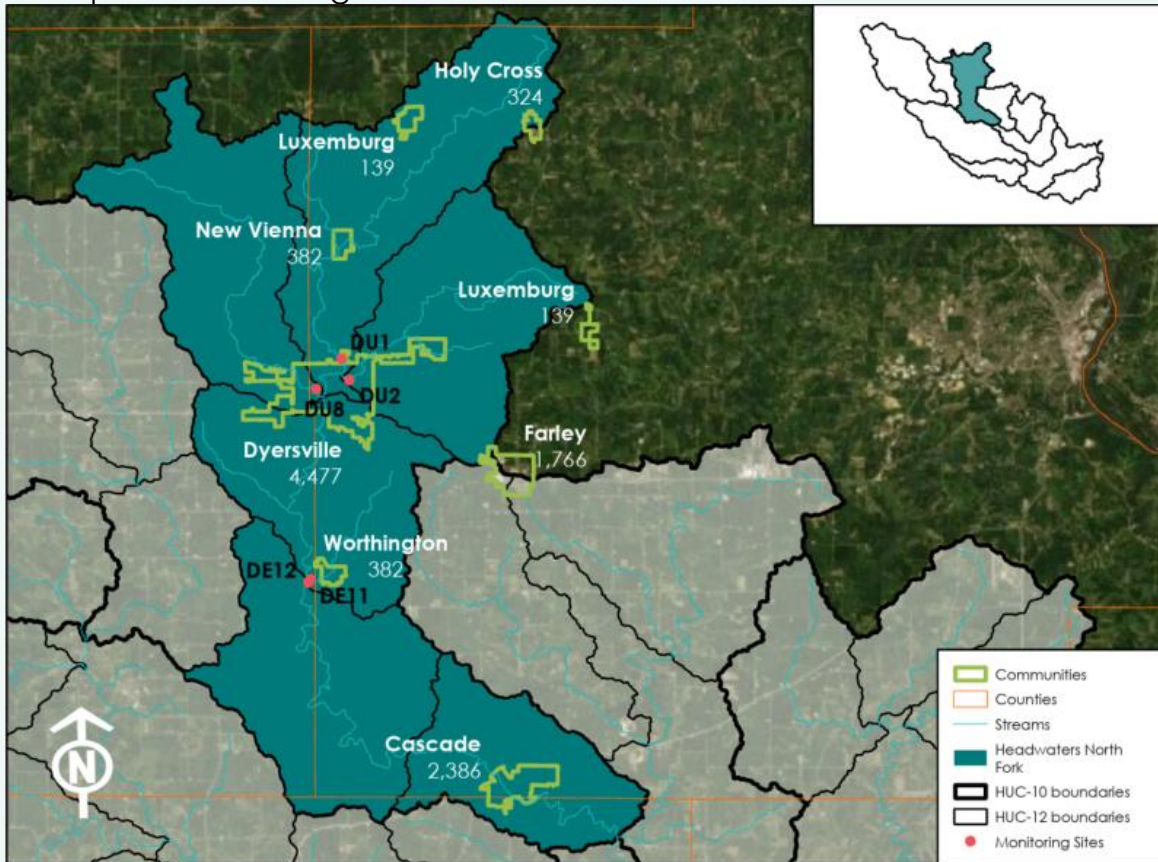
- 28 Permitted CAFOs and Open Feed Lots
- 6 Permitted wastewater treatment facilities

Water Quality Monitoring Results (2019-2021 average)						
Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
JA7	15.31	0.26	4,755.11	3.44	21.61	24.00
JA8	16.48	0.39	3,493.47	5.36	21.41	83.00
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Headwaters North Fork

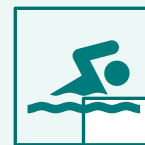
Headwaters North Fork is in the north portion of the Maquoketa River Watershed. It comprises 139,638 acres and six HUC-12s. This sub-watershed contains the City of Dyersville and the Cascade as well as all or part of six other smaller incorporated cities and four counties (Dubuque, Delaware, Jones, and Clayton). Notable features include the Heritage Trail, a 26-mile limestone path that connects to the City of Dubuque, and Dyersville Community Park, that provides sports fields along Bear Creek.



- This HUC-10 contains medium and high priority HUC-12's for flood risk.
- More urban area contributes to, and could be damaged by, flooding.



- Northern end is high priority for nitrate and phosphorous pollution.
- There are high monitored pollutants with few existing mitigation practices.

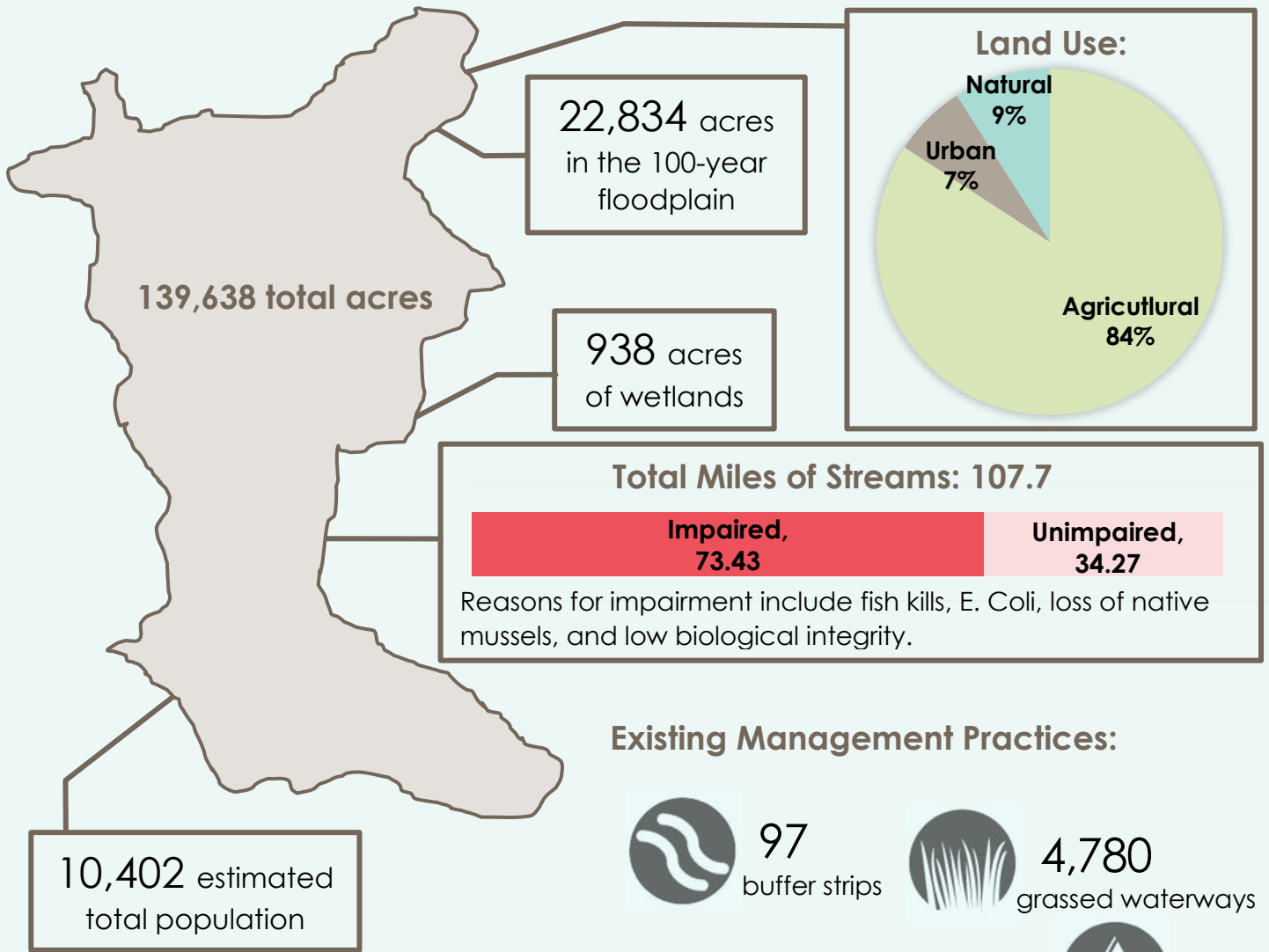


- This HUC-10 has the most high priority areas for recreation improvement.
- Few public lands and wetlands combined with many impaired streams restrict recreation opportunities.

