HTLN

| Protocol name | Data Stream Name | Start Year | End Year | Years Collected | 2023 included | Years QC backlog | Years published | Target Repository | CUI | DP |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Breeding Landbirds | bird communities | 2001 |  | 23 | yes | 1 | 22 | DataStore | No | 1 |
| Plant communities | plant communities | 1996 |  | 28 | yes | 1 | 27 | DataStore | No | 1 |
| CUVA wetland communities | wetland communities | 2008 |  | 15 | yes | 1 | 14 | DataStore | No | 1 |
| Aquatics: vegetation | spring plant communities | 2007 |  | 17 | yes | 1 | 0 | DataStore | No | 1 |
| Aquatics: invertebrate communities | invertebrate communities | 2005 |  | 18 | yes | 2 | 0 | DataStore | No | 1 |
| Aquatics: fish communities | fish communities | 2005 |  | 19 | yes | 1 | 0 | DataStore | No | 1 |
| White-tailed deer | deer population data | 2005 |  | 18 | yes | 0 | 0 | DataStore | No | 1 |
| Invasive plants | invasive plants | 2006 |  | 18 | yes | 1 | 0 | DataStore | No | 1 |
| Western-prairie fringed orchid | orchid population data | 1993 |  | 31 | yes | 0 | 0 | DataStore | Yes | 1 |
| Western-prairie fringed orchid | soil moisture probe | 2015 |  | 8 | yes | 0 | 0 | DataStore | No | 1 |
| Missouri bladderpod | bladderpod population data | 1997 |  | 27 | yes | 1 | 0 | DataStore | Yes | 1 |
| CUVA well depth | Continuous well loggers | 2008 |  | 14 | yes | 2 | 0 | Aquarius | No | 1 |
| Water quality | Discrete sondes | 2005 |  | 19 | yes | 1 | 18 | EPA Storet | No | 1 |
| Fire Ecology / FFI | USGS FFI server |  |  |  |  |  |  |  |  |  |
| Metal contaminants | Inactive |  |  |  |  |  |  |  |  |  |

Aquatics: Macroinvertebrates Communities

Macroinvertebrate community monitoring is implemented across two protocols: [Aquatic Invertebrates of Small Streams](https://irma.nps.gov/DataStore/Reference/Profile/2284622) (2021) and [Aquatic Invertebrates of Buffalo National River and Ozark National Scenic Riverways](https://irma.nps.gov/DataStore/Reference/Profile/2282172) (2020). Data for both protocols is processed and stored together. Data collection began in 2005, and 18 years data have been collected. Both data streams are in one database. There is legacy data collected in 1988 to the early 90s and again in 96 that has been archived. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical.

Data is managed in an Access/Access database system. Data entry and processing are current up to 2022. Data export and metadata creation scripts have not been created yet. The network is anticipating taxonomy issues due to the necessity of GBIF.

Two data packages are expected for the two protocols, one for pre-2005 legacy data and one for the ongoing data set. This is estimated as a heavy lift (5/5/).

Aquatics: Vegetation

The [Spring Communities](https://irma.nps.gov/DataStore/Reference/Profile/2284630) protocol was published in 2021 and is listed as a primary protocol in protocol tracker. Data collection began in 2007, and 17 years data have been collected. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical.

Data is managed in an Access/Access database system. Data entry and processing are current. Data export and metadata creation scripts have not been created yet.

One data package is expected for this protocol. This is estimated as a moderate lift (3/5/) due to a taxonomy component.

Breeding Landbirds

The [Breeding Landbirds](https://irma.nps.gov/DataStore/Reference/Profile/2300001) protocol was implemented in 2001 and revised in 2023. It is listed as a primary protocol in protocol tracker. Data collection began in 2001, and 23 years data have been collected. No data were collected in 2020 due to Covid restrictions. No sensitive data are collected. There is a draft QAP for this protocol. All data collected are statistical. Data storage was started with the Avian Knowledge Network (AKN) but was moved to internal management.

There is a small subset of data for a habitat component. Point counts and habitat are on a four-year panel, with volunteers doing observation data in interim years. Data entry and storage is managed using a web-based (IRMA) application with a SQL back end. Data entry is current, and processing is up to date except for the current year (2023).

Scripts have been written to export data in flat files, and metadata creation has been completed. An open data package is currently in review and should be published in October 2023. One cumulative data package is expected annually.

Fish Communities

Fish community monitoring is implemented across two protocols: [Fish Communities in Small Streams (2021) a](https://irma.nps.gov/DataStore/Reference/Profile/2284726)nd [Fish Communities of Buffalo National River and Ozark National Scenic Riverways](https://irma.nps.gov/DataStore/Reference/Profile/2253138) (2018). Data for both protocols is processed and stored together. Data collection began in 2005, and 19 years data have been collected. There is a legacy dataset 2001–2005 for stream fish. All three data streams are in one database. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical.

Data is managed in an Access/Access database system. Data entry and processing are current. Data export and metadata creation scripts have not been created yet.

One data package for all three data streams is expected for the two protocols. This is estimated as a moderate lift (3/5/). The network wants to handle this data package in house.

Cuyahoga Valley National Park Wetland Communities and Well Depth

The [Cuyahoga Valley National Park Wetland Monitoring](https://irma.nps.gov/DataStore/Reference/Profile/2236892) protocol was published in 2016 and is listed as a primary protocol in protocol tracker. Data collection began in 2008, and 15 years data have been collected. Well depth data was not collected in 2016, so there are 14 years of well data. No sensitive data are collected. There is not a QAP or DQS published for this protocol. Statistical and geospatial data are collected under this effort. There is an extensive geodatabase. The protocol is extensively documented with 22 Standard operating Procedures. There is a dedicated staff person at CUVA that manages the project.