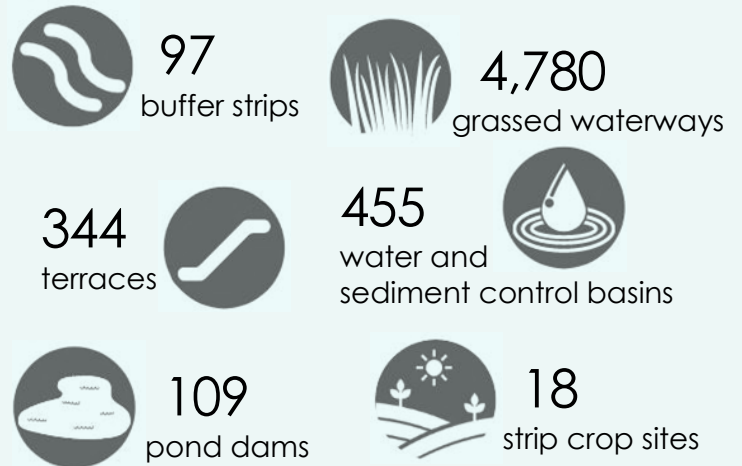
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



Existing Point-Source Pollution:

- 97 Permitted CAFOs and Open Feed Lots
- 9 Permitted wastewater treatment facilities

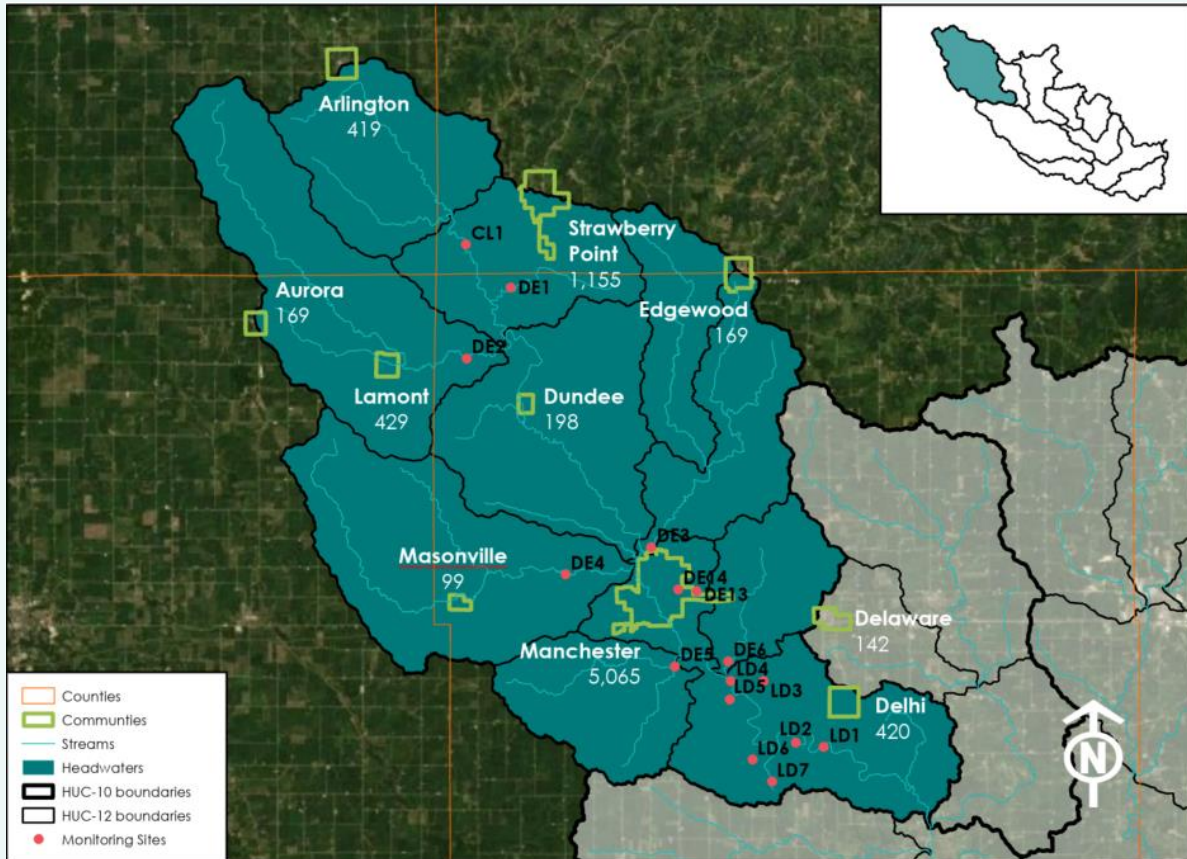
Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
DE11	22.21	0.69	6,673.86	10.75	27.07	11.67
DE12	23.13	0.63	5,374.75	9.06	23.41	31.17
DU1	23.26	0.70	1,945.57	7.40	20.01	35.39
DU2	19.73	0.56	4,421.83	9.38	21.03	15.11
DU8	19.64	0.48	6,026.29	10.17	29.47	22.94
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Headwaters

Headwaters is the northern most HUC-10 in the Maquoketa River Watershed. It comprises 235,072 acres and ten HUC-12s. This sub-watershed contains the City of Manchester as well as all or part of nine other smaller incorporated cities and four counties (Fayette, Clayton, Buchanan, and Delaware). Notable features include Backbone State Park, a destination for camping, climbing, and fishing, as well as the man-made Whitewater Park in Manchester.



- This HUC-10 is largely medium-high priority for flooding.
- Larger cities like Manchester contribute to, and are at risk of, flooding.



- Relatively high priority for nitrate and phosphorous pollution throughout the HUC-10.
- Many CAFOs are present in the northern portion.

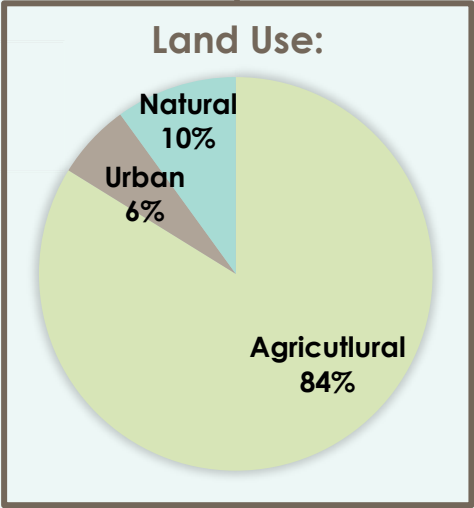
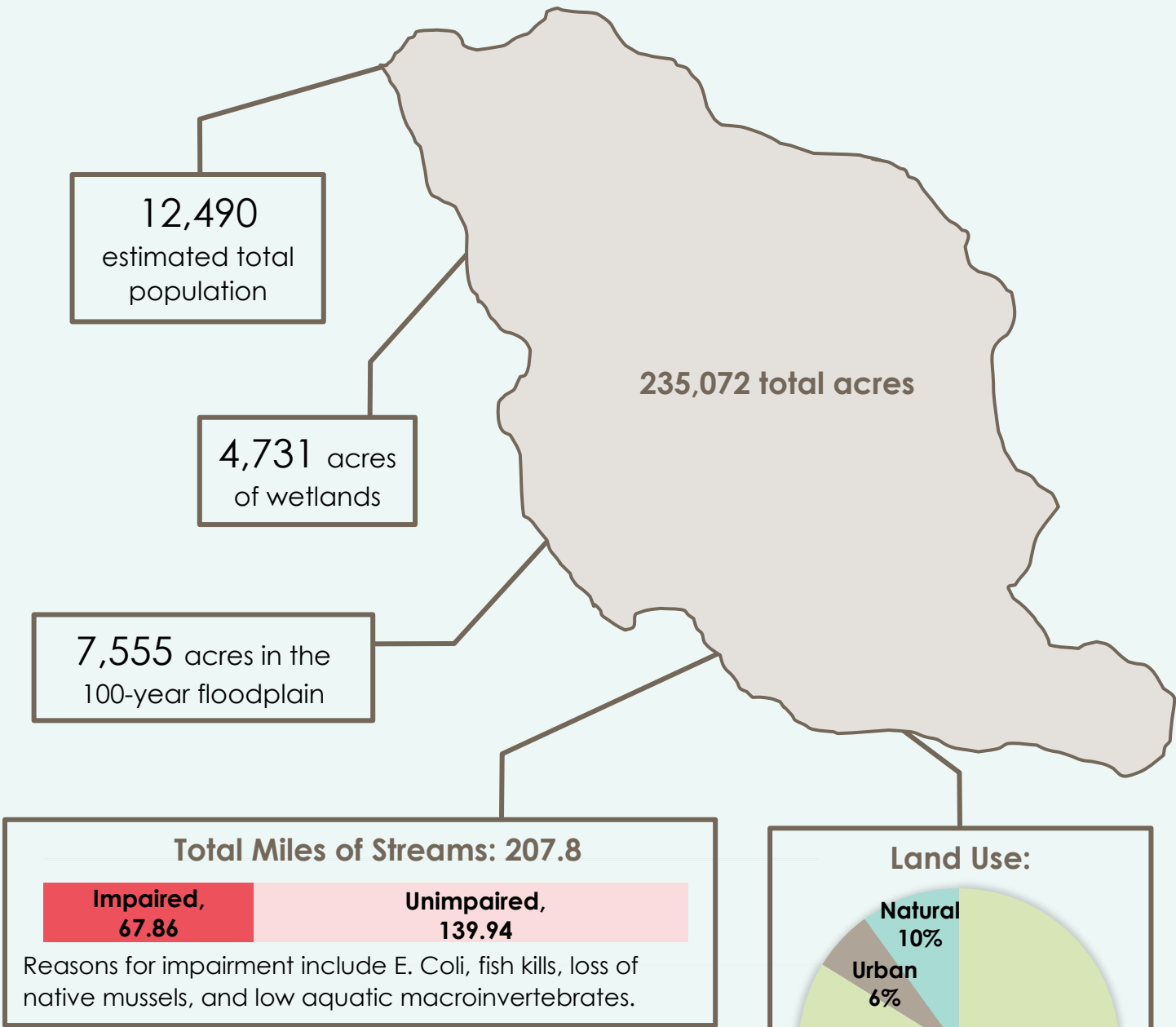


- All HUC-12's have relatively good recreational opportunities.
- Several fish kill events in the southern portion restrict recreation opportunities.







What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:

-  **79**
buffer strips
-  **4,470**
grassed waterways
- 292**
terraces 
- 135**
water and sediment control basins 
-  **73**
pond dams
-  **25**
strip crop sites

Existing Point-Source Pollution:

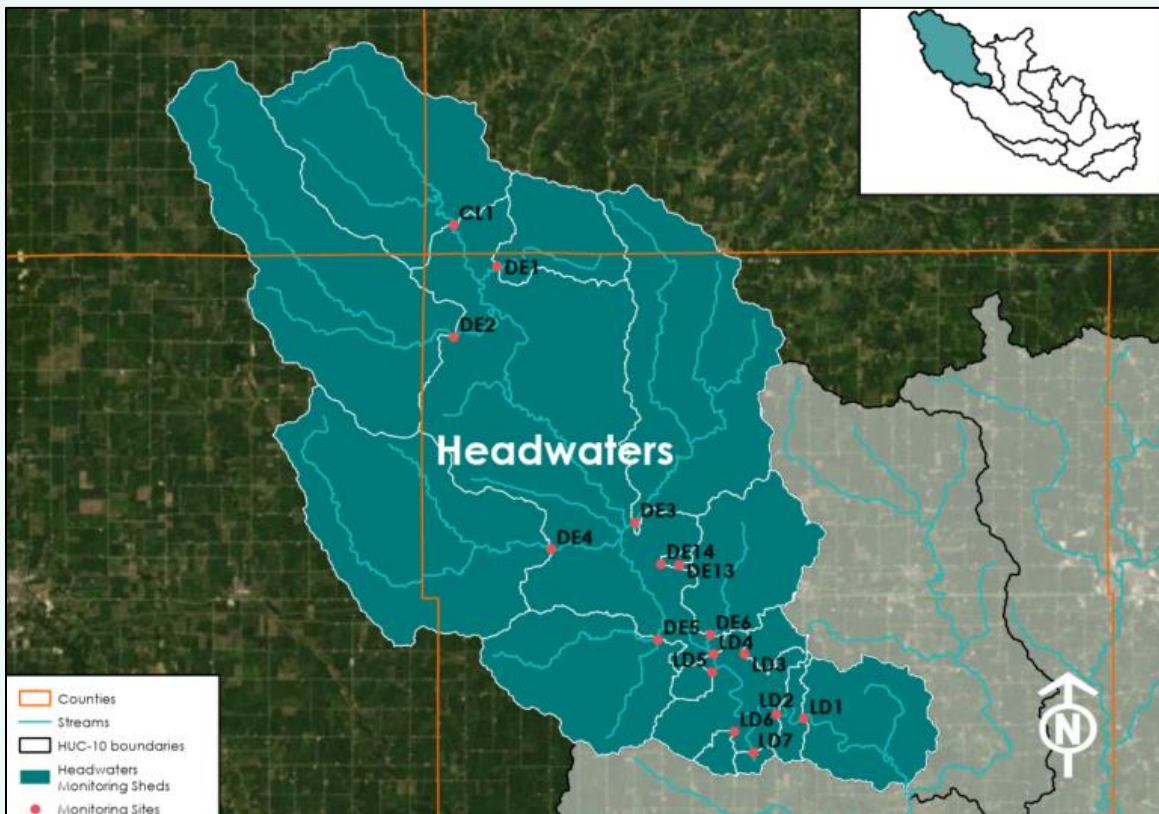
- 126** Permitted CAFOs and Open Feed Lots
- 21** Permitted wastewater treatment facilities

Data sources: IA DNR, US EPA, Iowa BMP Mapping Project, Maquoketa River WMA
Profile created 3/20/2022 by the Iowa Initiative for Sustainable Communities

Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
CL1	13.56	0.21	2,090.75	9.16	15.36	5.33
DE1	21.26	0.31	1,645.50	10.59	21.64	3.25
DE2	13.49	0.17	1,398.11	6.58	21.60	6.22
DE3	17.32	0.27	2,452.00	10.64	18.21	14.44
DE4	14.82	0.23	871.33	8.11	17.37	9.56
DE5	17.51	0.15	2,038.78	9.71	18.32	7.56
DE6	16.74	0.18	1,133.78	12.87	16.92	4.00
DE13	34.42	0.27	1,427.50	5.47	19.47	3.00
DE14	28.57	0.26	1,985.50	7.68	24.38	3.00
LD1	18.18	0.07	204.50	4.51	19.28	8.67
LD2	18.23	0.17	563.50	4.67	19.52	18.00
LD3	17.08	0.17	7,126.00	7.75	27.43	12.67
LD4	17.16	0.22	730.00	5.92	17.70	11.00
LD5	20.25	0.18	3,478.50	9.31	18.10	6.00
LD6	29.23	0.78	2,535.50	7.33	19.87	4.33
LD7	16.00	0.17	840.33	8.99	20.64	5.00
Standard	5 to 250	1	235	10	500 to 2000	25

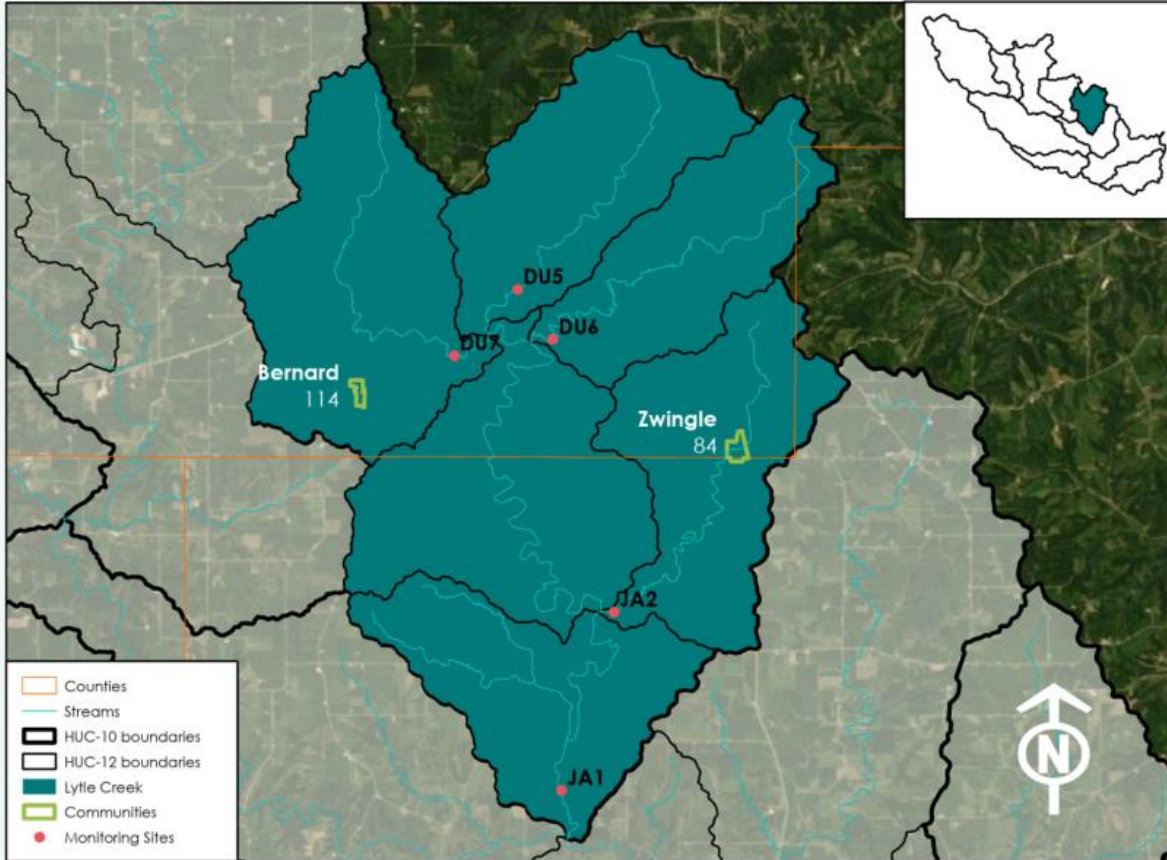
Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.