Data is stored in a geodatabase for spatial data and Aquarius for logger data. Data entry is current, and processing is complete except for the current season (2023). There is a two-year backlog for well data.

Scripts have not been completed for data export and metadata creation, but this is a relatively simple dataset and is next on the priority list, so completion is planned for 2024. There will be one data package for tabular wetland data and one geo package for spatial data. Well data in Aquarius will be published once export tools have been developed by WRD.

This is estimated to be a light lift (1/5).

Fire Ecology FFI

The [Fire Ecology protocol](https://irma.nps.gov/DataStore/Reference/Profile/2167710) was published in 2011 and is listed as a primary protocol in protocol tracker. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical. There is a legacy dataset for this protocol. The mapping component was retained but burn data and weather data were not carried forward.

Data is stored in the USGS version of FFI.

Invasive Plants

The [Invasive Plants protocol](https://irma.nps.gov/DataStore/Reference/Profile/2206497) was published in 2014 and is listed as a primary protocol in protocol tracker. Data collection began in 2006, and 18 years data have been collected. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical.

Data are managed in an Access/Access database system. Data entry and processing are current. Data exports are complete, but metadata creation has not been done yet. One data package is expected for this protocol. This effort is estimated as a light lift (1/5).

Opportunities for CSO support: Metadata creation and templates with existing definitions and a small taxonomy.

Metal Contaminants

The [Monitoring Metals in Ozark National Scenic Riverways](https://irma.nps.gov/DataStore/Reference/Profile/2173155) protocol was published in 2010 and is listed as a primary protocol in protocol tracker. Data collection began in 2008 and two years data were collected. No sensitive data are collected. There is not a QAP or DQS published for this protocol. All data collected are statistical. The protocol was abandoned after two years. Data has not been published.

Missouri Bladderpod

The [Missouri Bladderpod Monitoring](https://irma.nps.gov/DataStore/Reference/Profile/2166225) protocol was published in 2008 and is listed as a primary protocol in protocol tracker. This was an LTEM pilot protocol. Data collection began in 1997, and 27 years data have been collected. Some data collected may be sensitive and require special handling federally listed as threatened). There is not a QAP or DQS published for this protocol. Data collected are statistical and spatial.

Tabular data are stored in an Access database, and spatial data is in geodatabases. Data entry and processing are current.

Two data packages are expected, one with tabular data, and one restricted spatial dataset. Data would be partially redacted for publication, using park boundaries instead of coordinates. Spatial data are too specific to redact, and the geo package would not be published publicly. This effort is estimated as a light lift (2/5).

Opportunities for CSO support: Metadata creation and templates with existing definitions.

Vegetation Communities

The [Vegetation Community Monitoring](https://irma.nps.gov/DataStore/Reference/Profile/2294948) protocol revision was published in 2022 and is listed as a primary protocol in protocol tracker. Data collection began in 1996, and 28 years data have been collected. This was an LTEM prototype protocol. No sensitive data are collected. There is a draft QAP or DQS (unpublished) for this protocol. All data collected are statistical. A geodatabase is used for storage only. Points are published as centroids.

Data are managed using an Access/Access database system. Data entry is current, and processing is complete up to 2023. This effort is estimated as a heavy lift (4/5) due to taxonomy. Fire data has been added to this protocol and will be published as a geodatabase. Scripts are in progress for data export. Metadata creation has not been started yet. This dataset is a lower priority for the network because other datasets are closer to publication.

One tabular data package and one geodatabase for fire is expected for this protocol.

Western Prairie Fringed Orchid

The [Western Prairie Fringed Orchid Monitoring Protocol for Pipestone National Monument](https://irma.nps.gov/DataStore/Reference/Profile/649236) protocol was published in 2010 and is listed as a primary protocol in protocol tracker. Data collection began in 1993 and 31 years data have been collected. A second data stream to monitor soil moisture was added in 2015, and eight years data have been collected. Some data collected may be sensitive (Federally listed as threatened) and require special handling. There is not a QAP or DQS published for this protocol. All data collected are statistical.

Data are entered and stored using an Access/Access database system. Data entry is current, and processing is complete up to 2023. Scripts have not been completed for data export and metadata creation.

One tabular data package is expected for this protocol. This effort is estimated as a light lift (2/5).

Opportunities for CSO support: Metadata creation and templates with existing definitions.

White-tailed Deer

The [White-tailed Deer Monitoring](https://irma.nps.gov/DataStore/Reference/Profile/2257408) protocol was published in 2018 and is listed as a primary protocol in protocol tracker. Data collection began in 2005, and 18 years data have been collected. Data was not collected during years with Covid restrictions. No sensitive data are collected. A [Quality Assurance Plan](https://irma.nps.gov/DataStore/Reference/Profile/2257411) was published for this protocol in 2018. Data is primarily spatial, using GNSS in the field, which is processed into geodatabases. Sampling is done annually in three parks.

Spatial data is stored in a geodatabase, and tabular data is stored in Access. Data entry and processing is current. One tabular data package is expected. Scripts have not been written yet for data export but could be done in a few hours. There are definitions in place. This effort is estimated as a light lift (2/5) with no taxonomy and a single species.

Opportunities for CSO support: Metadata creation and templates with existing definitions.