Data sources: IA DNR, US EPA, Iowa BMP Mapping Project, Maquoketa River WMA
Profile created 3/20/2022 by the Iowa Initiative for Sustainable Communities

HUC-10 Profile: Lytle Creek

Lytle Creek is in the eastern, middle portion of the Maquoketa River Watershed. It comprises 73,821 acres and six HUC-12s. This sub-watershed contains two cities, Bernard and Zwingle, and is split between Dubuque and Jackson County. Notable features include LaSoya Wildlife Management Area and Leisure Lake campground.



- Relatively low flood risk throughout this HUC-10.
- Less population and urban areas that could be at risk from flooding.



- Relatively low nitrate and phosphorous pollution risk throughout this HUC-10.

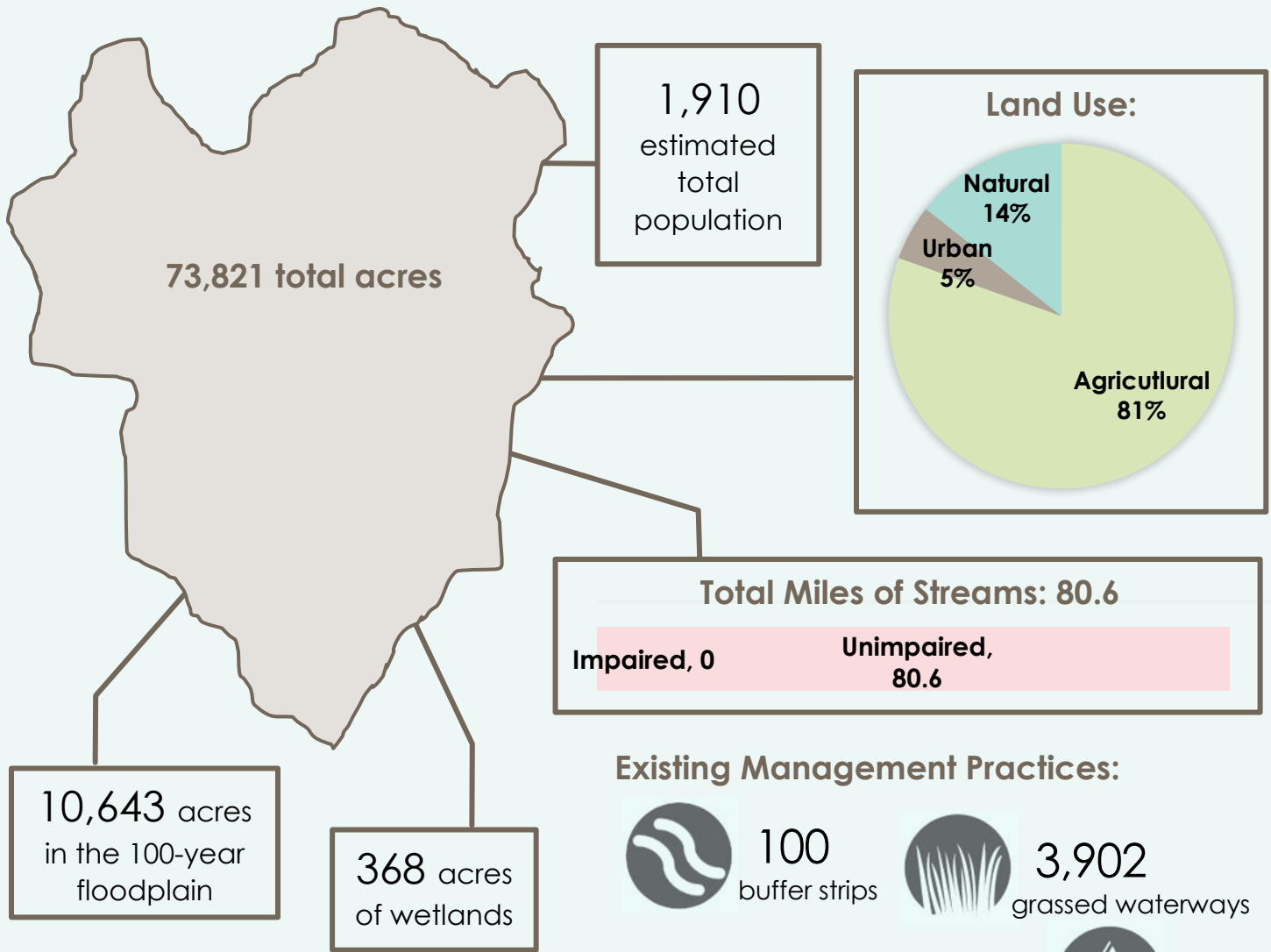


- All HUC-12's have relatively good recreational opportunities.
- Water quality issues

What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Point-Source Pollution:

- 13 Permitted CAFOs and Open Feed Lots
- 5 Permitted wastewater treatment facilities

Existing Management Practices:

- 100 buffer strips
- 3,902 grassed waterways
- 189 terraces
- 216 water and sediment control basins
- 224 pond dams
- 33 strip crop sites

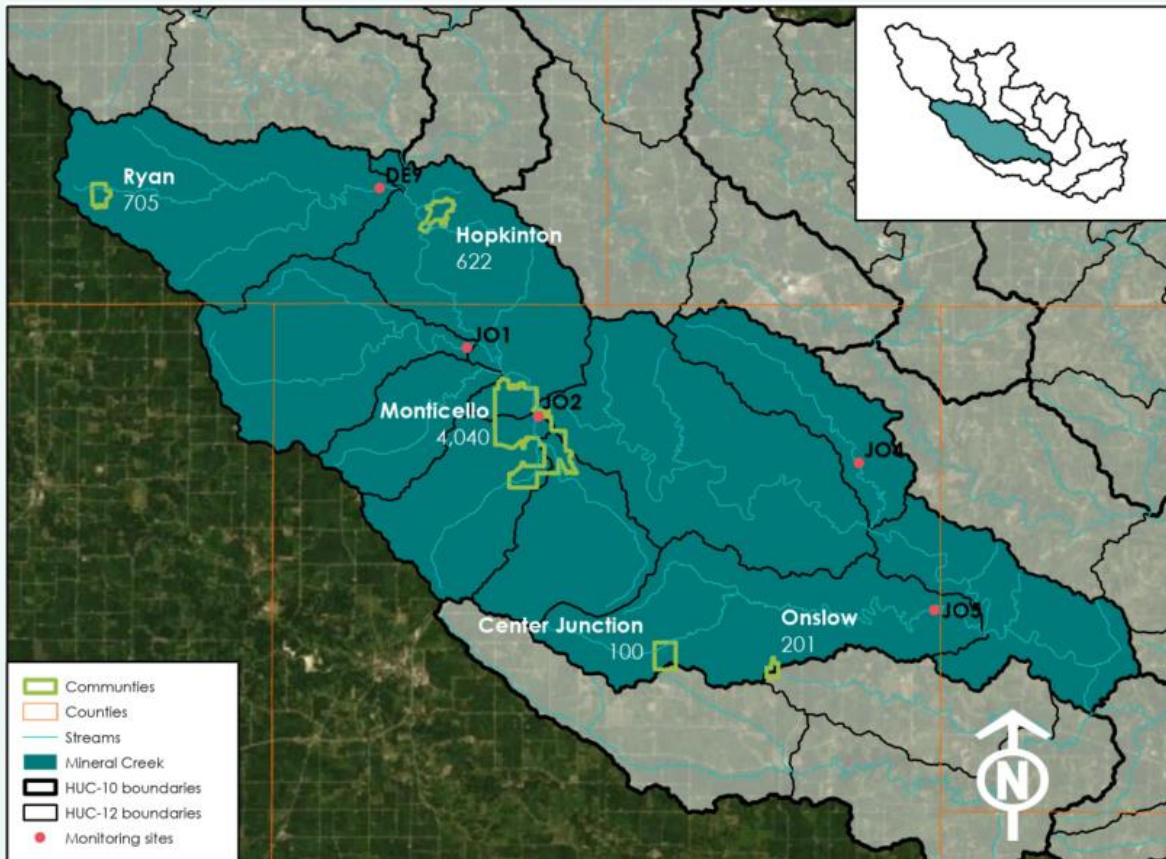
Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
DU5	20.54	0.46	1,954.60	7.51	12.87	29.22
DU6	17.86	0.38	3,044.71	7.76	13.32	15.28
DU7	22.26	0.46	5,315.17	9.86	17.72	28.50
JA1	16.98	0.39	4,049.88	6.49	14.87	40.78
JA2	20.21	0.42	3,053.50	5.74	13.76	24.00
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Mineral Creek

Mineral Creek is the southern, middle portion of the Maquoketa River Watershed. It comprises 236,588 acres and nine HUC-12s. This sub-watershed contains the City of Monticello as well as all or part of four other smaller incorporated cities and four counties (Delaware, Linn, Jackson, and Jones). Notable features include Pictured Rocks County Park, a regional destination for climbing and spelunking, and Indian Bluffs Wildlife Management Area.



- Northern end is high priority for flooding, while the southern end is low priority.
- Larger urban areas and public lands could be used to mitigate flood risk.



- Medium and high priority for nitrate pollution, due to pollutant sources and susceptible wells.
- Ranges from low to high priority for phosphorous, corresponding with runoff potential.

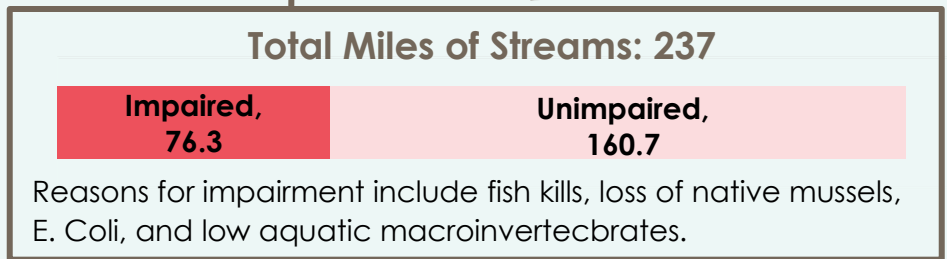
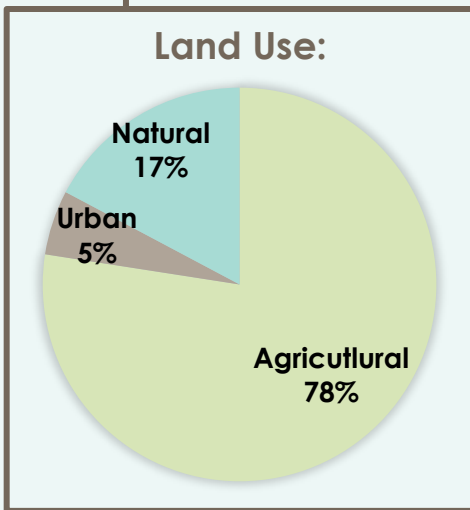
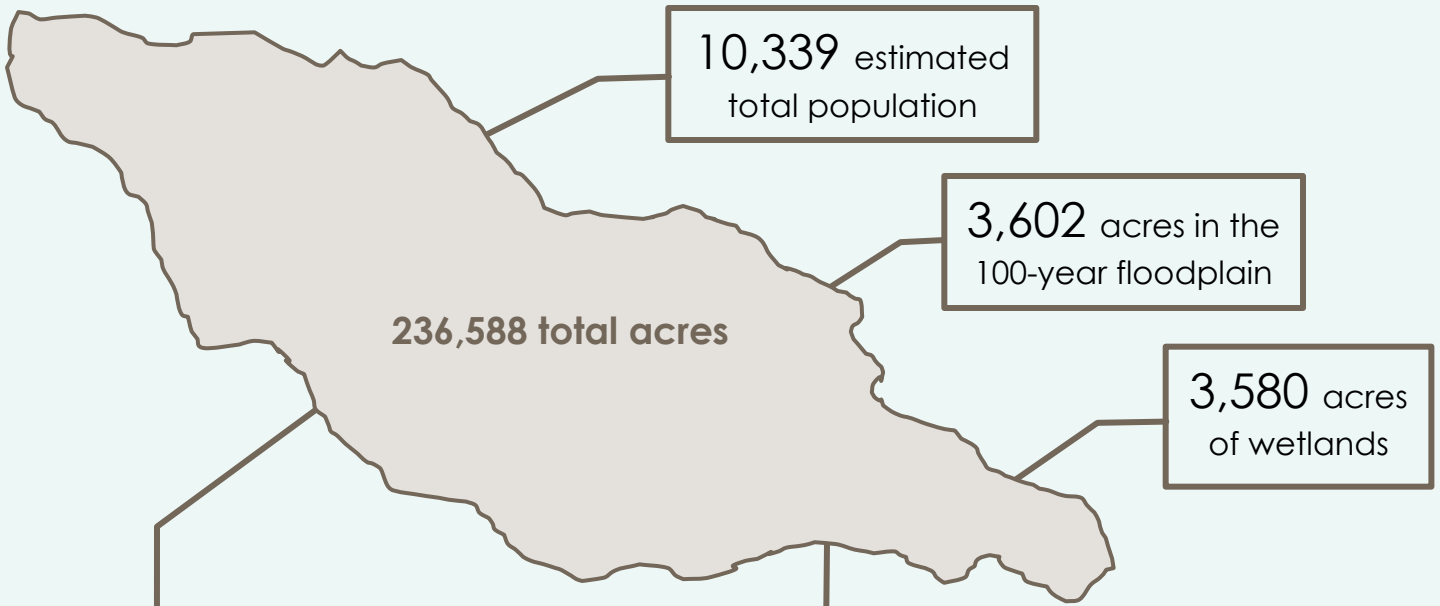


- Ranges from low to high priority for recreation improvements.
- Areas along the Maquoketa River have more wetland habitat but more impaired streams.

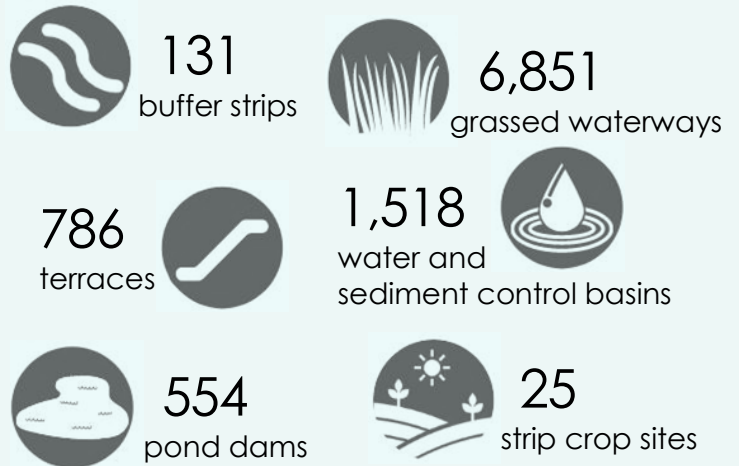
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



Existing Point-Source Pollution:

- 92 Permitted CAFOs and Open Feed Lots
- 8 Permitted wastewater treatment facilities

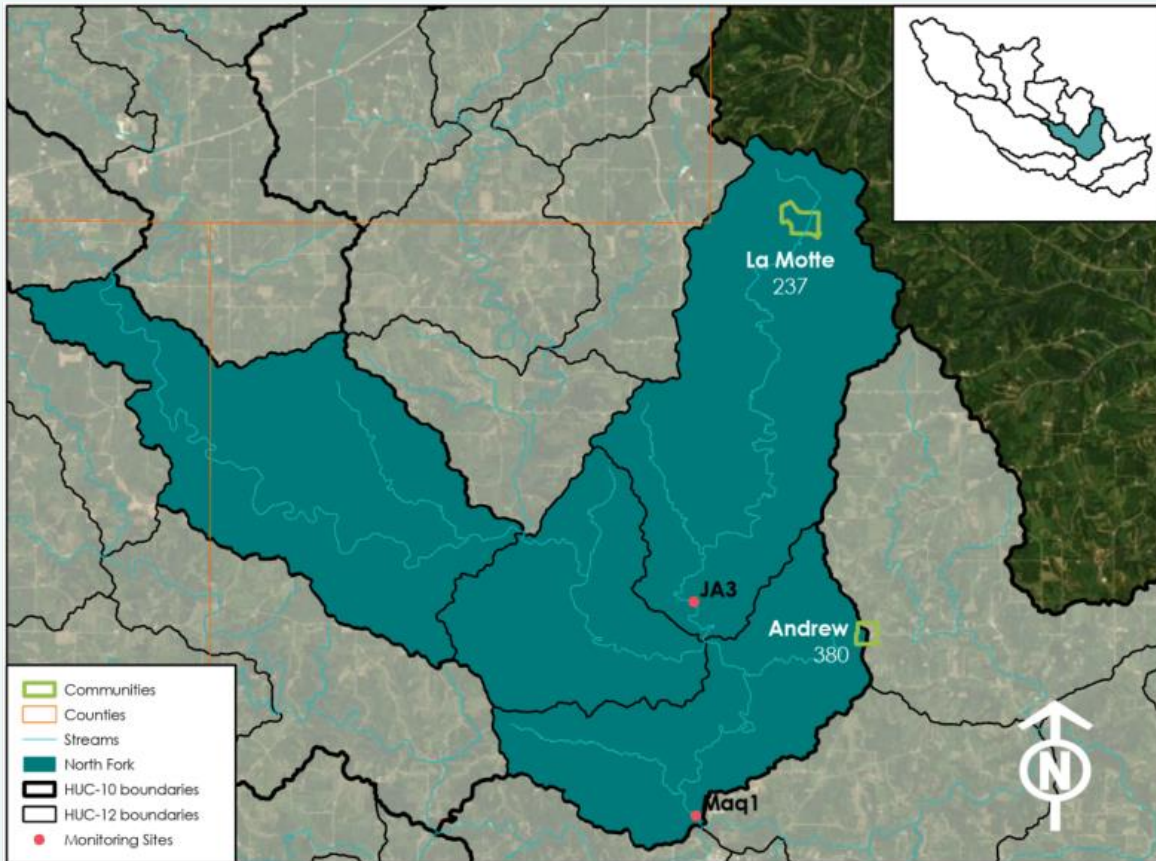
Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
DE9	16.20	0.33	4,178.63	10.55	18.41	20.56
JO1	14.66	0.23	2,454.89	7.83	19.20	15.83
JO2	18.68	0.18	2,588.67	5.55	16.18	12.44
JO4	14.34	0.51	1,461.33	6.44	21.17	36.11
JO5	13.66	0.22	2,096.78	4.53	15.42	37.61
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: North Fork

North Fork is in the southeast portion of the Maquoketa River Watershed. It comprises 91,689 acres and four HUC-12s. This sub-watershed contains two cities, La Motte and Andrew and crosses two counties, Jackson and Jones. Notable features include Ozark Wildlife Area, a destination for hunting, fishing, and wildlife viewing, and Cottonville Conservation Area, which features 40-acres of timber and prairie restoration.



- Relatively low flood risk throughout this HUC-10.
- Less urban area means less contribution to, and risk from, flooding.



- Relatively low nitrate and phosphorous pollution throughout this HUC-10.

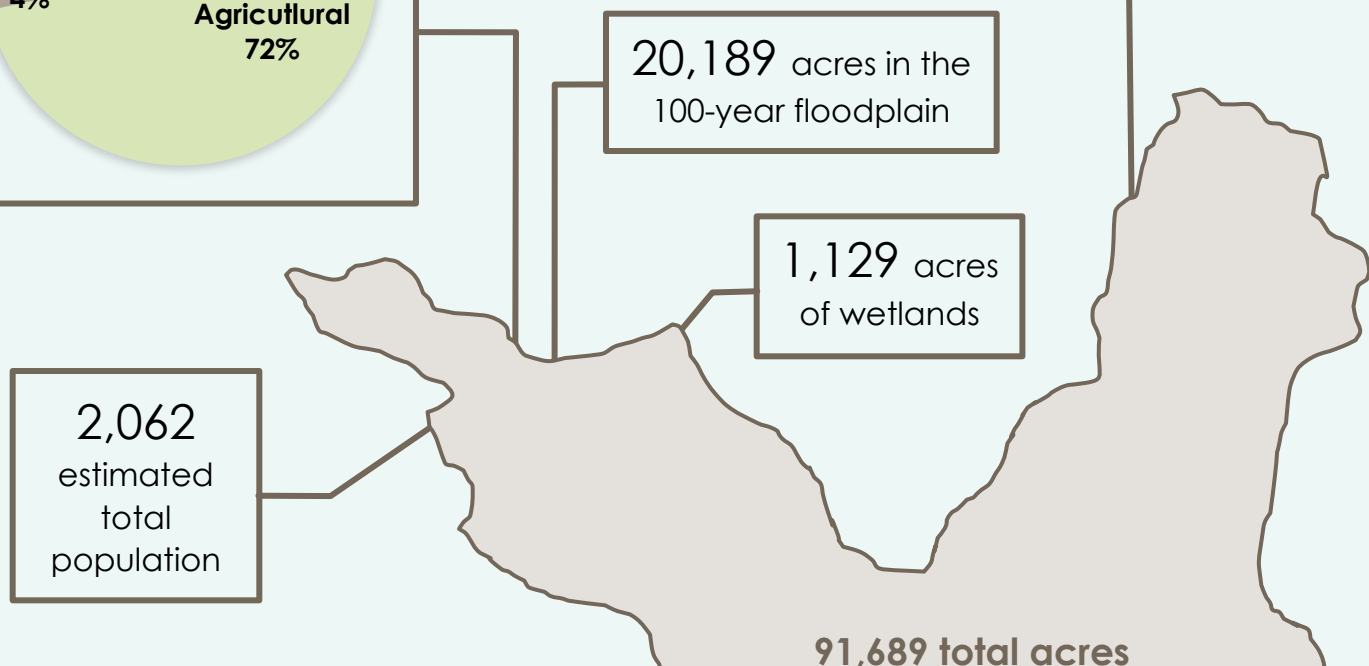
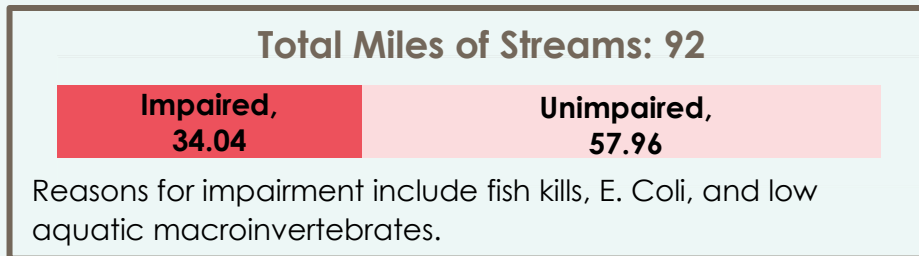
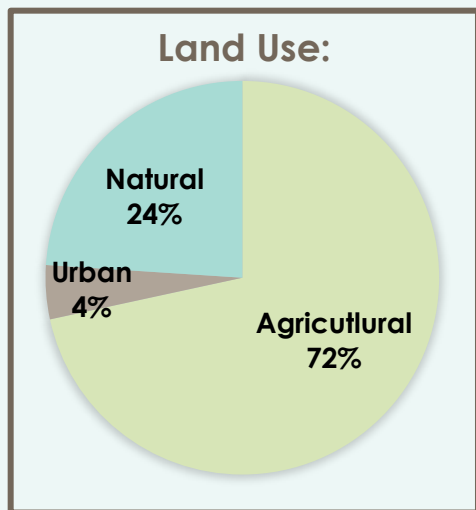


- Two of four HUC-12's are high priority for recreation improvement.
- Few wetland habitats and public lands throughout.

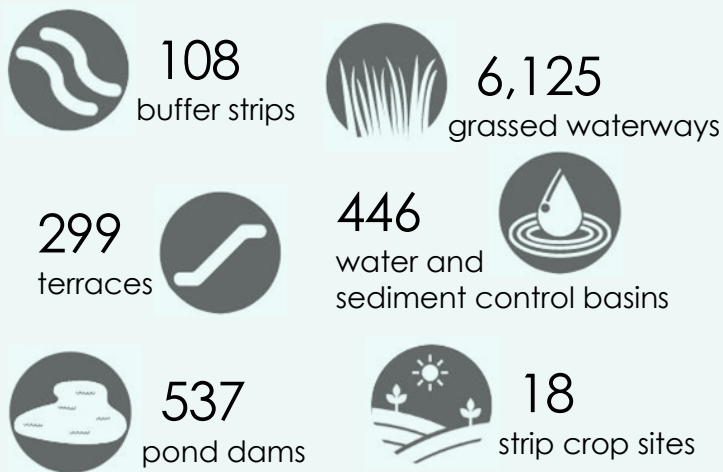
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



Existing Point-Source Pollution:

19 Permitted CAFOs and Open Feed Lots
 2 Permitted wastewater treatment facilities

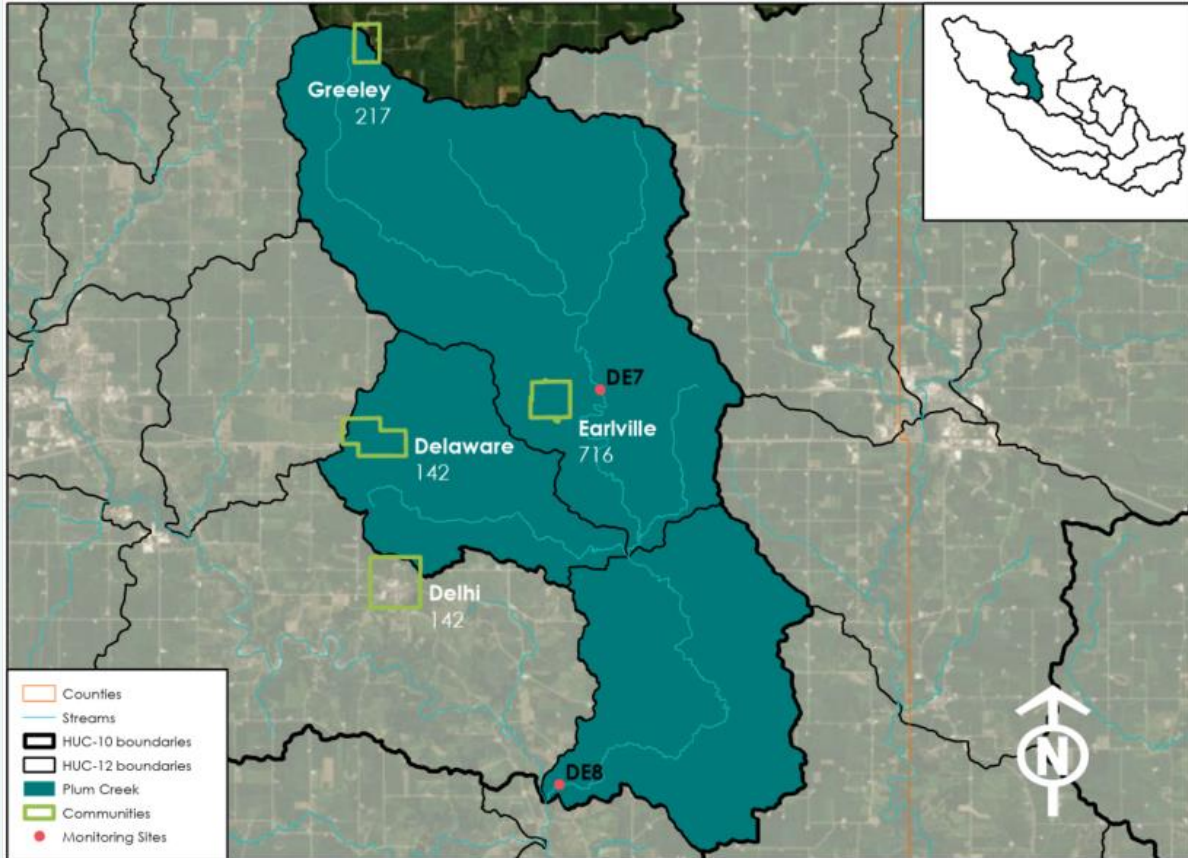
Water Quality Monitoring Results (2019-2021 average)

Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
JA3	14.62	0.24	937.25	5.79	13.35	30.06
Maq1	17.61	0.27	3,986.50	4.88	18.49	86.33
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Plum Creek

Plum Creek is in the northern portion of the Maquoketa River Watershed. It comprises 57,104 acres and three HUC-12s. This sub-watershed contains four cities and lies entirely within Delaware County. Notable features include Brayton Memorial Forest, a 307-acre forest managed by Iowa State University, and Plum Creek County Park, located just south of the City of Earlville.



- Two of the three HUC-12's are high priority for flood risk.
- Public recreation areas could be used for flood mitigation.



- The northeastern HUC-12 is high priority for both nitrate and phosphorous pollution.
- Less public land and implemented management practices are there for mitigation.

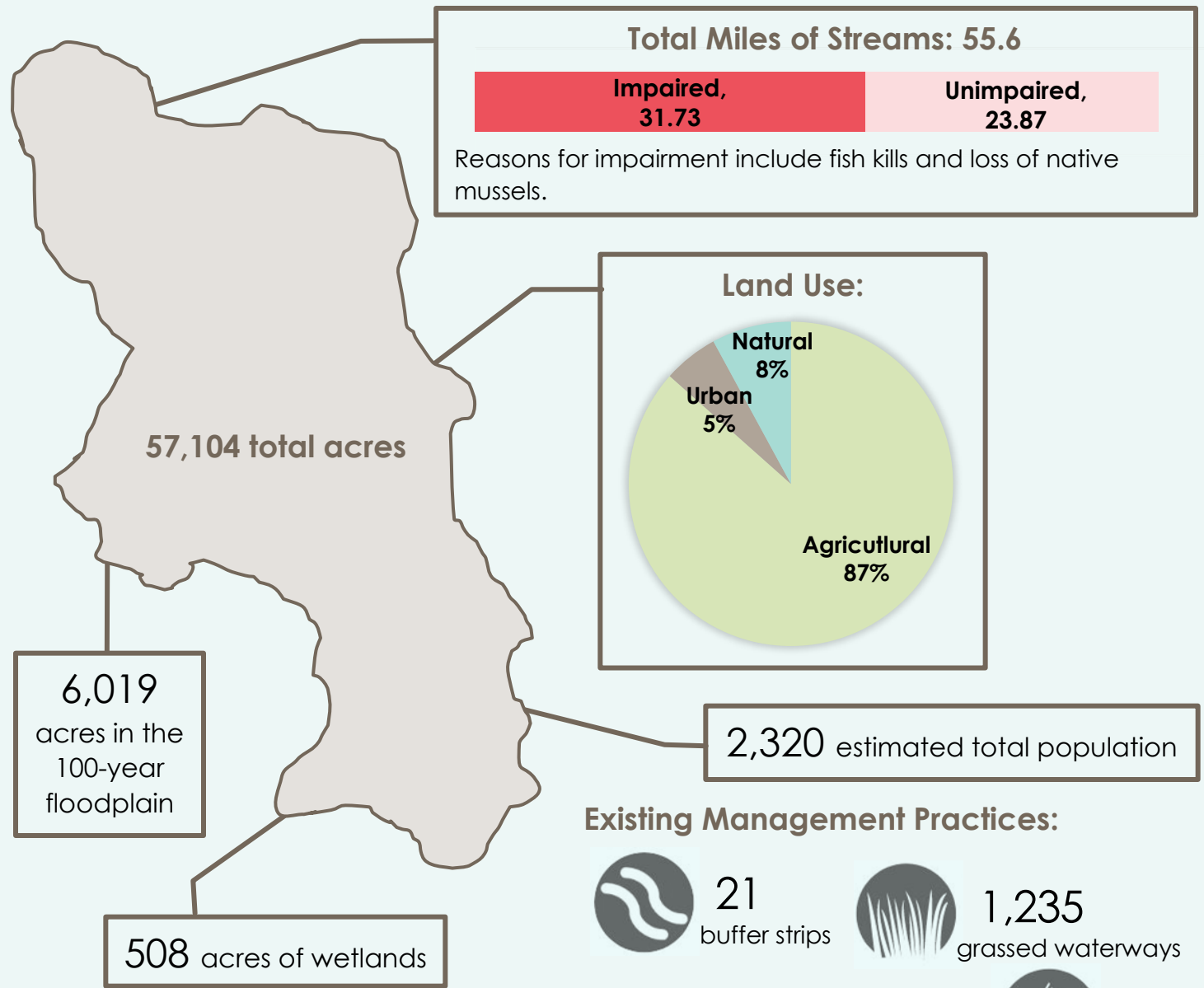


- All HUC-12's are medium and high priority for recreation improvement.
- High proportion of streams in this area are impaired.

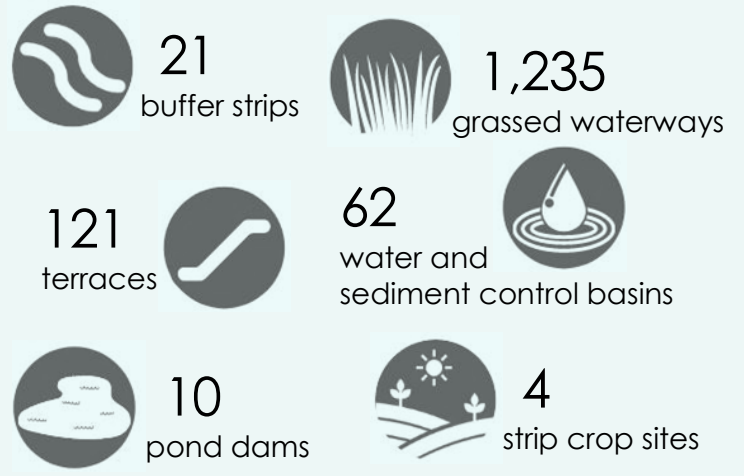
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



Existing Point-Source Pollution:

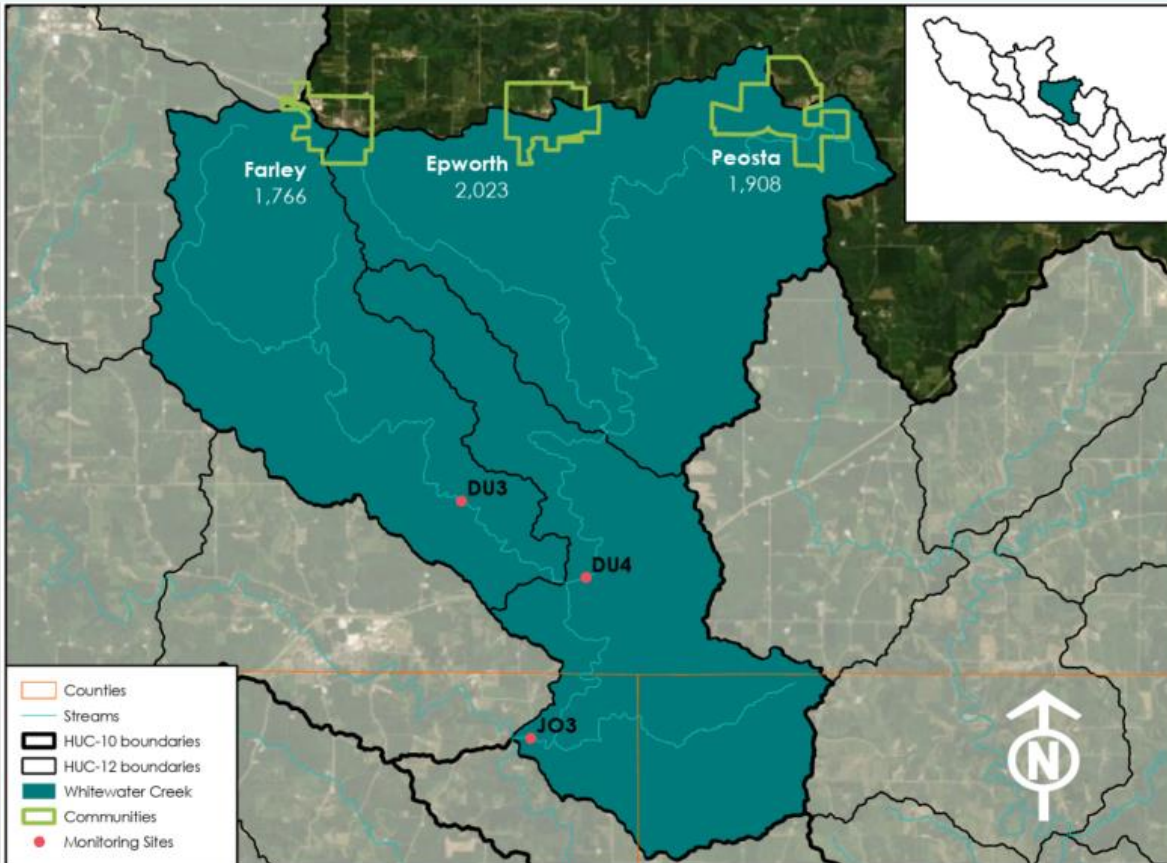
- 35 Permitted CAFOs and Open Feed Lots
- 3 Permitted wastewater treatment facilities

Water Quality Monitoring Results (2019-2021 average)						
Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
DE7	15.90	0.29	3,423.20	12.02	24.01	15.44
DE8	15.80	0.42	5,676.67	9.89	23.30	34.44
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

HUC-10 Profile: Whitewater Creek

Whitewater Creek is in the northern, middle portion of the Maquoketa River Watershed. It comprises 72,372 acres and three HUC-12s. This sub-watershed contains three cities: Farley, Epworth, and Peosta, as well as parts of three counties (Dubuque, Jackson, and Jones). Notable features include Whitewater Canyon Wildlife Area, a destination for hunting and hiking, and the Heritage Trail, a 26-mile limestone path.



- Ranges from low to high flooding priority.
- High priority near the cities where there is more urban area and public land.



- One HUC-12 is high priority for phosphorous and soil runoff, due to topography.
- Medium priority throughout for nitrate pollution, due to limited mitigation possibilities.

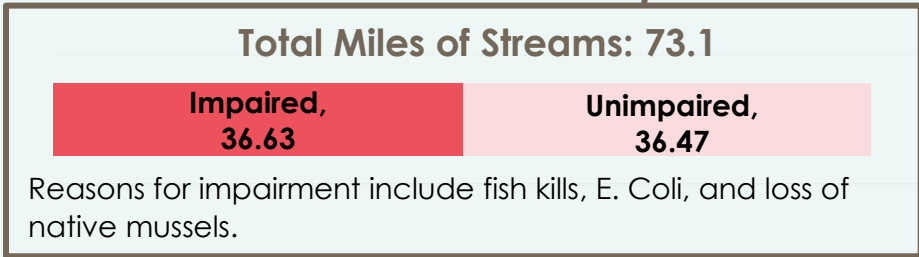
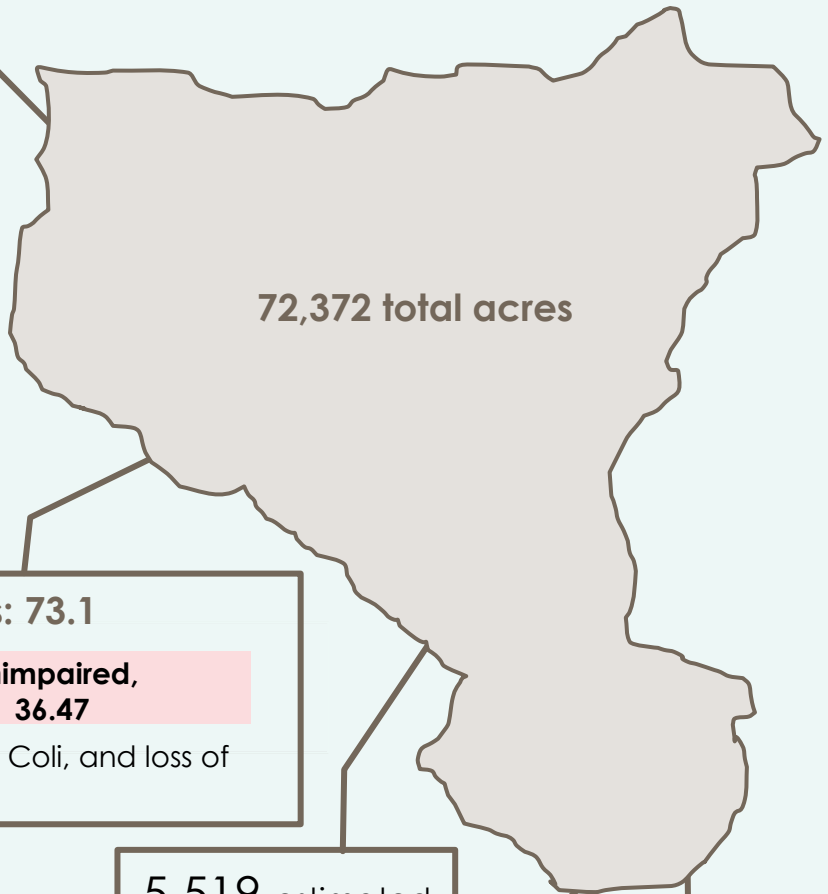
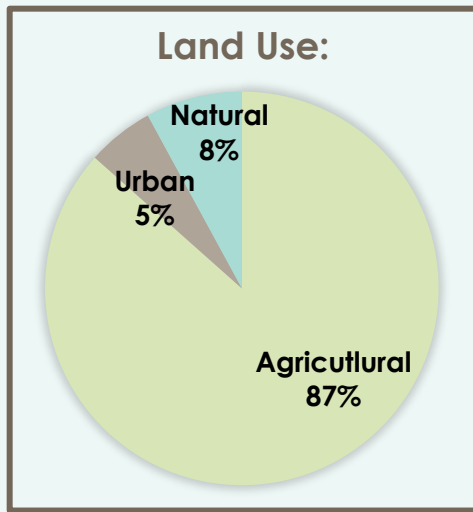


- Two of the HUC-12's are high priority for recreation improvement.
- Impaired streams and few public lands for mitigation restrict recreational opportunities.

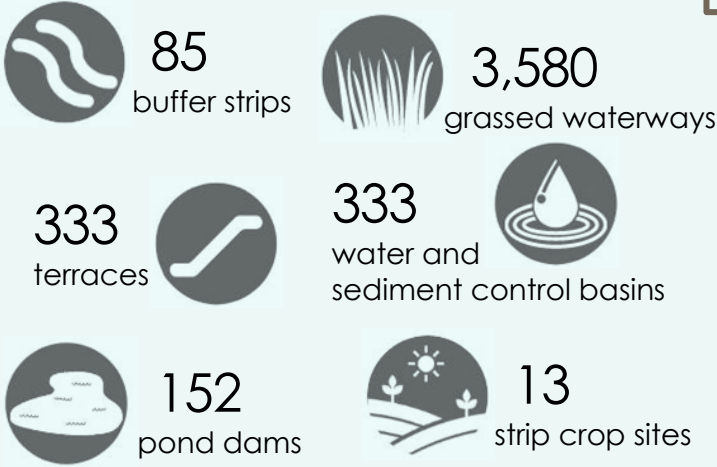
What the heck is a HUC?

HUC (Hydrological Unit Code) is a number assigned to identify a sub-watershed. They range from 2 to 12 digits, with the entire Maquoketa River Watershed being a HUC-8.





Existing Management Practices:



5,519 estimated total population

387 acres of wetlands

5,630 acres in the 100-year floodplain

Existing Point-Source Pollution:

34 Permitted CAFOs and Open Feed Lots
 2 Permitted wastewater treatment facilities

Water Quality Monitoring Results (2019-2021 average)						
Sites	Chloride (mg/L)	Dissolved Phosphorous (mg/L)	E. Coli Bacteria (CFU/100ml)	Nitrate (mg/L)	Sulfate (mg/L)	Turbidity (NTUs)
DU3	18.28	0.86	1,495.00	8.74	18.99	45.94
DU4	23.17	0.51	1,490.40	6.07	18.03	67.61
JO3	18.88	0.55	891.00	6.48	17.17	89.50
Standard	5 to 250	1	235	10	500 to 2000	25

Standards are from the US EPA and IA DNR. Chloride and sulfate standards depend on the water hardness. E. Coli criteria listed is for waterbodies designated for swimming. Turbidity listed is the limit for each point source.

Data sources: IA DNR, US EPA, Iowa BMP Mapping Project, Maquoketa River WMA
 Profile created 3/20/2022 by the Iowa Initiative for Sustainable Communities